

GVA ENGINEERING, L.L.C.

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PROJECT NAME: St. Bernard Parish Public Library

PROJECT NO: GVA 3931

SHOP DRAWING REVIEW	
REVIEW IS FOR GENERAL COMPLIANCE WITH CONTRACT DOCUMENTS. NO RESPONSIBILITY IS ASSUMED FOR CORRECTNESS OF DIMENSIONS, QUANTITIES OR DETAILS.	
<input type="checkbox"/>	No Exceptions Taken
<input checked="" type="checkbox"/>	Make Corrections Noted
<input type="checkbox"/>	Revise & Resubmit
<input type="checkbox"/>	Rejected
Date:	July 8, 2024
By:	SJL

SPEC. SECTION NO: 16600

SUBMITTAL ITEM: Special Systems (Data, Sound System, Paging, CCTV, access controls)

COMMENTS:

- 1 For sound equipment, Contractor is reminded to provide quantities as indicated in specifications (ex. 3 microphones, 2 mic stands, 2 mic clips, etc).
- 2 Contractor is reminded to provide data outlet cover plate ID's, as well as labeling cables at patch panels.
- 3 Contractor is reminded to provide data wiring ANSI/TIA/EIA testing and test report.
- 4 Contractor is reminded to provide training for CCTV operation.



**St. Bernard Parish Public
Library**

Gibbs Project #1725

Submittal Cover Sheet

Architect:	Attn:
Contractor:	Sub/Sup:
Re:	Subm #:
Spec #:	Dwg #:

For Architectural Approval

For Record Only

Reviewing is only for conformance with the design concept of the Project and compliance with the information given in the Contract Documents. The vendor is responsible for dimensions to be confirmed and correlated at the site for information that pertains solely to the fabrication process or to the means, methods, techniques, sequences, and procedures of construction, and for coordination of the work with all trades.

Signed:  _____

Date: _____

General Contractor Review: Reviewed Reviewed as Noted Revise & Resubmit Rejected

REVIEWER / CONTRACTOR COMMENTS AND STAMPS

This submittal contains product data for the Sound system, intrusion system, paging system, telecommunications, surveillance, access control.



EDUCATIONAL ELECTRONICS CORPORATION

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Main Office (504) 737-4545 · Fax (504) 737-7443
North Shore (985) 809-0086

ELECTRONICS
SYSTEMS
SPECIALISTS

NEW ST. BERNARD PARISH LIBRARY

SOUND SYSTEM

SUBMITTALS

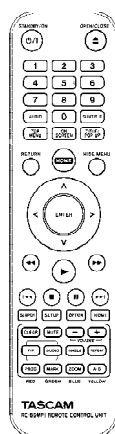
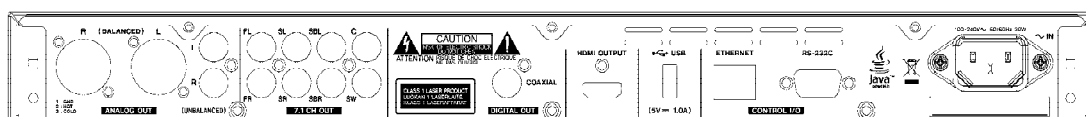
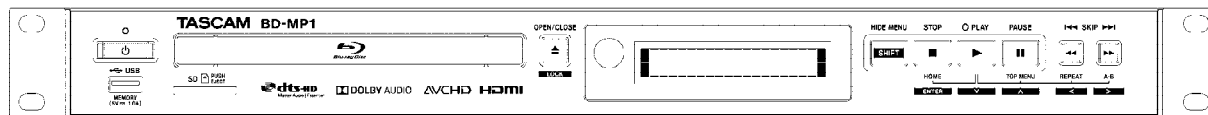
EQUIPMENT LIST
NEW ST. BERNARD PARISH LIBRARY

SOUND SYSTEM

Vendor	Equipment	Description
SOUND SYSTEM		
TASCAM	BD-MP1	DVD-BLU-RAY PLAYER
DBX	220i	EQUALIZER FEEDBACK ELIMINATOR
BEHRINGER	RX 1202 FX	MIXER 8 LINE MIC MIXING BUS
CROWN	Xti-1002	AMPLIFIER
SHURE	BLX24R/B58	HANDHELD WIRELESS MIC SYSTEM
SHURE	BLX14R/W85	CLIP ON WIRELESS MIC SYSTEM
SHURE	PGA48-LC	HANDHELD MIC
JBL	26CT	SOUND SPEAKERS
FURMAN	M-8X2	POWER STRIP
LISTEN TECHNOLOGIES	LR-3200-072	ASSISTIVE LISTENING
LISTEN TECHNOLOGIES	LA-404	EAR BUDS
LISTEN TECHNOLOGIES	LR-100-216	AMPLIFIER
LISTEN TECHNOLOGIES	LT-800-072-P1	TRANSMITTER
ATLAS	MS-12	MIC STAND
PROCO	M-25	MIC CORDS 25'
SOUNDOLIER	S601-13C	MIC OUTLET
ATLAS	340-21B	WALL RACK
WEST PENN	25225B	COMMUNICATIONS WIRE
WEST PENN	25291B	COMMUNICATIONS WIRE

Feb, 2022

Product Spec Sheet
BLU-RAY DISC PLAYER
BD-MP1



Wireless remote control(RC-BDMP1)

■ Specifications

General

•Supported media

Disc media

- Blu-ray: BD25, BD50, BD-ROM, BD-R, BD-RE
- DVD: DVD-ROM, DVD-R, DVD-RW, DVD+R, DVD+RW
- CD: CD-DA, CD-R, CD-RW

Disc formats

- Blu-ray: BDMV, BDAV
- DVD: DVD-Video, DVD-VR, AVCHD

Supported file formats

- Video: ASF, MPG, AVI, 3GP, DAT, MKV, MOV, M2TS, OGM, TP, TS, MP4, WMV
- Audio: WAV, MP3, WMA, AAC, FLAC, APE
- Picture: JPEG, GIF, PNG

*USB flash drive and SD card formats must use FAT16, FAT32 or NTFS file systems.

•Audio

BD/DVD/USB/SD

- Sampling frequency: 44.1/48/64/88.2/96/176.4/192 kHz
- Bit length: 16/24-bit

CD

- Sampling frequency: 44.1/48 kHz
- Bit length: 16/24-bit

MP3/WMA

Sampling frequency:	32/44.1/48 kHz
Bit rate	MP3: 112 kbps – 320 kbps
WMA:	48 kbps – 192 kbps

Outputs**•HDMI output**

Connector:	HDMI 19-pin Type A
Resolution:	480i/576i, 480p/576p, 720p, 1080i, 1080p
Aspect ratio:	16:9 Full, 16:9 Normal, 4:3 Pan & Scan, 4:3 Letterbox
Video format:	NTSC, PAL, Multi
HDMI signal system:	RGB PC level, RGB Video level, YCbCr (4:4:4), YCbCr (4:2:2)

•Digital Audio output**COAXIAL**

Connector:	RCA pin jack
Format:	IEC60958-3 (S/PDIF)
Output impedance:	75 Ω

•Analog audio outputs**Balanced**

Connectors:	XLR-3-32 (1: GND, 2: HOT, 3: COLD) x2 (Stereo)
Nominal output level:	+4 dBV (1.23 Vrms)
Maximum output level:	+20 dBV (7.75 Vrms)
Output impedance:	200 Ω

Unbalanced

Connectors:	RCA pin jack × 1 pair
Nominal output level:	-10 dBV (0.316 Vrms)
Maximum output level:	+6 dBV (2.0 Vrms)
Output impedance:	200 Ω

7.1ch Audio outputs

Connectors:	RCA pin jack x8 (FL/FR/SL/SR/SBL/SBR/C/SW)
Connector Color:	FL, SL, SBL-White FR, SR, SBR-Red C, SW-Black
Nominal output level:	-10 dBV (0.316 Vrms)
Maximum output level:	+6 dBV (2.0 Vrms)
Output impedance:	200 Ω

Control input/output**•RS-232C connector**

Connector:	D-sub 9-pin
Format:	RS-232C

•Ethernet connector

Connector:	RJ-45
Protocol:	10 BASE-T/100 BASE-TX

•USB port

Connectors:	USB type-A x2 (Front x1, Rear x1)
Protocol:	USB 2.0 compliant
Rated supply voltage:	DC 5 V, 1 A
Mass storage class:	2 TB (MAX)
Supported file formats:	FAT16/FAT32/NTFS

•SD slot

Supported media:	SD (512 MB – 2 GB), SDHC (4 GB – 32 GB)
Storage class:	Max 32 GB
Supported file formats:	FAT16/FAT32/NTFS

Audio performance

Frequency response:	20 Hz – 20 kHz \pm 0.5 dB (F_s = 44.1/48 kHz, JEITA)
S/N ratio:	> 96 dB (When playback, JEITA)
THD (Total Harmonic Distortion):	< 0.03% 1 kHz (JEITA)
Dynamic range:	> 96 dB (JEITA)
Channel separation:	> 89 dB (JEITA)

Other

•Power

AC100 – 240 V, 50/60 Hz

•Power consumption

30 W

•Dimensions

482.8 × 44 × 280.7 mm (W x H x D, including protrusions)

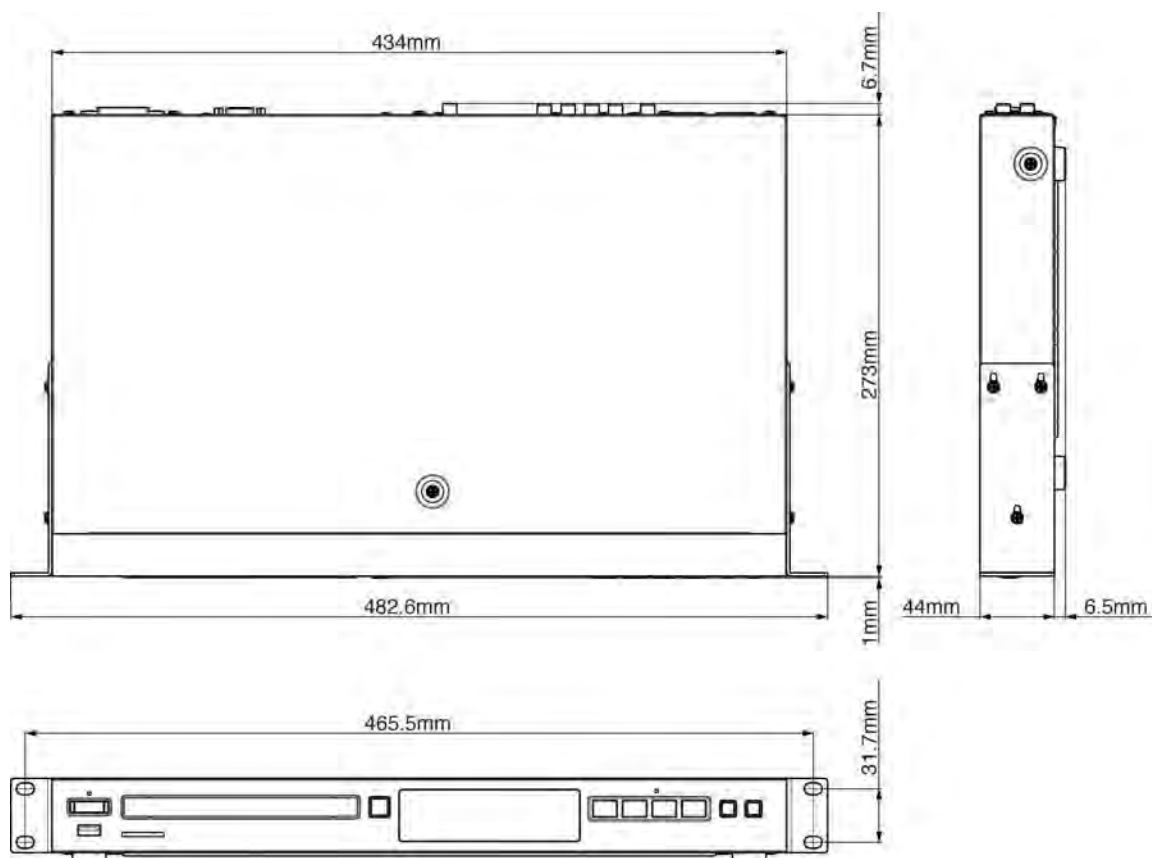
•Weight

2.64 kg

•Operating temperature range

5°C – 35°C (41°F – 95°F)

■ Dimensional drawings



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※Specifications and appearance are subject to change without notice.

※All information included in this document is as of Feb, 2022.

DriveRack[®] 220i

System Processor with AFS[™] Advanced Feedback Suppression

dbx[®]
PROFESSIONAL PRODUCTS

VISIONARY DESIGN

Designed from the ground up to provide state-of-the-art signal processing, the DriveRack 220i is the perfect tool for any fixed-install application. With a full complement of processing features and Mic/Line inputs the DriveRack 220i can provide both system and microphone processing. Featuring the new, patent-pending Advanced Feedback Suppression (AFS) algorithm, equalization, dynamics processing, delay, matrix mixing, and bandpass filters, the DriveRack 220i will exceed your expectations.

REVOLUTIONARY ENGINEERING

The DriveRack 220i is piloted from the intuitive DriveWare GUI that offers both Configuration and Control of the processing modules. Modules can be accessed, edited and saved as part of programs. Processing modules can be linked between the channels for true stereo processing. If independent processing is desired, parameters can be copied from one channel to the next to ensure that setup is quick and easy. Stored programs can be loaded from either the front panel or from wall mounted Zone Controllers. Zone Controllers can also be used for output muting or adjusting output volumes. For more information please visit www.driverack.com or www.dbxpro.com.

FEATURES

- **Advanced Feedback Suppression (AFS[™])**
- **Graphic and Parametric EQ**
- **Compressor**
- **Limiter**
- **Auto Gain Control**
- **Noise Gating**
- **De-Esser**
- **Ducker**
- **Bandpass Filters**
- **Matrix Mixer**
- **1.3 Seconds of Delay**
- **RS-232 PC GUI control**
- **Mic/Line Inputs**
- **Wall Panel Control**
- **Security Lockout**

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Phone (801) 568-7660
Fax (801) 568-7662
Int'l Fax (801) 568-7583
customer@dbxpro.com
<http://www.dbxpro.com>

H A Harman International Company



DriveRack® 220i

System Processor with AFS™ Advanced Feedback Suppression



SPECIFICATIONS

Analog Inputs:

Number of Inputs: (2) Switchable line or mic inputs
Connectors: Female XLR line inputs and Euroblock
Type: Electronically balanced/RF filtered

Impedance: > 50k Ω
Max input line level: +20dBu
CMRR: > 40dB, typically >55dB @ 1kHz
Mic Pre gain: 30 to 60dB
Mic EIN: < 110dB, 22Hz-22kHz, 150 Ω
Mic Phantom Power: 15V

Analog Outputs:

Number of Outputs: (2)
Connectors: Male XLR and Euroblock
Type: Electronically balanced, RF filtered
Impedance: 120 Ω balanced, 60 Ω unbalanced
Max Output Level: +20dBu

A/D Performance:

Type: dbx Type IV™ conversion system
Dynamic Range line: >113 dB A-weighted, >110 dB unweighted
Type IV dynamic range: >119 dB, A-weighted, 22kHz BW
>117 dB, unweighted, 22kHz BW
Sample Rate: 48kHz

D/A Performance:

Dynamic Range: 112 dB A-weighted, 109dB unweighted

System Performance:

Dynamic Range: >110 dB A-weighted, >107dB unweighted,
THD+N: 0.003% typical at +4dBu, 1kHz, 0dB gain
Frequency Response: 20Hz – 20kHz, +/- 0.5dB
Interchannel Crosstalk: >110dB, 120dB typical
Crosstalk input to output: >80dB
Operating voltage: 100 VAC, 50/60Hz, 120 VAC, 60Hz, 230VAC 50/60Hz
Size: 19" Wide, 1.75" High, 7.7" Deep

Safety Agency Approvals:

UL 6500, IEC 60065, EN 55013, E 60065

Architects' and Engineers' Specifications:

The device shall provide two balanced inputs which are selectable as line level or mic level with phantom power. The line inputs and output gains shall be controllable via software; the mic inputs shall be adjustable from the rear panel. Analog audio inputs and outputs shall be accessible via rear panel XLR and Euroblock connectors.

The signal processing Graphic User Interface (GUI) software shall be user programmable using Windows® 98, 2000, and XP operating systems. Software control shall be via RS-232 protocol and shall be located on both the front and rear panel. The GUI shall provide display, configuration and control of all signal processing functions including, but not limited to: • Input Gain and Mixing • Graphic or Parametric Equalization • Compression • Limiting • Gating • Automatic Gain Control • Ducking • De-Essing • Advanced Feedback Suppression (AFS™) • Notch Filters • Sub-Harmonic Synthesis • Matrix Mixing • Bandpass Filtering • Delay

Front panel controls shall include program selection and load buttons. Clearing feedback suppression filters shall also be provided for using the program up and program down buttons. A PC connection and Clip indicator shall be located on the front panel. The front panel shall also include input and output level meters with a 6-segment LED meter and output dynamics threshold LED.

External control shall include program selection, output level control and muting, and shall be via industry-standard CAT5 cable with RJ45 connectors. The device shall include 20 internal programs with up to 10 being user configurable. All program memory shall be non-volatile providing program security should power or computer fail.

Audio conversion shall be 24-bit 48 kHz. The dynamic range of the processor shall not be lower than 110 dB A-weighted.

The device shall have an IEC power socket. The unit shall meet UL/CSA and CE safety requirements. The unit shall be constructed of cold-rolled steel with a brushed and anodized aluminum front panel, and mount into a standard 19" 1U EIA rack. The device shall be a dbx DriveRack® 220i.

FOR MORE INFORMATION CONTACT:

dbx Professional Products
8760 S. Sandy Pkwy.
Sandy, Utah 84070
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Fax (801) 568-7662

dbx PROFESSIONAL PRODUCTS

The Professional's Choice In Signal Processing™

■ A Harman International Company

customer@dbxpro.com
http://www.dbxpro.com

Rackmount Mixers

EURORACK PRO RX1202FX

Premium 12-Input Mic/Line Rack Mixer with XENYX Mic Preamplifiers, British EQ's and Multi-FX Processor



- Premium ultra-low noise, high headroom analog 3U rack mount mixer
- 8 state-of-the-art XENYX Mic Preamps comparable to stand-alone boutique preamps
- Neo-classic "British" 2-band EQs for warm and musical sound
- Studio-grade FX processor with 100 awesome presets including reverb, chorus, flanger, delay, pitch shifter and various multi-effects
- Switchable +48 V phantom power for condenser microphones
- 4 additional balanced high-headroom line inputs
- CD/Tape inputs assignable to Main mix or Control Room/Phones outputs
- 2 Aux sends per channel: 1 pre fader for monitoring applications, 1 post fader for internal FX or as external send
- Separate Control Room, Phones and stereo CD/tape outputs
- Balanced Main mix outputs with gold-plated XLR connectors
- Long-wearing 60-mm logarithmic-taper faders and sealed rotary controls

The rack-mountable, 12-Input RX1202FX mixer enables you to effortlessly achieve premium-quality sound, thanks to 8 onboard studio-grade XENYX Mic Preamps, 2 stereo Line Inputs and ultra-musical "British" channel EQs. Add to this our 24-Bit Multi-FX processor with 100 awesome presets including studio-class reverbs, delays, pitch shifter and various multi-effects – and the RX1202FX becomes an incredibly-versatile mixer for your live performances. Ideally suited for musicians, houses of worship and a wide variety of business applications, the incredible RX1202FX is also perfect for sub-mixing keyboards, drums or multiple vocal mics – and is an absolute "must-have" for monitoring your multitrack recording projects!



Sonically Superior Mic Preamps

Our legendary, high headroom XENYX mic preamps have been praised by audio engineers all over the world. These state-of-the-art mic pres represent a major step in the evolution of audio technology – and they can easily hold their own, even when compared to the most expensive stand-alone mic preamps. XENYX preamps offer a staggering 130 dB of dynamic range, with a bandwidth that extends from below 10 Hz to well above 200 kHz. Armed with these outstanding mic preamps, the RX1202FX provides such transparent, crystal-clear performance you just might think someone upgraded your mics while you weren't looking.

Rackmount Mixers

EURORACK PRO RX1202FX

Premium 12-Input Mic/Line Rack Mixer with XENYX Mic Preamplifiers, British EQ's and Multi-FX Processor

- "Planet Earth" switching power supply for maximum flexibility (100 - 240 V~), noise-free audio, superior transient response plus low power consumption for energy saving
- 3-Year Warranty Program*
- Conceived and designed by BEHRINGER Germany

Sublimely Musical British EQ

The British consoles of the 1960s and '70s changed the sound of rock and roll – without them the British Invasion might not have happened. Those legendary mixing desks soon became the envy of engineers and producers all over the world. The channel EQ on our RX1202FX mixer is based on that very same circuitry, allowing you to imbue signals with incredible warmth and detailed musical character. Even when applied generously, these equalizers exhibit sweet forgiveness and superb audio quality.



Effective FX

Every RX1202FX mixer features our 24-Bit Multi-FX processor, with 100 awesome presets including reverb, chorus, flanger, delay, pitch shifter and various multi-effects. Complete with highly-accurate Signal and Clip LEDs, these effects are instantly available at your fingertips via the Program selector control.

*Warranty details can be found at music-group.com.

Rackmount Mixers

EURORACK PRO RX1202FX

Premium 12-Input Mic/Line Rack Mixer with XENYX Mic Preamplifiers, British EQ's and Multi-FX Processor

Taking Control

Smooth 60 mm faders and intuitive rotary dials make it quick and simple to create a great mix. The Main Mix fader adjusts the volume of the Main Output signal, while the dual 4-segment LED ladder display gives a visual confirmation of the signal level. The Phones jack features a dedicated Phones/Control Room dial for adjusting the volume. Push CD/Tape To Mix to add backing tracks from an mp3 or CD player, or the CD/Tape To Ctrl to isolate a click or scratch track in the headphones during recording.



Panel Discussion

On the RX1202FX's rear panel, the Left and Right Main Out XLR connections can be used to feed the mix to a recording device or PA system. For live performances, keep pre-recorded music cued up for between-set breaks by connecting a CD or mp3 player via the stereo 2-Track In jacks. If the band wants a recording of their performance, you can send the signal to a recording device via the 2-Track Out jacks. Use the Mon Aux Send to send the monitor bus signal to your floor monitors in a live performance, or to a headphone amp in a recording session. When it's time for playback of the recorded material, just send the signal to your studio monitors via the Ctrl Out jack.

Amazing Performance and Value

No matter what your audio mixing needs, the RX1202FX provides the performance and features that can take your talent to the next level, at a price sure to amaze you. Professional sound quality, our legendary XENYX mic preamps, British EQs, 24-Bit Multi-FX Processor and USB connectivity make EURORACK PRO RX1202FX ideal for both your live gigs and recording. Try one out at your authorized BEHRINGER dealer – or place your order online today!



Rackmount Mixers

EURORACK PRO RX1202FX

Premium 12-Input Mic/Line Rack Mixer with
XENYX Mic Preamplifiers, British EQ's and
Multi-FX Processor



You Are Covered

We always strive to provide the best possible Customer Experience. Our products are made in our own [MUSIC Group](#) factory using state-of-the-art automation, enhanced production workflows and quality assurance labs with the most sophisticated test equipment available in the world. As a result, we have one of the lowest product failure rates in the industry, and we confidently back it up with a generous [3-Year Warranty program](#).

Rackmount Mixers

EURORACK PRO RX1202FX

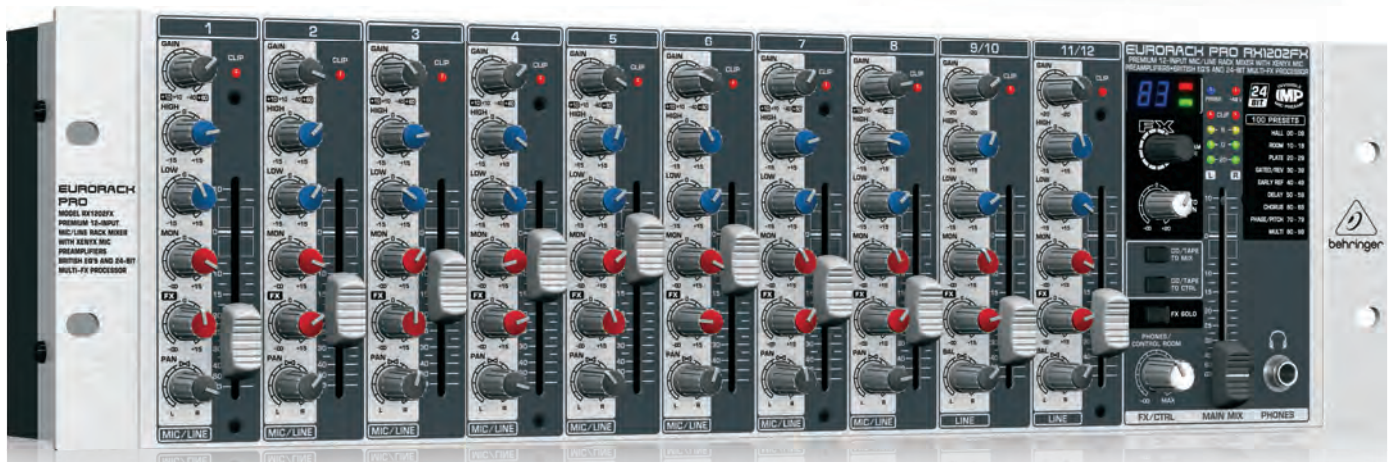
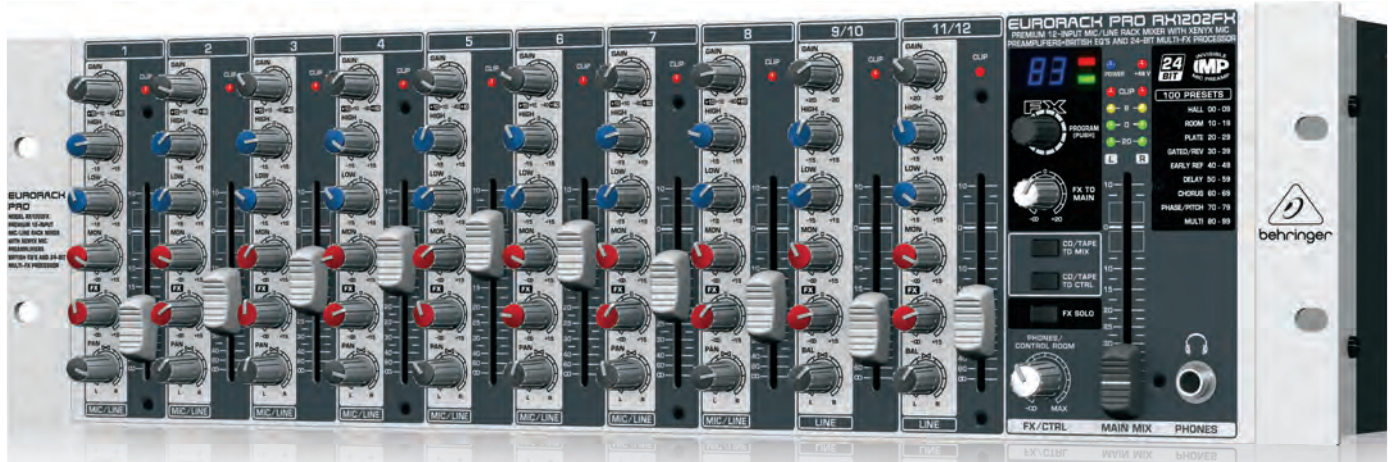
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Rackmount Mixers

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Features

There's no debate – when you choose Crown's XTi 2 Series, you're choosing one of the most powerful and innovative amplifiers on the market today. That's because the XTi 2 Series amps continue to set the standard for unmatched performance and value, delivering the goods night after night without breaking a sweat.

- Peakx Plus™ Limiters provide the ultimate in system performance and protection by allowing full control over threshold, attack, and release
- Enhanced Subharmonic Synth section provides user control over frequency, gain and filter type for system-specific tuning
- 3 user-defined fan mode controls—normal, early and fullspeed—for matching fan performance to a specific application
- New system monitoring provides software visibility of AC line voltage and power supply temperature
- Remotely manage and configure using HiQnet Band Manager™ or Audio Architect™ control software

XTi 2 Series



XTi 1002, 2002, 4002



XTi 6002

Power Matrix

Model	Channels	2Ω Dual	4Ω Dual	8Ω Dual	4Ω Bridged	8Ω Bridged
1002	2	700W	500W	275W	1400W	1000W
2002	2	1000W	800W	475W	2000W	1600W
4002	2	1600W	1200W	650W	3200W	2400W
6002	2	3000W	2100W	1200W	6000W	4200W

*1Hz, 20ms burst, both channels driven

Amplifier Performance Specifications	XTi 1002	XTi 2002	XTi 4002	XTi 6002
Sensitivity (for full rated power at 4Ω)				1.4V
Rated Power Output (per Channel at 4Ω)	500W Stereo	800W Stereo	1200W Stereo	2100W Stereo
Signal to Noise Ratio (below rated 1kHz power at 8Ω)	100 dB (A Weighted)	100 dB (A Weighted)	100 dB (A Weighted)	103 dB (A Weighted)
Total Harmonic Distortion				<0.5%
Damping Factor 20 Hz to 1kHz				>500
Frequency Response (at 1W, 20 Hz to 20 kHz)				+0 dB, -1 dB
Crosstalk (below rated power) 20 Hz to 1kHz				>70 dB
Input Impedance		20kΩ balanced, 10kΩ unbalanced		

Physical Specifications

Width	19 in. (48.3cm)			
Height	3.5 in. (8.9cm)			
Depth	12.25 in. (31.1cm)	12.25 in. (31.1cm)	12.25 in. (31.1cm)	16.2 in. (41.1cm)
Net Weight	18.5 lbs (8.4kg)	18.5 lbs (8.4kg)	18.5 lbs (8.4kg)	24 lbs (10.9kg)
Shipping Weight	21.5 lbs (9.75kg)	21.5 lbs (9.75kg)	21.5 lbs (9.75kg)	30 lbs (13.6kg)

Specifications subject to change without prior notice. Latest information available at www.crownaudio.com. Crown offers a three-year, no-fault, fully transferable warranty for every new Crown amplifier – an unsurpassed industry standard. With this unprecedented no-fault protection, your new Crown amplifier is warranted to meet or exceed original specifications for the first three years of ownership. During this time, if your amplifier fails, or does not perform to original specifications, it will be repaired or replaced at our expense. In most cases, the only things not covered by this warranty are those losses normally covered by insurance and those caused by intentional abuse. Plus, the coverage is transferable, should you sell your amplifier. See your authorized Crown dealer for full warranty disclosure and details. For customers outside of the USA, please contact your authorized Crown distributors for warranty information or call 574-294-8200. © 2015 Crown Audio, Inc.

A close-up photograph of a woman with long dark hair, wearing a dark blue t-shirt and a necklace, singing passionately into a silver and black Shure microphone. The background is a soft, out-of-focus mix of green and blue stage lights.

SHURE[®]

LEGENDARY
PERFORMANCE[™]

BLX[®] WIRELESS SYSTEMS

**LEGENDARY SOUND.
RIGHT OUT OF THE BOX.**

A large, stylized, semi-transparent 'S' logo is positioned in the bottom right corner of the advertisement, partially overlapping the text.

BLX® Wireless Systems

WIRELESS FREEDOM, MADE SIMPLE.

Making the jump to wireless should be liberating, not challenging. Shure BLX Wireless Systems combine professional quality sound with simple setup and an intuitive interface for performance you can trust right out of the box. Precision built and available in a variety of handheld, lavalier, instrument and headset configurations, it's the most accessible way to own the stage.

SYSTEM COMPONENTS

BLX4, BLX4R and BLX88 Diversity Receivers

- Up to 12 compatible systems per frequency band (region dependent)
- Microprocessor-controlled internal antenna diversity
- One-touch QuickScan frequency selection quickly locates the best frequency
- 1/4" and XLR audio outputs
- Two color audio status indicator LED



BLX4 Wireless Receiver



BLX4R Rack Mount Wireless Receiver

Additional BLX4R features:

- Adjustable output level
- Removable antennas for quick antenna distribution
- LCD display with detailed RF and audio metering
- Rugged metal construction, rack mount hardware included



BLX88 Dual Wireless Receiver

Wireless Transmitters

- Power and battery status LED
- Adjustable gain control
- Quick & easy frequency matching
- 2 AA batteries (included) provide up to 14 hours of continuous use
- 300 feet (91 m) operating range (line of sight)



BLX2 Handheld Transmitter



BLX1 Bodypack Transmitter

VOCAL

For lead and backup vocals.



PG58

CARDIOID | DYNAMIC

Professional-quality microphone capsule for lead and backup vocal performance applications



WITH BLX4 OR BLX88

SM58®

CARDIOID | DYNAMIC

Industry-standard microphone capsule tailored to deliver warm, clear vocal reproduction



WITH BLX4 OR BLX4R

BETA 58A®

SUPERCARDIOID
DYNAMIC

Precision-engineered microphone capsule optimized for lead vocal applications



WITH BLX4 OR BLX4R

Optional Accessory:
5 Color ID Caps for
handheld transmitter



GUITAR

For guitar or bass.



WA302

GUITAR CABLE

1/4"-to-TA4F instrument cable to connect transmitter to a guitar or bass



WITH BLX4 OR BLX4R

INSTRUMENT

For brass, wind, and percussion instruments.



BETA 98H/C

CARDIOID | CONDENSER

Precision-crafted, flexible gooseneck instrument microphone for brass, woodwind, and percussion applications



WITH BLX4 OR BLX4R

HEADSET

For vocalists, presenters, aerobics instructors and drummers.



PGA31

CARDIOID | CONDENSER

Comfortable, durable head-worn microphone for active performance applications



WITH BLX4, BLX4R OR BLX88

SM31FH

CARDIOID | CONDENSER

Rugged, comfortable head-worn microphone with increased moisture-resistance for active speech and fitness applications



WITH BLX4, BLX4R OR BLX88

SM35

CARDIOID | CONDENSER

Rugged, comfortable head-worn microphone for roadworthy, high-quality live vocal performance applications



WITH BLX4, BLX4R OR BLX88

PRESENTER

For presenters, instructors, teachers and clergy.



CVL

CARDIOID | CONDENSER

Reliable wearable microphone for spoken word applications



WITH BLX4, BLX4R OR BLX88

WL93

OMNIDIRECTIONAL
CONDENSER

Miniature wearable microphone for spoken word applications



WITH BLX4R

WL185

CARDIOID | CONDENSER

Premium wearable microphone optimized for spoken word applications

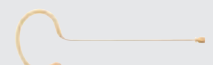


WITH BLX4R

MX153

OMNIDIRECTIONAL
CONDENSER

Premium sub-miniature earset microphone for discrete, exceptional clarity in spoken word applications



WITH BLX4R

BLX2 HANDHELD SYSTEM OPTIONS

Model	Includes
BETA 58A® VOCAL 50Hz – 16kHz	<ul style="list-style-type: none"> BETA 58A® Handheld Microphone with BLX2 Transmitter BLX4 or BLX4R Wireless Receiver Durable Padded Zipper Case Break-resistant Microphone Clip 2 AA Batteries

PG58 VOCAL 60Hz – 15kHz	<ul style="list-style-type: none"> PG58 Handheld Microphone with BLX2 Transmitter BLX4 or BLX88 Wireless Receiver Break-resistant Microphone Clip 2 AA Batteries
--------------------------------------	--

BLX1 BODYPACK SYSTEM OPTIONS

Model	Includes
WA302 GUITAR	<ul style="list-style-type: none"> WA302 Guitar Cable BLX1 Bodypack Transmitter with 2 AA Batteries (included) BLX4 or BLX4R Wireless Receiver Durable Padded Zipper Case

PGA31 HEADSET 40Hz – 20kHz	<ul style="list-style-type: none"> PGA31 Headset Microphone BLX1 Bodypack Transmitter with 2 AA Batteries (included) BLX4, BLX4R OR BLX88 Wireless Receiver Windscreen
---	--

WL93 PRESENTER 50Hz – 20kHz	<ul style="list-style-type: none"> WL93 Lavalier Microphone BLX1 Bodypack Transmitter with 2 AA Batteries (included) BLX4R Wireless Receiver Durable Padded Zipper Case Tie Clip and Windscreen
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MX153 PRESENTER 20Hz – 20kHz	<ul style="list-style-type: none"> MX153 Earset Microphone BLX1 Bodypack Transmitter with 2 AA Batteries (included) BLX4R Wireless Receiver Durable Padded Zipper Case Collar Clip, Windscreen, and Protective Pouch
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Model	Includes
SM58® VOCAL 50Hz – 15kHz	<ul style="list-style-type: none"> SM58® Handheld Microphone with BLX2 Transmitter BLX4 or BLX4R Wireless Receiver Durable Padded Zipper Case Break-resistant Microphone Clip 2 AA Batteries

BLX1 BODYPACK SYSTEM OPTIONS



Model	Includes
BETA 98H/C INSTRUMENT 20Hz – 20kHz	<ul style="list-style-type: none"> BETA 98H/C Instrument Microphone BLX1 Bodypack Transmitter with 2 AA Batteries (included) BLX4 or BLX4R Wireless Receiver Durable Padded Zipper Case

CVL PRESENTER 60Hz – 12kHz	<ul style="list-style-type: none"> CVL Lavalier Microphone BLX1 Bodypack Transmitter with 2 AA Batteries (included) BLX4, BLX4R OR BLX88 Wireless Receiver Tie Clip and Windscreen
---	--

WL185 PRESENTER 50Hz – 20kHz	<ul style="list-style-type: none"> WL185 Lavalier Microphone BLX1 Bodypack Transmitter with 2 AA Batteries (included) BLX4R Wireless Receiver Durable Padded Zipper Case Tie Clip and Windscreen
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SM31FH HEADSET 40Hz – 20kHz	<ul style="list-style-type: none"> SM31FH Headset Microphone BLX1 Bodypack Transmitter with 2 AA Batteries (included) BLX4, BLX4R OR BLX88 Wireless Receiver Windscreen
--	---

SM35 HEADSET 40Hz – 20kHz	<ul style="list-style-type: none"> SM35 Headset Microphone BLX1 Bodypack Transmitter with 2 AA Batteries (included) BLX4, BLX4R OR BLX88 Wireless Receiver Windscreen
--	---

Operating Principle
 Dynamic
  Condenser

Polar Pattern
 Cardioid
  SuperCardioid
  OmniDirectional

Frequency Response
 Flat
  Tailored

TECHNICAL SPECIFICATIONS

Operating Range:
300 ft (91 m) line of sight
(actual range depends on RF signal absorption, reflection and interference)

Available Frequencies:
Between 524–865 MHz
(available frequencies depend on applicable regulations in country where system used)

Audio Range:
50–15,000 Hz
(dependent on microphone type)

Transmitter RF Output Power:
10 mW, typical *(varies by region)*

Audio Output Connector:
XLR and 1/4" (6.3 mm) unbalanced

Maximum Output Level:
-27 dBV (XLR, mic level),
-13 dBV (1/4")

Battery Life:
Up to 14 hours

Dynamic Range:
100 dB A-weighted

System Distortion:
0.5% THD typical
(ref. +/- 38 kHz deviation, 1 kHz tone)

Operating Temperature Range:
-18°C (0°F) – +50°C (122°F)

Power Requirements:
BLX1, BLX2: 2 AA alkaline or rechargeable batteries

BLX4: 12–18 V DC at 150 mA, supplied by external power supply

BLX88: 12–18 V DC at 320 mA, supplied by external power supply

BLX4R: 12–18 V DC at 260 mA, supplied by external power supply

Note: Performance may vary depending on country regulations and operating environment.

SHURE®
LEGENDARY PERFORMANCE™

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www.shureasia.com

Product Specifications

PG48 Cardioid Dynamic Vocal Microphone

Overview

The PG48 Dynamic Vocal Microphone is a professional quality microphone designed to be used for spoken word and karaoke performance applications. With rugged durability and excellent sound, the PG48 comes with an on/off switch, swivel adapter, carrying pouch and choice of XLR cable, QTR (¼”) cable or without cable.

Features

- Tailored frequency response is smooth and extended. Tuned specifically for vocal applications.
- Cardioid polar pattern picks up the most sound from in front of the microphone and some sound from the sides. Less susceptible to feedback in high volume settings.
- Dynamic cartridge has a simple, rugged coil. Handles extreme volume levels without distortion.
- Durable metal construction.
- On/off switch for onstage control.
- Steel mesh ball grille with integral “pop” filter reduces explosive breath sounds and wind noise.

Available Models

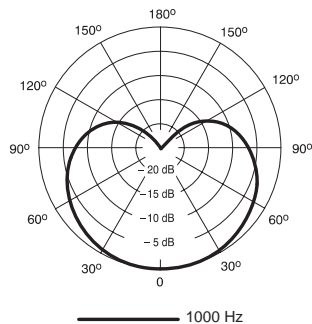
PG48-QTR	Includes a 15 ft (4.57m) XLR to 1/4” Cable, Microphone Clip, 5/8” to 3/8” Threaded Adapter, and a Storage Bag.
PG48-XLR	Includes a 15 ft (4.57m) XLR to XLR Cable, Microphone Clip, 5/8” to 3/8” Threaded Adapter, and a Storage Bag.
PG48-LC	Includes a Microphone Clip, 5/8” to 3/8” Threaded Adapter, and a Storage Bag.



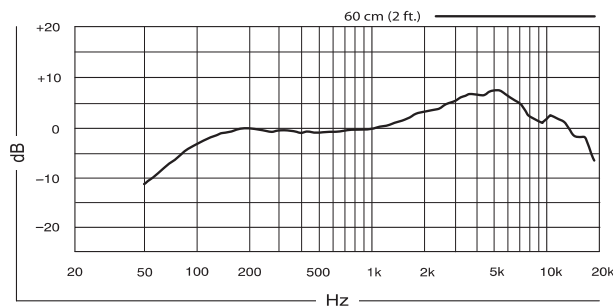
PG48

Specifications

Microphone Type	Dynamic (moving coil)
Polar Pattern	Cardioid (unidirectional)
Frequency Response	70 to 15,000 Hz
Polarity	Positive pressure on diaphragm produces positive voltage on pin 2 relative to pin 3 of microphone output connector
Output Impedance (at 1000 Hz)	600 ohms
Sensitivity (at 1000 Hz)	-52 dBV/Pa, (2.5 mV), 1 Pascal = 94 dB SPL
Electromagnetic Hum Sensitivity	22 dB equivalent SPL in a 1 millioersted field (60 Hz)
Connector	Three-pin professional audio connector (male XLR type)
Switch	Built-in On/Off switch
Environmental Conditions	This microphone operates over a temperature range of -29 to 57 degrees Celsius (-20 to 135 degrees Fahrenheit), and at a relative humidity of 0 to 95%.
Case	Die cast metal handle, black matte finish; hardened silver colored, spherical steel mesh grille
Weight	Net: 314 grams (11.1 oz) Packaged: 890 g (1 lb 15 oz)



Polar Pattern
Measured at 1000 Hz



Frequency Response

SHURE[®]
LEGENDARY
PERFORMANCE™

Control® 26C/CT

Professional Series – Background/Foreground Ceiling Speaker



Key Features:

- Coaxially mounted 165 mm (6.5 in) woofer with butyl rubber surround and 19 mm (¾ in) titanium coated diffraction-loaded tweeter
- High power, wide frequency response and low distortion for high sound level capability
- Wide coverage allows fewer speakers, reducing the cost of the installed sound system without sacrificing performance
- JBL's exclusive SonicGuard™ overload protection allows higher operational levels and improved system reliability (26C only)
- Packaged with grille, backcan and tile rails for fast installation and easy dealer stocking



Description:

The Control 26C is a compact ceiling speaker providing premium performance in background, foreground music sound systems. The Control 26C is perfectly suited for a wide variety of applications from casinos and hotels to upscale restaurants and themed locations. High power handling, wide frequency response and low distortion make the Control 26C ideal for sound systems requiring a higher fidelity sound from ceiling loudspeakers. The premium performance capability ensures excellent sound character, providing pleasant, enveloping sound throughout the listening area.

The Control 26C's 16 ohm impedance allows use of multiple speakers in parallel without having to use a more expensive constant voltage distributed system. The optional Control 26CT version includes a multitap transformer for 70V/100V systems.

JBL's exclusive SonicGuard overload protection is a non-invasive loudspeaker protection system that is inaudible to the listener, ensuring reliability while providing full fidelity sound. The computer-optimized ported enclosure delivers warm, smooth bass response. Low frequency output can be further augmented with the addition of one of the Control Contractor subwoofer models.

The 165 mm (6.5 in) woofer features a polyurethane-coated cone and pure butyl rubber surround for long life, even in high humidity environments. An aluminum voice coil former provides extra cooling for greater long-term power handling.

The coaxially mounted 19 mm (¾ in) titanium coated tweeter provides crisp, clear highs. Diffraction-loading of the tweeter provides wide, even coverage of the listening area. The extremely broad 110° coverage pattern allows for fewer speakers to be used, making for a simpler and less expensive installation.

Specifications:

System

Freq. Range (-10 dB) ¹	75 Hz – 20 kHz
Power Capacity ²	150 Watts Continuous Program Power 75 Watts Continuous Pink Noise
Nominal Sensitivity ³	89 dB SPL, 1W @ 1 m (3.3 ft)
Nominal Coverage Angle ⁴	110° conical coverage
Directivity Factor (Q)	5.9 averaged 500 Hz to 4 kHz
Directivity Index (DI)	4.6 averaged 500 Hz to 4 kHz
Rated Maximum SPL	107 dB @ 1 m (3.3 ft)
Nominal Impedance (26C)	16 ohms (Min Z: 16.5 Ω @ 290 Hz)
Transformer Taps (26CT)	70V: 60W, 30W, 15W & 7.5W taps 100V: 60W, 30W, & 15W taps

Transducers

Low Frequency	165 mm (6.5 in) polypropylene-coated, 1" coil on aluminum former
High Frequency	19 mm (¾ in) titanium-coated polyester

Physical

Enclosure	Backcan: Formed steel Baffle/Rim: Medium impact polystyrene, fire rated UL94V-0
Overload Protection	Full-range power limiting to protect network and transducers (Control 26C only).
Termination	Removable locking connector with screw-down terminals. 2 input terminals and 2 loop-thru output terminals. Max. wire 12 AWG (2.5 mm ²)
Safety Agency Rating	Suitable for use in air handling spaces per UL1480, UL2043, NFPA90 & NFPA 70. S7232/UL Listed, Signaling Speaker. Transformer UL registered per UL1876. In accordance with IEC60849/EN60849.
Outside Dimensions (H x Dia)	210 x 252 mm (8.3 x 9.9 in) 190 mm (7.5 in) front of ceiling tile to back of backcan
Cutout Size	220 mm (8.75 in)
Net Weight (each)	3.4 kg (7.5 lb) CT: 4.2 kg (10 lb)
Shipping Weight (pair)	8.1 kg (18.0 lb) CT: 9.7 kg (21 lb)
Included Accessories	» C-shaped support backing plate » 2 tile support rails (fits both 2 x 4 ft or 600 x 1200 mm tiles) » Cutout template » Paint shield » Removable locking wiring connector

¹ Half-space (flush mounted in ceiling)

² Continuous Pink Noise rating is IEC-shaped pink noise with a 6 dB crest factor for 100 hours continuously. Continuous Program power is a conservative expression of the system's ability to handle normal speech and music program material and is defined as 3 dB above the Continuous Pink Noise Rating.

³ Half-space (in ceiling), average 100 Hz to 10 kHz

⁴ 500 Hz to 4 kHz

JBL continually engages in research related to product improvement. Changes introduced into existing products without notice are an expression of that philosophy.

Control® 26C/CT

Professional Series – Background/Foreground Ceiling Speaker



Input connection is conveniently provided on a removable locking connector (included), providing secure connection via screw-down terminals and allowing a system to be prewired before installing the speaker for fast snap-on convenience. Separate connector terminals are available for the input and for the loop-through wires, making it easy to jumper the speaker signal to additional speakers. The input terminal plate provides strain relief for either bare wire, plenum cable or ½ inch conduit (12 mm I.D.). The terminal box is securely enclosed to meet safety codes.

The speaker trim and grille are paintable to match any decor. A paint shield is provided for covering the drivers while painting the rim.

Installation of the Control 26C is quick and easy. The loudspeaker is packaged complete with the backcan, grille, support backing bracket and tile rails.

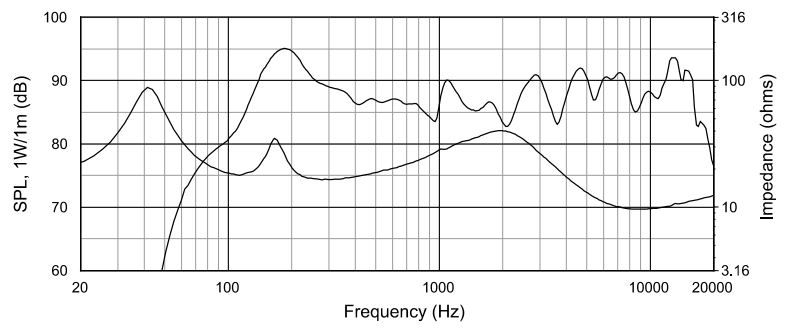
The entire installation can be accomplished without requiring access above the ceiling. A template is provided for marking the cutout. An innovative C-shaped support backing plate can be installed from below through the cutout to reinforce the top of the ceiling material. Tile bridge rails are included which can be screwed onto the C-plate to extend support to the T-channel grid in suspended ceiling installations. After the speaker is fitted through the cutout, it is held securely in place via three mounting tabs which tighten onto the C-plate, if used, or directly onto the ceiling material.

The Control 26C backcan is made of formed steel and the speaker is suitable for use in air handling spaces, per U.L.-2043. An attachment loop is provided on the backcan for cabling to the building structure as a secondary support in seismic areas or where required by code.

The model Control 26CT includes a 60W multitap transformer for use in either 70.7V or 100V distributed-line systems. The transformer effectively limits the power to the speaker, so SonicGuard is not included in the Control 26CT. Taps are selected with a rotary switch conveniently located on the front panel, but protected under the grille, so that the speaker does not have to be removed to adjust tap settings.

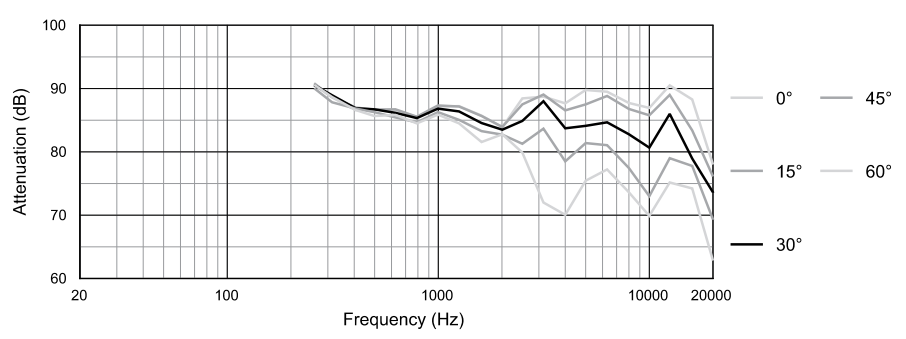
All JBL Control Contractor loudspeakers—both ceiling speakers and surface-mount models—are designed with a similar sonic signature, allowing for mixing and matching of the various models within an application, providing a similar tonal character throughout the entire listening area.

Frequency Response:



Measured on-axis with a distance referenced to 1 meter at 1-watt.
Shown as a half-space (2π) environment.

Off Axis Frequency Response (1/3 Oct Avg):

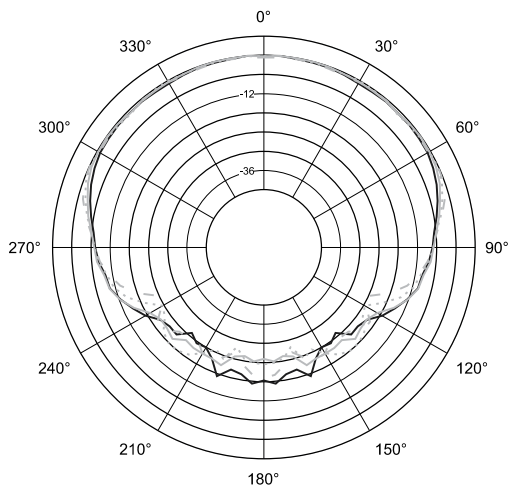


Control[®] 26C/CT

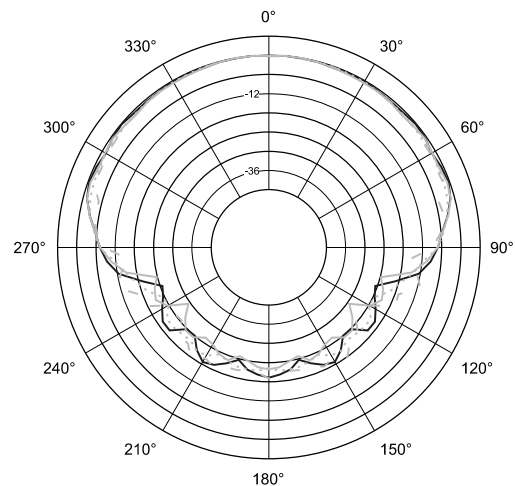
Professional Series – Background/Foreground Ceiling Speaker



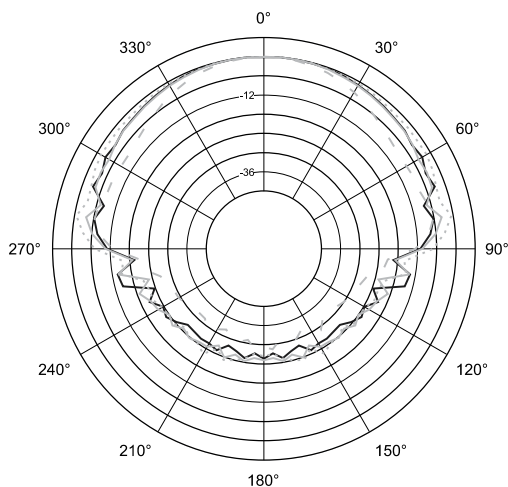
1/3 Octave Polars:



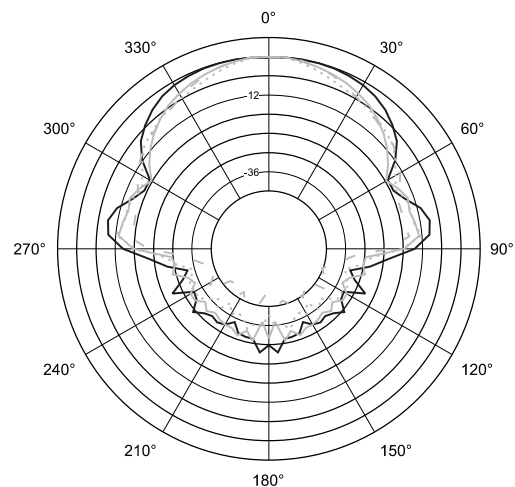
- 200Hz
- 250Hz
- 315Hz
- - 400Hz



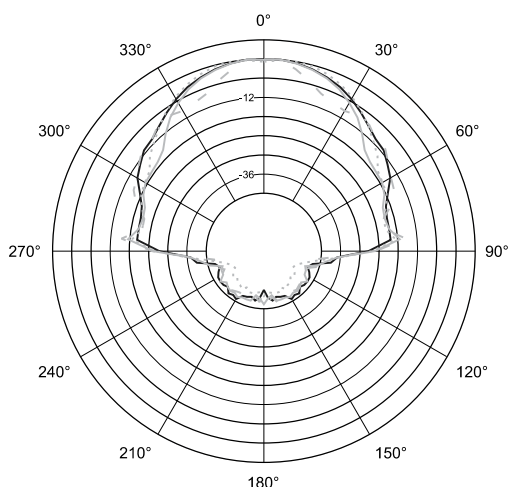
- 500Hz
- 630Hz
- 800Hz
- - 1kHz



- 1.25kHz
- 1.6kHz
- 2kHz
- - 2.5kHz



- 3.15kHz
- 4kHz
- 5kHz
- - 6.3kHz



- 8kHz
- 10kHz
- 12.5kHz
- - 16kHz

Control® 26C/CT

Professional Series – Background/Foreground Ceiling Speaker



Architectural Specifications:

The loudspeaker shall be of in-ceiling design, consisting of a 165 mm (6.5 in) low frequency transducer, a coaxially-mounted 19 mm (¾ in) high frequency transducer, and frequency dividing network installed in a ported enclosure. The low frequency voice coil shall be 25 mm (1 in) in diameter and the coil former shall be of aluminum for maximum heat dissipation.

Performance specifications of a typical production unit shall be as follows: Measured sensitivity (SPL at 1m [3.3 ft] with 4V input, averaged from 100 Hz to 10 kHz) shall be at least 89 dB-SPL. Usable frequency response shall extend from 75 Hz to 20 kHz (10 dB below rated sensitivity in half-space) with no external equalization. Rated power shall be at least 75 watts continuous pink noise power, defined as conforming to international standard IEC268-5 (shaped pink noise with peak-to-average ratio of 6 dB) for a period of 100 continuous hours.

The system shall be protected against damage from occasional overpowering via full range series lamps that limit the power to the network and transducers (Control 26C, not Control 26CT). The high frequency transducer shall be horn-loaded to more evenly cover a minimum 110° polar conical coverage area.

The backcan shall be constructed of formed steel and the baffle of UL94V-0 fire rated medium impact polystyrene. An enclosed terminal box shall be included providing strain relief for use with either plenum-rated wire, 1/2 in (13 mm inside diameter) conduit, or flexible conduit up to 22 mm (7/8 in) outside diameter. The external wiring shall be accomplished via a removable lockable wiring connector with screw-down terminals to provide both secure wire termination and rewiring capability before loudspeaker installation. An attachment loop shall be provided on the back panel for cabling to building structure as a secondary support point.

The system shall include a support backing plate to reinforce the ceiling material and tile support rails for use on either 2 x 4 ft or 600 x 1200 mm suspended ceiling tiles and which can all be installed from beneath the ceiling tile.

Overall front face diameter shall not exceed 252 mm (9.9 in), overall depth from the bottom of the ceiling shall not exceed 190 mm (7.5 in), and shall weigh no more than 3.4 kg (7.5 lb).

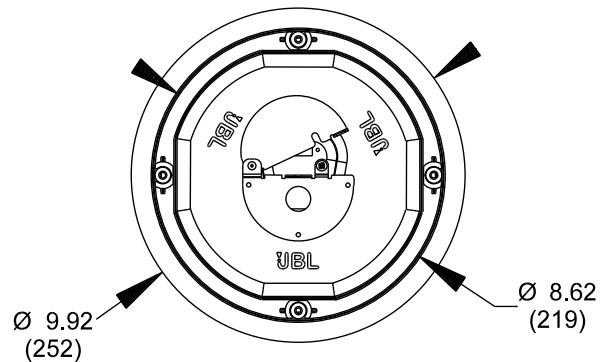
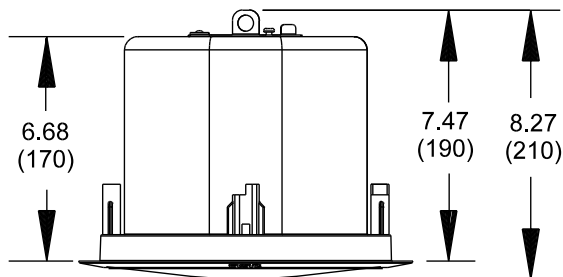
Control 26C: Nominal impedance shall be 16 ohms.

Control 26CT: The loudspeaker shall be equipped with transformer for use in either 70.7 or 100V distributed-line speaker systems, with taps selectable by rotary switch located on the front panel so that the speaker does not have to be removed to adjust tap settings. Taps shall be nominally 60W @ 70V, 30W @ 70V (60W @ 100V), 15W @ 70V (30W @ 100V), and 7.5W @ 70V (15W @ 100V).

The loudspeaker shall be the JBL Model Control 26C (Control 26CT).

Mounting Dimensions:

Dimensions in inches (mm)



MERIT X SERIES POWER CONDITIONERS

A Merit Series Power Conditioner is the perfect low-cost AC power solution for any rack mount system. Install an M-8x², M-8Lx, or M-8Dx in to the top slot of your rack, and the eight switched outlets in the rear panel will power up and protect all your equipment up to a 15-amp load. The M-8Lx and M-8Dx feature two slide out, swiveling light fixtures to provide discreet illumination of your equipment on stages, in studios, and in other dark places. A dimmer knob lets you adjust the lamp brightness to just the right level. The M-8Dx adds a bright red, three-digit LED voltmeter that displays incoming voltage. The M-8x² is designed for applications where lights are not required.

Merit M-8x² Power Conditioner



Noise Filtration



Surge Protection



Nine Total Outlets



15 Amp Rating



"Protection OK" Indicator



Wall Wart Spacing

Merit M-8Lx Power Conditioner



Noise Filtration



Surge Protection



Nine Total Outlets



15 Amp Rating



"Protection OK" Indicator



Wall Wart Spacing



Front Panel Pull-out Lights

Merit M-8Dx Power Conditioner



Noise Filtration



Surge Protection



Nine Total Outlets



15 Amp Rating



"Protection OK" Indicator



Wall Wart Spacing



Front Panel Pull-out Lights



Digital Voltmeter

FURMAN

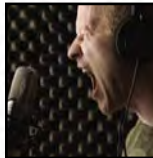
THE SOLUTION TO POWER YOUR APPLICATION...

INSTRUMENT RIGS



You've got a rack for your effects, preamps, tuner...You're going to plug that into the wall? One big spike and your rig is up in smoke. Furman's standard level surge/spike protection defends your gear from the spikes and surges that are so common at gigs and practice spots. With Furman's standard level RFI/EMI filtration, you'll get a quieter tone without pops, crackles, and the local radio station coming out of your amp. Plus, dual pull-out lamps (M-8Lx/M-8Dx) let you see your rack without turning the house lights on, while the digital voltmeter (M-8Dx) lets you monitor incoming voltage.

RECORDING



Can't track down where that noise is coming from? Your mix sounding flat? With Furman's standard level RFI/EMI filtration you'll lower the noise floor caused by the dirty AC power coming into your console or DAW. Furman's standard level surge and spike protection keeps your sensitive digital equipment from acting funny or burning up due to everyday spikes and surges. You can even monitor voltage changes, as the digital meter (M-8Dx) allows you to keep an eye on the incoming line voltage. With a 15A capacity and nine total outlets, it's enough to power your whole home studio.

DJ EQUIPMENT



Bars, clubs and other event venues have some of the worst power out there - from air compressors turning on and off to light shows pulling current loads up and down, the AC power can be a strain on the circuits in your rig. Furman's standard level protection and filtration keeps the bad stuff out and the digital voltmeter (M-8Dx) lets you monitor the incoming line voltage. The dual pull-out front panel lights (M-8Lx/M-8Dx) let you discreetly see your board and gear without distracting from the show on the dance floor.

PRO AUDIO



When you're out there gigging, you never know what kind of power you're going to get. The wear and tear on mobile rigs eventually takes it toll - that's why it's smart to plug into Furman's standard level protection and RFI/EMI filtration. It keeps your equipment safe and sounding clean, while the digital voltmeter (M-8Dx) lets you monitor incoming voltage. Whether you're setting up a show at the local club or powering up the church band for their next service, make sure you give them power they can trust.



MERIT X SERIES SPECIFICATIONS

Maximum Output Current
15 Amps

Line Cords
6 ft. captive, 14 AWG, with 3-conductor Edison Plug

Lamps (M-8Lx/M-8Dx)
Two 120V incandescent bulbs, 4 watts each

Operating Voltage
120VAC 60Hz

Spike Protection Mode
Line to neutral

Energy Dissipation
150 Joules

Peak Impulse Current
12,000 Amps

Maximum Continuous Operating Voltage
130 VAC RMS

Noise Attenuation (Transverse Mode)
M-8x²: Greater than 23db, 200Khz to 10MHz
M-8Lx: Greater than 26db, 200Khz to 10MHz
M-8Dx: Greater than 26db, 200Khz to 10MHz

Dimensions
1.75" H x 19" W x 3.75" D (M-8x²)
1.75" H x 19" W x 7.5" D (M-8Lx/M-8Dx)

Weight
M-8x²: 4.9 lbs. (2.2 kg)
M-8Lx/M-8Dx: 6 lbs. (2.7 kg)

Three Year Limited Warranty
Merit Series units are protected by a limited three year warranty covering defects in materials and workmanship.



Configuration:

LR-3200-072 Basic DSP RF Receiver (72 MHz)

Product Overview:

The LR-3200-072 receiver from Listen Technologies offers outstanding audio clarity and quality with the best range and reception in its class.

Part of our Intelligent Digital Signal Processing (iDSP) line, the LR-3200-072 is the smallest device of its kind, resulting in a compact unit that won't burden the end user. An integrated neck loop/lanyard makes each receiver easy to wear, and the DSP loop driver offers an improved listening experience for anyone with a T-coil-equipped hearing aid. Dual 3.5mm output jacks also allow receivers to be shared between users.

Each receiver is equipped with a micro USB connection which can be used with free [iDSP software](#) for charging, set up, programming, inventory management and firmware updates.

Extended speaking sessions, presentations and more can be challenging for other devices, but the LR-3200-072 incorporates advanced Lithium-ion rechargeable batteries that offer long life and reliable power.

Highlights:

- RF receiver offering best-in-class sensitivity and sound
- Integrated neck loop/lanyard with DSP loop driver for an enhanced T-coil listening experience
- Smallest device of its kind makes it easier to wear and use and for venues to dispense, store and maintain
- Limited lifetime warranty with hassle-free support
- Lanyard and belt clip options offer convenient and discreet choices for the end-user
- Advanced rechargeable battery technology eliminates the costs and hassles associated with frequent battery replacement
- Designed for single-channel applications

Includes:

One (1) LR-3200-072 Intelligent DSP RF Receiver (72 MHz)* *The LR-3200-072 comes with a quick start guide and a non-proprietary field replaceable Lithium-ion battery.

Product Specification: Basic DSP RF Receiver (72 MHz)	
Audio	
System Distortion	< 1% total harmonic distortion (THD) at 80% deviation
Output/s	Two (2) 3.5 mm (0.14 in.) connectors, unbalanced, 0 dBu nominal output level, 50 mW maximum, impedance 32 ohm

Product Specification: Basic DSP RF Receiver (72 MHz)	
System Frequency Response	50 Hz - 15 kHz (± 3 dB)
System Signal to Noise Ratio	SQ disabled 70 dB, SQ enabled 80 dB
Controls	
User Controls	Power, up/down volume
Programming	Via software and USB port
Set-up Controls	Press and hold up/down volume buttons for 5 seconds to enter channel adjust, use up/down to select channel
Indicators	
LEDs	Flashes when batteries are low or to indicate charging, solid when fully charged
RF	
Frequency Range	72.0250 - 75.9500 MHz
Number of Channels	Basic Mode: 3 wide Band, Expand Mode: 17 wide band
Sensitivity	.6uV typical, 1 uV maximum for 12 dB sinad
Frequency Accuracy	$\pm .005\%$ stability 32 to 122 °F (0 to 50 °C)
Squelch	Fixed level, automatic on loss of RF signal
Antenna Type	Uses ear phone/neck loop lanyard and short ear phone cable or standard earphone cable
Power	
Battery Type	Lithium Ion 3.7 Vdc, 1200 mAh
Battery Life	24 Hours of continuous use
Battery Charging Time	Fully charged in 2.5 Hours
Power Supply	Micro USB connector, 5 V, 500 mA
Physical	
Color	Black
Unit Weight	1.60 oz. (45 g)
Unit Weight with Batteries	2.40 oz. (68 g)
Shipping Weight	3.20 oz. (91 g) with 1.0 lbs. (454 g) minimum
Dimensions (H x W x D)	3.75 x 2.00 x 0.64 in. (9.6 x 5 x 1.7 cm)
Dimensions with Belt Clip	3.75 x 2.00 x 0.80 in. (9.6 x 5.0 x 2.1 cm)
Environmental	
Temperature - Operation	14 to 104 °F (-10 to 40 °C)
Temperature - Storage	(-)4 to 122 °F (-20 to 50 °C)
Relative Humidity	0 to 95% relative humidity, non-condensing
Compliance	
Standards	FCC Part 15 Class B, Industry Canada ICES-3 (B), RoHS



Product Overview:

Best for assistive listening applications where access to ambient or environmental sound is desired, the LA-404 Universal Single Ear Bud is the ideal solution. The comfortable ear bud design sits just inside the ear to directly deliver outstanding audio clarity without interfering with external sounds, and the universal design allows it to work for all listeners. Disposable foam cushions (LA-163) are also available for easy replacement and added user comfort.

The LA-404 can be used with either our integrated neck loop/lanyard that is worn around the neck, or connected via the included 3.5mm extension cable to a receiver worn on a belt clip or in a pocket. The hard plastic construction is both durable and easy to clean, and each ear bud can be quickly disinfected using our Listen disinfecting wipes (LA-901).

Highlights:

- Single-ear design allows ambient or external noises to be heard
- Universal design to fit large or small ears comfortably
- Compatible with neck loop/lanyard or can be used with receivers worn on belt clips or carried in a pocket
- Durable plastic construction for long life and easy cleaning or disinfecting

Includes:

One (1) LA-404 Universal Single Ear Bud
One (1) LA-434 Earphone Extension Cable

Product Specification: Universal Single Ear Bud	
Audio	
Frequency Response	20 Hz - 20 kHz
Impedance	32 ohm +/- 15% @ 1 kHz
Rated Power Input	10 mW
Max Power Input	20 mW
Output Sensitivity	82 dB +/- 4dB @ 1 kHz, 1 mW
Interconnections	
Connector/s	Male 3.5 mm (mono)
Physical	
Color	Dark Gray
Shipping Weight	1.0 lbs. (454 g)
Cable Length	13 in. (33 cm), extension cable is 28 in. (71 cm)
Weight	0.32 oz. (9 g)
Compliance	
Standards	RoHS



Configuration:

LR-100-072 Stationary RF Receiver/Power Amplifier (72 MHz)
LR-100-216 Stationary RF Receiver/Power Amplifier (216 MHz)

Product Overview:

Listen’s LR-100 Stationary RF Receiver/Power Amplifier is a stationary auditory assistance receiver with a built-in power amplifier. When used with a Listen transmitter, the LR-100 can deliver high quality audio for use in a variety of locations and applications — most commonly with a wireless audio distributed system. This unit has Listen’s signature Look&Listen™ LCD Display showing channel, lock, and battery level. A security cover protects auxiliary and receiver volume, adjustable squelch and trim controls. It has an balanced or unbalanced speaker wire output options. Multiple input options give this unit great flexibility. It’s powered by a 15 VAC/1000mA power input or 12 VDC battery. An antenna is needed for reception.

Highlights:

- Superior audio quality - 80 dB signal-to-noise ratio (SNR), setting the industry’s sound quality standard
- 57 channels
- 100 % Digital - Listen receivers are digitally-tuned so the transmission won’t drift
- Programmability - Unneeded channels can be locked so this receiver will access only one or more channels of your choice
- Look & Listen™ LCD shows channel, battery status, signal strength and programming information
- Uses standard alkaline or nickel-metal hydride (NiMH) batteries
- Built in SmartCharge™ won’t allow batteries to overcharge. Charging circuitry is conveniently built into Listen’s receivers
- Drop in charging contacts for any of Listen’s many charging cases or a charging plug on the side of the unit
- Adjustable squelch control
- Selectable audio output
- Multiple input options
- Remote control capabilities
- Optional 12 VDC input
- Many accessory options make Listen products ideal for a wide range of applications

Includes:

- One (1) LR-100 Stationary RF Receiver/Power Amplifier
- One (1) LR-100 manual
- One (1) LA-201 15 VAC Power Supply
- One (1) LA-124 90° Helical Antenna (216 MHz)
- One (1) Hex Wrench

Product Specification: Stationary RF Receiver/Power Amplifier (216)(Discontinued)	
Audio	
Frequency Response	System: 63 Hz - 10 kHz (±3 dB)
Signal-to-Noise Ratio	80 dB SQ enabled, 50 dB SQ disabled (A Weighted)
Distortion	< 2% total harmonic distortion (THD) at 80% deviation
Input/s	One (1) female XLR-1/4 in combo connector, balanced, 0 dBu nominal input level adjustable, +13 dBu maximum, impedance 600 ohmTwo (2) phono connectors, unbalanced, -10 dBu nominal input level adjustable, +7 dBu maximum, impedance 10k ohm band, 40 narrow band

Product Specification: Stationary RF Receiver/Power Amplifier (216)(Discontinued)	
Output/s	One (1) male XLR, balanced, 0 dBu nominal output level, +16 dBu maximum, impedance 2k/10 Ohms (line/mic)Two (2) phono connectors, unbalanced, -10 dBu nominal output level, +2 dBu maximum, impedance 2k ohmOne (1) 3.5mm stereo connector, unbalanced, adjustable output level, +7 dBu maximum, impedance 10 ohmOne (1) detachable terminal block, bridged, adjustable output level, 15/10 watts (peak/RMS) continuous power with 4 ohm load
Controls	
User Controls	Front: Power, test tone on/off, channel up/down, input levels, mix level, contour, monitor volume controlRear: Audio output select (RX Only, RX + AUX, RX or AUX),Speaker (Output, Aux), switchable balanced output levelRemote Controls: Eight (8) position detachable terminal block, channel up, channel down, mute
Programming	Unit can be programmed so that only desired channels are displayed to the user, channel selection can be locked by holding the SEEK button 5 seconds.
Indicators	
LCD	Channel designation, lock status, RF power level, programming (front panel)
Power LED	Indicated by a green LED when on (front panel)
VU Meter	Four (4) LED (three green, one red)
RF Power	Indicated on the LCD (low, mid, high)
Squelch	Green LED illuminates when the unit is squelched
Mute	Green LED illuminates when the output audio is muted
RF	
Frequency Range	216.025 - 216.987 MHz
Number of Channels	57 (19 wide band, 38 narrow band)
Sensitivity	.6uV typical, 1 uV maximum for 12 dB SINAD
Frequency Accuracy	± .005% stability +32 °F to +122 °F (0 °C to +50 °C)
Antenna Type	LA-124 90° Helical Antenna (216 MHz)
Antenna Connector	BNC
Power	
Power Supply Input	120 VAC, 60 Hz, 19 Watts
Power Supply Output	15 VAC, 1 Amp
Power Supply Connector	.02 in (5.0 mm) OD, .01 in. (2.5 mm) ID, barrel type
Optional Battery	12VDC, connected via terminal block
Optional Battery Charging	Trickle charge of optional 12VDC battery through terminal block connection
Power Supply Type	In line power supply, Listen part number LA-201
Physical	
Color	Dark Grey with white silk screening
Unit Weight with Power Supply	4.2 lbs. (1.9 kg)
Shipping Weight	7.0 lbs. (3.2 kg)
Rack Mounting	One (1) rack space height, 1/2 rack space wide, one (1) or two (2) receivers can be mounted in one rack space, optional rack mount (LA-326)
Dimensions (H x W x D)	1.75 x 8.50 x 9.13 in. (4.5 x 21.5 x 23 cm)

Product Specification: Stationary RF Receiver/Power Amplifier (216)(Discontinued)	
Unit Weight	2.8 lbs. (1.3 kg)
Environmental	
Temperature - Operation	-10 °C (14 °F) to +40 °C (104 °F)
Temperature - Storage	-20 °C (-4 °F) to +50 °C (122 °F)
Relative Humidity	0 to 95% Relative Humidity, non condensing
Compliance	
Power Supply Compliance	UL Listed
Standards	FCC Part 15, Part 90, Industry Canada



Configuration:

LT-800-072-P1 Stationary RF Transmitter
 Package 1 (72 MHz)

Product Overview:

Combining our LT-800-072 Stationary RF Transmitter with the LA-106 Telescoping Top-Mounted Antenna and LA-304 Assistive Listening Notification Signage Kit, this complete package makes it easy to get your 72 MHz system installed and available to listeners right away.

Highlights:

- Perfect start-up package for your 72 MHz RF assistive listening system
- Includes our LT-800 transmitter, LA-106 antenna, and the LA-304 signage kit to ensure awareness of your system and compliance
- Balanced and unbalanced audio inputs allow for use with any audio source
- Built-in auto processor optimizes audio (voice or music) prior to transmission
- 57 available, selectable channels
- VU level meter and test tone for simple installation and set up
- 30-day, no-obligation demonstration available for your venue or business

Includes:

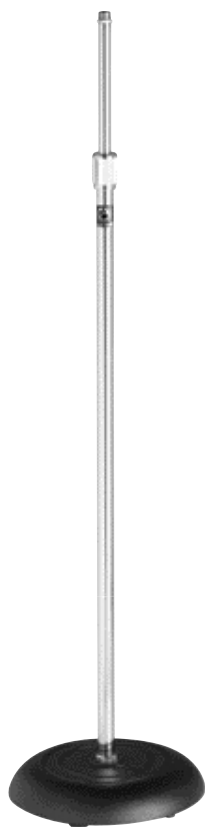
- One (1) LT-800 Stationary RF Transmitter (72 MHz)
- One (1) LA-207 Power Supply for LT-800
- One (1) Line Cord
- One (1) Quick reference card
- One (1) LA-106 Telescoping Top Mounted Antenna (72 MHz)
- One (1) LA-304 Assistive Listening Notification Signage Kit

Product Specification: Stationary RF Transmitter Package 1 (72 MHz)	
Physical	
Shipping Weight	6.0 lbs. (2.7 kg)



MS-10C(CE) & MS-12C(CE)

All-Purpose Microphone Floor Stands



MS-10C



MS-12CE

Features

- Economical, Industry Standard Floor Stands Suitable for a Variety of Applications
- Wearproof, Three-Piece Clutch Offers Secure, Fast, and Noise-Free Height Adjustment
- Edge-Concentrated, One-Piece Cast Metal Circular Base Ensures Maximum Stability
- Field Serviceable Parts Guarantee Long Product Life
- Steel Tubing is Finished in a Choice of Mirrored Chrome or Non-Reflective Ebony Epoxy (E).
- Anti-Vibration Cap Absorbs Incidental Vibrations and Sounds.
- Lock-Nut Ring Securely Positions Tubing to Base.
- Atlas Sound Stands are Threaded 5/8"-27 and Include a Lock-Nut Ring for Versatile Positioning of Accessories.

Applications

Atlas Sound microphone floor stand Models MS-10C/MS-10CE and MS-12C/MS-12CE are the industry standard for application in schools, churches, recreation complexes, lounges, restaurants, conference areas, meeting rooms or wherever sound reinforcement or communications systems are applied. High-quality materials are combined to make these functional, full-height stands extremely stable and durable-serving as exceptional values for performers and presenters.

General Description

These all-purpose chrome and ebony finished stands, respectively, are quality, long-lasting models which feature durable tubing, the famous Atlas Sound wearproof clutch, and either a 10" or 12" diameter die cast circular base. The three-piece clutch provides positive locking control and is able to withstand years of stage and studio handling. The base features edge-concentrated weight distribution and is equipped with rubber pads to absorb shock and protect floor surfaces.

The 5/8" and 7/8" diameter tubing is fully adjustable. Tubing is manufactured of cold rolled steel and terminates in the industry standard 5/8" - 27 thread suitable for microphone clamps and accessories (see reverse side). Top and bottom lock-nut rings are included for versatile and secure positioning.

Models MS-10C/MS-12C are finished in chrome; Models MS-10CE/MS-12CE are finished in ebony epoxy to eliminate reflections caused by high-intensity lighting. This durable epoxy finish will withstand the rigors of repeated use and frequent transportation.

Specifications

MS-10C

Height Span	35" - 63" (89mm - 160mm)
Base Diameter	10" (25mm)
Tube Finish	Chrome
Base Finish	Ebony
Weight	9.0 lbs. (4.1 kg)

MS-10CE

Height Span	35" - 63" (89mm - 160mm)
Base Diameter	10" (25mm)
Tube Finish	Ebony
Base Finish	Ebony
Weight	9.0 lbs. (4.1 kg)

MS-12C

Height Span	34" - 62" (86mm - 158mm)
Base Diameter	10" (25mm)
Tube Finish	Chrome
Base Finish	Ebony
Weight	9.6 lbs. (4.4 kg)

MS-12CE

Height Span	34" - 62" (86mm - 158mm)
Base Diameter	10" (25mm)
Tube Finish	Ebony
Base Finish	Ebony
Weight	9.6 lbs. (4.4 kg)

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Accessories

Boom Attachments

- PB11X(CH/EB) Adj. 16¼" – 24½" Length, 2 lb. Counterweight, (Chrome/Ebony)
- PB15(CH/EB) Fixed 34" Length, 2 lb. Counterweight, (Chrome/Ebony)
- PB21X(CH/EB) Adj. 25¼" – 38½" Length, 2 lb. Counterweight, (Chrome/Ebony)

Gooseneck Flexible Extensions (.338" I.D.)

- GN-6(E) 6" Length, Chrome (Ebony)
- GN-13(E) 13" Length, Chrome (Ebony)
- GN-19(E) 19" Length, Chrome (Ebony)

Clip-Mounting Microphone Accessories

- MICCLIP Mic Clip
- LO-2B(E) Lock-On / Mic Clip Disconnect, Chrome (Ebony)
- TM-1(E) Twin Microphone Mount, Chrome (Ebony)

Multi-Purpose Clamps

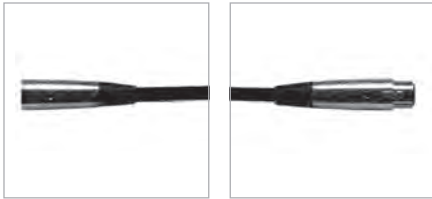
- CO-1B Adapter & Clamp, ⅝" -27, Max. Opening ⅞", Ebony
- MAC-1 Adapter & Clamp, ⅝" -27, Max. Opening 1½", Ebony

Cable Hangers & Tube Extensions for Use With Copling Adapters

- CH-1B(E) Cable / Tambourine Hanger, Chrome (Ebony)
- AD-7B 3" Long Tube, ⅝"-27 Male Thread, Chrome Plated
- AD-8B 6" Long Tube, ⅝"-27 Male Thread, Chrome Plated
- AD14B(E) 90° Angle Tube, ⅝"-27 Male & Female Thread, Chrome Plated, 4"H x 4" Ext. (Ebony)
- AD19B(E) 90° Angle Tube, ⅝"-27 Male & Female Thread, Chrome Plated, 6"H x 3" Ext. (Ebony)

Replacement Kits

- MSC Chrome Tube Assembly (⅝" - ⅞") with Clutch
- MSCE Ebony Tube Assembly (⅝" - ⅞") with Clutch
- MSC-K Clutch for Chrome Stands with ⅞" Diameter Tubing
- MSCE-K Clutch for Ebony Stands with ⅞" Diameter Tubing



DESCRIPTION:

StageMASTER low-impedance microphone cables are designed to be quiet, durable and dependable. These cables are hand-soldered with top-quality metal XLR connectors and extremely low-noise, twisted-pair wire

StageMASTER SMM microphone cables are not "outsourced." They are manufactured in our North American facilities, by our employees, according to the strictest quality standards we have developed in our more than 25 years in business.

SMM microphone cables are the perfect value for any budget. You can depend on StageMASTER SMM microphone cables to perform night after night.

SMM Microphone cables are available in 1, 3, 5, 10, 15, 20, 25, 30, 50 and 100 foot lengths.

FEATURES:

- » Quiet and durable CS-MIC.K 2-conductor shielded audio cable
- » Terminated with high-quality, nickel-plated XLR connectors for years of superior performance and maximum value
- » Hand-built and individually tested to meet performance and quality requirements
- » 1-year limited warranty

WIRE SPECIFICATIONS:

WIRE:	CS-MIC.K 2-Conductor, Shielded	
CONDUCTOR GAUGE:	24 AWG	20 mm ²
STRANDING <i>no. strands x AWG:</i>	7 x 32	7 x .254 mm ²
CONDUCTOR MATERIAL	Bare Annealed Copper	
INSULATION:	.013"	.330 mm
INSULATION MATERIAL:	Polypropylene	
INSULATION DIAMETER:	.050 ±.002"	1.27 ±.051 mm
NOMINAL LAY LENGTH <i>pair:</i>	1.75" Left Hand	44.5 mm
FILLER:	Jute as required	
SHIELD MATERIAL	Bare Annelded Copper Serve	
SHIELD COVERAGE:	90%	
JACKET MATERIAL:	Polyvinyl Chloride	
JACKET COLOR:	Matte Black	
JACKET WALL THICKNESS:	.055"	1.40 mm
OUTER DIAMETER:	.230 ±.005"	5.84 ±1.27 mm
CAPACITANCE -Between paired conductors	21 pf/ft	69 pf/m
-Between one of paired conductors and remaining conductor tied to shield:	37 pf/ft	121 pf/m
CALCULATED IMPEDANCE:	70 Ω/kft	230 Ω/km
VELOCITY OF PROPAGATION	66%	
NOMINAL CONDUCTOR RESISTANCE @20°C	24 Ω/kft	79 Ω/km



STAINLESS STEEL OR ALUMINUM WALL PLATES

Professional appearance with easy and cost-efficient installation is achieved by using Atlas Sound wall plates. Models include mounting holes on standard box mount center [$\frac{3}{16}$ " (83mm)] and plate mounting hardware. Units without devices are available in .031 stainless steel. Wall plates with pre-mounted connectors are standard with stainless steel plate.

WALL PLATES WITHOUT DEVICES							
TYPE	BLANK	$\frac{3}{8}$ " (10mm) Dia. Hole	$\frac{1}{2}$ " (13mm) Dia. Hole	$\frac{3}{8}$ " (10mm) I.D. Grommet	Switchcraft C()M, C()F	Switchcraft B()F	Switchcraft B()M
1 GANG	S101	S201	S301	S401	S501	S601	S701
2 GANG	S102	S202	—	—	S502	—	—

WALL PLATES WITH PRE-MOUNTED CONNECTORS				
TYPE	Includes one C3F type Connector per gang	Includes one C3M type Connector per gang	Includes one B3F type Connector per gang	Includes one B3M type Connector per gang
1 GANG	S501-13C*	S501-14C	S601-13C	S701-14C
2 GANG	S502-13C*	S502-14C	—	—

* INDUSTRY STANDARD MIC JACK CONNECTOR MODELS



RECEPTACLES WITH & WITHOUT CONNECTORS INSTALLED

MRB Series. Convenient receptacle floor box with easy-open lid requires no tools to access connectors. Lid is mounted on a pin hinge that lifts easily and swings to the side for access and then falls into a closed position when not in use. Four level legs are provided on a 4" octagon box. Models are offered with choice of mounting plate, punched to accept a variety of connector styles, and are available with listed selection of factory-installed connectors. Lid and trim cover are cast commercial red brass with a brushed finish. Optional matching carpet ring provides attractive finished appearance.



MRB Series

MODEL	MOUNTS CONNECTOR	MODEL	INCLUDES CONNECTOR
MRB-1	Switchcraft C3M, C3F, C4M, C4F	MRB-1-13	C3F Type
MRB-2	Switchcraft B3F, B4F	MRB-2-13N	B3F Type
MRB-PL	Blank receptacle plate		
MRB-TR	Optional carpet trim ring for all models		



SECTIONAL WALL CABINETS WITH 12", 15", AND 18" DEEP CENTER SECTION

300B Series
320B Series
340B Series



320-21B



340-42B

FEATURES

- Sturdy Wall-Mount Cabinet Protects Equipment and Saves Valuable Floor Space
- Selection Includes Models with 12", 15", and 18"D Center Mounting Sections
- Reinforced Frame Flanges, Plus Corner-Brace Structural Supports and Electric-Welded Seams & Miters Provide Stability for Mounted Equipment
- Punched Vents Assure Heat Dissipation
- Wire Management Provisions Allow Organized Wire Access
- Adjustable Mounting Rails Provide Flexibility
- Choice of Standard Solid, Optional Plexiglass, or Optional Vented Door Styles Meet Application Needs

APPLICATIONS

The 300B, 320B and 340B Series cabinets have been engineered to provide full functional and mechanical flexibility for wall-mounting standard 19" wide rack equipment. Sectional assemblies may be installed to accommodate right or left-hand hinging applications, and are ideal for use in areas with limited floor space or "protected" access requirements. Units are commonly used to house electronic switching, monitoring, sound and communication controls in school auditoriums, health care facilities, presentation/conference centers, manufacturing facilities, laboratories, public buildings, and recreational complexes. They can also be used to house computer control equipment, studio electronics, and building management/security systems in commercial, industrial, institutional, and military applications.

GENERAL DESCRIPTION

Series 300B, 320B and 340B Series wall cabinets are distinguished by center-section depths of 12", 15", and 18", respectively. Basic model includes three, 16-gauge CRS sections which include a 2" deep, solid-steel front door, a 12", 15", or 18"D center section with adjustable mounting rails, and a 4½"D rear door. Panel space openings range from 12¼" to 61¾". Enclosures are equipped with convenient and useful provisions for custom cabinet mounting, wire management, equipment mounting, and structural support. (See page 2 for detailed information.) Cabinet is finished in #962 black epoxy.

W/DOOR	W/O DOOR	PANEL OPENING*	RACK UNIT	CABINET O.D.		SECTION DEPTH**		OPTIONAL DOOR***	
				WIDTH	HEIGHT	REAR	CENTER	4" Deep	2" Deep †
12" CTR. MODELS				20%"	15¼"	4½"	12"	—	302-12SD
300-12B	N/A	12¾"	7					304-17B	302-17(SD)(P)(V)
300-17B	300-17LDB	17%"	10					304-21B	302-21(SD)(P)(V)
300-21B	300-21LDB	21¾"	12					304-28B	302-28(SD)(P)(V)
300-28B	300-28LDB	28%"	16					304-42B	302-42(SD)(P)(V)
300-42B	300-42LDB	42¾"	24					304-61B	302-61(SD)(P)(V)
300-61B	300-61LDB	61¾"	35						
15" CTR. MODELS				20%"	20½"	4½"	15"	304-17B	302-17(P)(V)
320-17B	320-17LDB	17%"	10					304-21B	302-21(P)(V)
320-21B	320-21LDB	21¾"	12					304-28B	302-28(P)(V)
320-28B	320-28LDB	28%"	16					304-42B	302-42(P)(V)
320-42B	320-42LDB	42¾"	24					304-61B	302-61(P)(V)
320-61B	320-61LDB	61¾"	35						
18" CTR. MODELS				20%"	20½"	4½"	18"	304-17B	302-17(P)(V)
340-17B	340-17LDB	17%"	10					304-21B	302-21(P)(V)
340-21B	340-21LDB	21¾"	12					304-28B	302-28(P)(V)
340-28B	340-28LDB	28%"	16					304-42B	302-42(P)(V)
340-42B	340-42LDB	42¾"	24					304-61B	302-61(P)(V)
340-61B	340-61LDB	61¾"	35						

* Listed panel opening allows ¼" clearance at top and bottom (½" total).
† Suffix model with P (plexiglass) or V (vented steel).

** Non-LDB Models include a 2" deep steel front door

*** Mounts LDB Series only.

Specifications subject to change without notice



1601 JACK MCKAY BLVD. / ENNIS, TEXAS 75119 U.S.A. / TELEPHONE: (800) 876-3333 / FAX (800) 765-3435

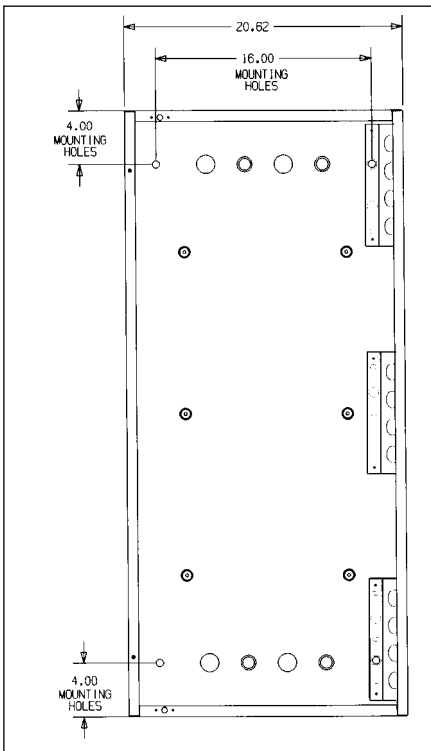


Fig. 1: Rear Section Mounting Holes & Knockouts
(Note: -61 Models have 8 mounting holes)

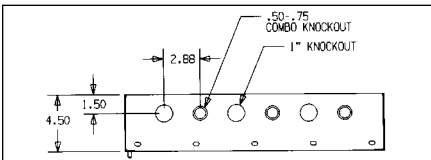


Fig. 2: Rear Section Top & Bottom Flange Conduit Knockout Array

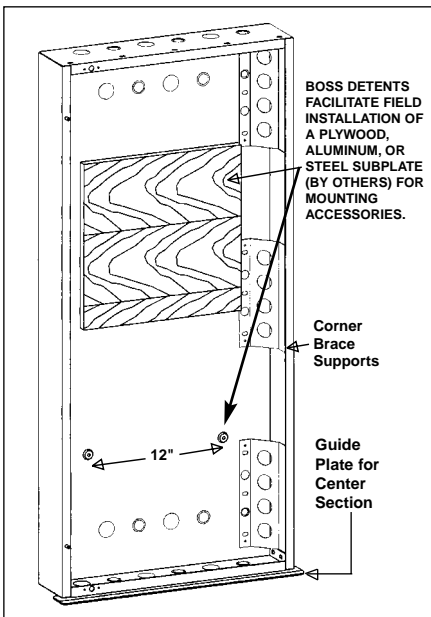


Fig. 3: Rear Section Featuring Optional Subplate (by others) and Guide Plate

Mounting Provisions

Mounting holes located on the back panel of the rear door, enable the pre-assembled cabinet to be easily secured to a wall, post, support, or other surfaces for elevated applications. (See Fig. 1) These convenient cabinets are designed for right-hand hinging applications, but assemblies can be inverted 180° to facilitate left-hand hinging. Rear section hinges are bolted, not welded, to ensure easy retrofit capability. The removable pin-type hinges holding the center and rear sections together facilitate independent pre-installation of the rear section. This feature also permits efficient surface or recess installation. Models with panel heights of 12¼", 17½", and 21½" have two hinges; while 28½", 42½", and 61½" panel space cabinets each have three hinges.

Equipment Mounting & Wiring

All Models include one pair of 11-ga. adjustable front-to-rear mounting rails which are tapped 10-32, and manufactured to standard E.I.A. ½"-¾"-1½" spacing. Models with panel space openings of 28½", 42½", and 61½" are equipped with center section mounting rail supports (1 per side) which have slotted cutouts for infinite adjustment of mounting rails and open raceways for containing vertically run wire and cable. Smaller models do not require mounting rail supports. Corner brace supports, which straddle the back and side panel of the rear section (hinge side), also feature round (1¼" dia.) wire access holes for harnessing excess wire. The back panel of the rear section is equipped with ¼" D boss detents which give contractors field flexibility to screw-mount a plywood, aluminum, or steel subplate (by others) for mounting accessories, such as transformers, power strips, and phone relay systems inside the cabinet. Boss detents are on 12" centers and vary depending upon model height (17½", 21½", 28½" panel space models have four detents, 42½" panel space models have six detents and 61½" panel space models have eight detents.) (See Fig. 2) Note: Model 300-12 does not have provisions for mounting subplate.

Conduit Knockouts

All Series models have 20 conduit knockouts on the rear section, with the exception of the 300-12B which has 16. Conduit arrays are located at the top and bottom of the back panel (except 300-12B which has a centered array), as well as on the top and bottom back flanges. Panel arrays consist of four knockouts: two 1" (25mm) standard, and two, ½" (13mm) / ¾" (19mm) concentric. Top and bottom flange arrays are comprised of six knockouts: three, 1" (25mm) standard, and three, ½" (13mm) / ¾" (19mm) (See Fig. 2).

Ventilation

Stamped perforated vents, located on both sides (top and bottom) of the center section, provide maximum ventilation for rack-mounted electronics. (Four vent patterns per side on 300B Series, eight per side on 320B & 340B Series).

Structural Support

Series 300B, 320B and 340B cabinets offer exceptional structural support. The units' one-piece front and rear sections are strengthened with frame flanges on bottom, top, and sides. Center sections also have "L"-shaped gussets (brackets) which are plug-welded, joining bottom and top panels to side panels. Series 300B, 320B, and 340B have a total of 8, 12, and 16 brackets, respectively. Rear sections have corner brace supports which bridge the back and side panel (hinge side) giving the back (mounted) panel extra reinforcement for tension relief. (See Fig. 3) Units also have electric-welded seams and miters which bolster the cabinets' overall bonding. The center section offers maximum reinforcement provisions, such as a uniquely designed center section guide plate that reduces potential sagging by distributing cabinet and equipment weight to rear section. The 11-ga., 1-7/8" W guide plate, which mounts to the rear section's bottom flange, provides a ¾" lip which gives added support to the center section when the cabinet is open or closed. The plate also ensures that an equipment-weighted center section will close properly, by "guiding" alignment pins into respective holes.

Standard Door

Series 300B, 320B and 340B cabinets include a 2" (51mm) deep, steel front door equipped with a cylinder lock. All models, with the exception of the 300-12, can be ordered without a front door (LDB Series). LDB Series Models will accommodate optional door Series 302(V)(P)(SD) or 304 (see optional accessories).

Specifications subject to change without notice



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OPTIONAL ACCESSORIES

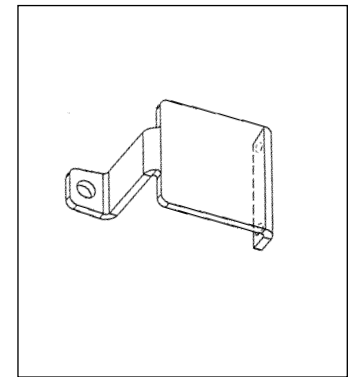
302/304B Series Doors. Optional Series 302 and 304B front doors are offered in depths of 2" and 4", respectively, and will accommodate Series 300LDB, 320LDB, and 340LDB cabinets. Series 302 doors are available with a steel frame and a plexiglass front (P), vented steel (V) front, or solid steel front (SD). Plexiglass models are ideal for applications where equipment operation must be monitored, but secured. Vented steel doors are designed to dissipate heat. Solid door are ideal for situations where internal components are to be out-of-sight to deter tampering. Extra-depth 304 Series doors provide added clearance for equipment with full-grip handles and protruding knobs. Series 304 doors are particularly useful when rails are adjusted in the far-forward position to accommodate extra-depth equipment.

OPTIONAL FRONT DOORS FOR SERIES 300B, 320B, AND 340B CABINETS				
2"D MODEL		4"D MODEL		MOUNTS CABINET MODEL(S)
SOLID / VENTED	PLEX	SOLID STEEL		
302-12SD / NA	-	-		15 1/2" 302-12B
302-17SD / 302-17V	302-17P	304-17B		300-17LDB, 320-17LDB, 340-17LDB
302-21SD / 302-21V	302-21P	304-21B		300-21LDB, 320-21LDB, 340-21LDB
302-28SD / 302-28V	302-28P	304-28B		300-28LDB, 320-28LDB, 340-28LDB
302-42SD / 302-42V	302-42P	304-42B		300-42LDB, 320-42LDB, 340-42LDB
302-61SD / 302-61V	302-61P	304-61B		300-61LDB, 320-61LDB, 340-61LDB

CT31A. This optional heavy-duty caster support reduces the load bearing requirements of the wall by supporting the center section weight when opened and closed (typically used on 61" panel space models). Cabinet must be mounted 6" from the ground. Support is constructed of formed, 14-ga. CRS and includes heavy-duty, zinc-plated caster with a black, hard-tread wheel. The caster adjusts in height from 5 1/2" to 7 1/2" and is supplied with drilling template for easy installation. Finished in black. *(Note: Before installing the CT31A, the center section guide plate must be removed.) (Only one CT31A required per cabinet)*



CT31A

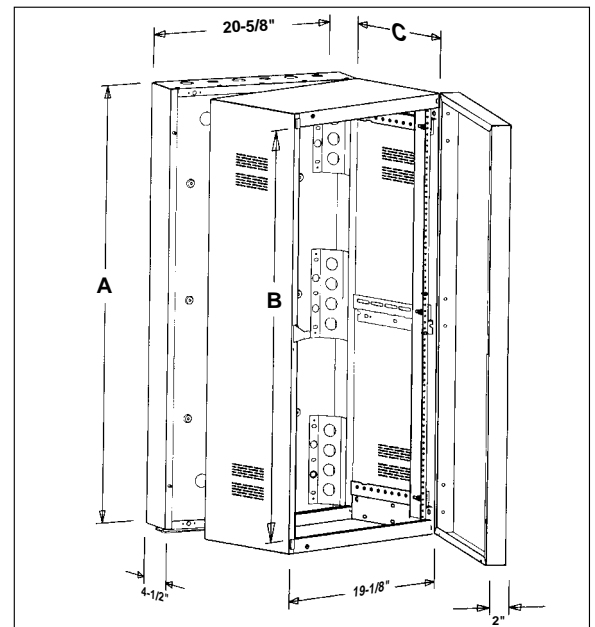


EJL-2

EJL-2. Replacement latch-bracket is designed for security applications and features a standard size hole to accommodate customer-supplied 1/4" padlock. Bracket is constructed of 11-ga. CRS and mounts into existing latch holes after standard cylinder lock is removed.

SERIES 300B, 320B, AND 340B OUTSIDE DIMENSIONS						
MODEL*	A	B	C			
300-12B	15 1/4" (387mm)	12 1/4" (311mm)				
300-17B	20 1/2" (520mm)	17 3/8" (448mm)	12" (304mm) for 300 Series			
340-17B						
300-21B	24" (610mm)	21 1/8" (536mm)		15" (381mm) for 320 Series		
320-21B						
340-21B						
300-28B	31" (787mm)	28 3/8" (714mm)			18" (457mm) for 340 Series	
320-28B						
340-28B						
300-42B	45" (1143mm)	42 3/8" (1070mm)				
320-42B						
340-42B						
300-61B	64 1/4" (1632mm)	61 3/8" (1559mm)				
320-61B						
340-61B						

* LDB Series share the same dimensional characteristics, but do not have an attached 2" deep steel front door.



Specifications subject to change without notice



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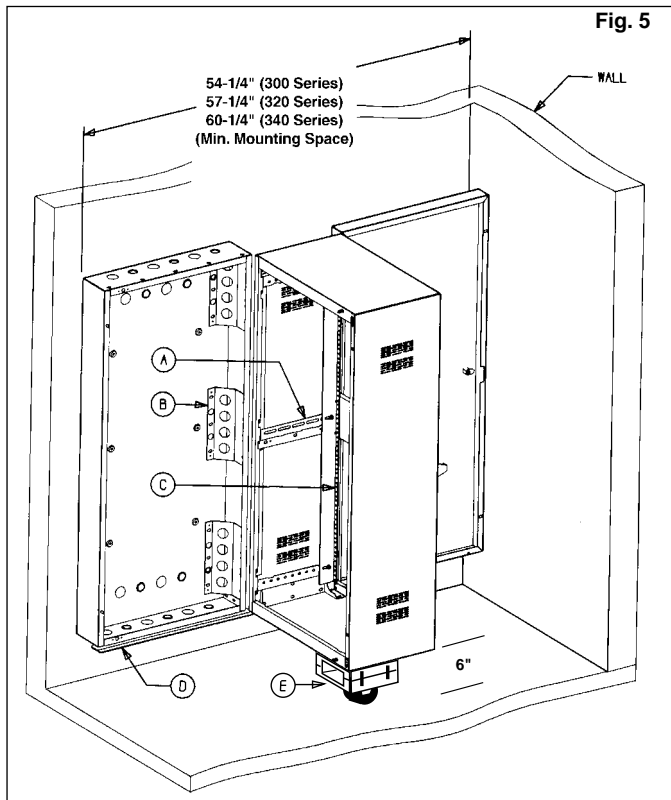
ARCHITECT AND ENGINEER SPECIFICATIONS

The sectional wall mounting cabinet shall be Atlas Sound Model _____ (suffix Model with "LDB" for cabinet less front door). It shall be constructed of 16-gauge CRS throughout. Hinges shall be bolted, not welded. All sections shall be of one-piece construction with electric-welded seams and miters. Cabinet shall have provisions which allow the unit to be inverted for accommodating left-hand hinging applications. Rear section shall have concentric 1/2" (13mm) and 3/4" (19mm) knockouts on the top and bottom surface panel, as well as the flange panels at the top and bottom of the rear panel. Center section shall be secured with screw-type locking rods and alignment pins. The center section shall be equipped with adjustable, front-to-rear mounting rails tapped with 10-32 holes on E.I.A. 19" spacing. Units

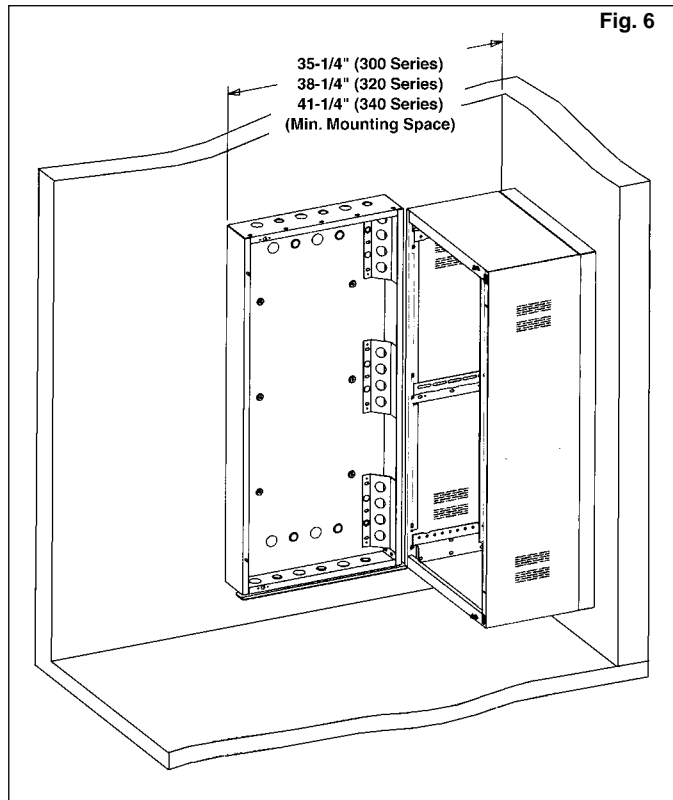
shall have slotted rail supports for mounting rail adjustment and wire management purposes. Standard front door shall be 2" (51mm) deep, and constructed of one-piece 16-ga. CRS, with perforation vents and cylinder lock. Optional 4" deep vented steel front door shall be Atlas Sound Model _____ (304B Series). Optional 2" deep front door shall be vented steel Model _____ (302V Series), plexiglass Model _____ (302P Series) or solid steel Model _____ (302SD) Series. Optional caster support shall be _____ (Model CT31A). Optional replacement latch shall be _____ (Model E JL-2).

INSTALLATION

Minimum mounting space required to facilitate opening center section 90° with front door open.



Minimum mounting space required to facilitate opening center section 90° with front door closed.



- A) Mounting Rail Supports**
- B) Corner Brace Supports**
- C) Adjustable Front-to-Back Mounting Rails
(Standard E.I.A. Spacing)**
- D) Center Section Guide Plate**
- E) Optional Model CT31A Caster Support
(Requires the cabinet to be mounted 6" from the floor.)**

Installation Placement Considerations

- Determine Left/Right Swing Distance to Adjacent Walls
- Decide if optional caster support Model CT31A will be used to reduce wall load-bearing requirements (recommended on 61" and some 42" panel space cabinet installations). If the caster will be used, cabinet must be mounted 6" from the floor.

Specifications subject to change without notice



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25222B

20/2 Unshielded CMP

Audio and Control

Construction & Dimensions

CONSTRUCTION & DIMENSIONS	
CONDUCTOR PARAMETER	
• Number of Conductors	2
• AWG Size	20
• Conductor Stranding	7x28
• Conductor Type	Bare copper
• Nominal DCR	10.5 Ohm/1000ft
• Cabling Lay Length	2 in
• Twists/Foot	6 twist/ft
INSULATION PARAMETER	
• Insulation Type	Plenum PVC
• Insulation Thi kness	0.007 in
• Insulation Color Code	1. Black 2.Red
SHIELDING PARAMETER	
• Shield Type	None
ELECTRICAL CHARACTERISTICS	

Overall Construction

OVERALL CONSTRUCTION PARAMETERS	
Jacket Type	Flexible Plenum
Jacket Thi kness	0.015 in
Nominal Cable O.D.	0.134 in
Plenum	Yes
NEC UL Rating	CMP
RoHS Compliant	Yes
Pull Tension	26 lbs
Bend Radius	1.206 in
Cable Weight	13 lbs

Overall Electrical & Optical Characteristics

OVERALL ELECTRICAL/OPTICAL CHARACTERISTICS	
UL Flammability	NFPA 262 Plenum
Operating Range	-0 to 60 Deg C
UL Voltage Rating	300

Related Products

RELATED PRODUCTS	
Non Plenum Number	222



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INTRUSION SYSTEM

SUBMITTALS

**EQUIPMENT LIST
NEW ST. BERNARD PARISH LIBRARY**

INTRUSION SYSTEM

Vendor	Equipment	Description
INTRUSION SYSTEM		
ADEMCO	VISTA-20P	SECURITY CONTROL PANEL
HONEYWELL	6160	KEYPAD
HONEYWELL	IS3050A-SN	MOTION DETECTORS
WEST PENN	25244B	SECURITY WIRE



ADEMCO VISTA-20P

Control Panel

The high capacity, feature-rich ADEMCO VISTA-20P lets you deliver more value to your customers on each and every sale with up to 48 zones of protection and dual partitions. The panel's installation advantages, innovative end-user benefits and robust system capacity make the value-priced VISTA-20P an ideal choice for higher end installations.

FEATURES

- Eight on-board hardwire zones standard (15 when Zone Doubling feature is used)
- Expandable to 48 total zones when used with hardwired and/or wireless expansion modules
- Wireless keys can be programmed without using zones
- 16 output devices
 - Relays (Model 4204 Relay Modules, or 4229 Expansion Module), and/or
 - X-10® devices (when used with a 4300 Transformer)
- Two low current on-board trigger outputs
- 100 Event Log viewable at system keypads with time/date stamp
- 48 system user codes assignable to either partition
- Two independent partitions plus a common partition
 - Global Arming from any system keypad
 - Goto function to view or operate one partition from the other
 - Separate partition account numbers
- Four installer configurable zone types allows the installer to create custom zone types by assigning all zone attributes
- Multiple actions on output devices depending on system "state"
 - Turns lights off when system arms
 - Turns the same light on when system disarms
 - Flashes same lights when system is in alarm
- Built-in phone line cut monitor with programmable delay and annunciation options
 - Display on system keypads
 - Trigger local sounders
 - Trigger system bell
- Supports four-wire, and up to 16 two-wire smokes
 - Works with Sentrol CleanMe™ maintenance signal
- User Scheduling
 - Automatically activates X-10 and relays at programmed times
 - Latchkey reports to pagers
 - Auto arm/disarm
 - "User access" time windows
- Supports up to four end user numeric pagers
- VIP Module allows system control from any touchtone phone
- Chime by zone

Security Dealer Features

- Programmable to meet SIA false alarm prevention specifications. To meet UL approval for ANSI/SIA CP-01-2000 order part number VISTA-20PSIA
- Automatic System Load Shed
 - During extended AC power fail, the system battery will be disconnected to prevent irreversible battery failure. Reduces service calls to replace batteries
- Dynamic Signaling
 - Reduces redundant reporting to the central station when multiple reporting methods are used; i.e. digital dialer and AlarmNet radio

Valuable End User Features

- Now viewable on system keypads:
 - Exit countdown
 - Time and date display*
 - Event log*
- Auto keypad backlighting on entry
- Keyswitch arming
- Programmable macro buttons and single-button arming
- A variety of wireless remote controls for single-button operation

*Requires custom alpha keypad

ADEMCO VISTA-20P

Control Panel

SPECIFICATIONS

Electrical

- Aux. power 12VDC, 600mA maximum
- Seven hour standby at 400mA aux. load with four amp hour battery
- 16.5VAC/25VA transformer
- Alarm output 12VDC, 2.0 amps maximum
- For UL installations, combined aux. and alarm output cannot exceed 700mA

Output Control

- Supports up to four relay boards (up to 16 relays)
- Optional X-10 transformer/interface (part no. 4300) may be used to control up to 16 X-10 receiving devices

Zones

- Eight hardwired zones (15 with zone doubling)
- Selectable response 10msec, 350msec, 750msec
- Assignable to any partition
- 20 selectable zone types plus four configurable zone types
- Programmable swinger suppression

Expansion Devices

- 4219 – Eight hardwired zones – 16mA
- 4204 – Up to four relays – 15mA standby (each active relay draws an additional 40mA)
- 4229 – Eight hardwired zones and two relays – 36mA (each active relay draws an additional 40mA)

Accessories

- 4286 VIP Voice Module – 220mA
- 5881ENL RF Receiver supports up to eight zones – 60mA, 5881ENM supports up to 16 zones – 50mA, 5881ENH up to 40 zones – 50mA
- 5883 Transceiver supports up to 40 zones – 80mA
- Supports Eagle 1225 and 1221 boards

Keypads

- 6160 Custom Alpha (required for programming) – 100mA
- 6160V Custom Alpha Voice – 100mA
- 6150 Fixed English LCD - 85mA/40mA
- 6150V Fixed English Voice LCD – 85mA/40mA
- 6150RF Fixed English RF LCD - 85mA/40mA
- 6148 Fixed English LCD – 70mA/30mA

Agency Listings

- UL Residential Fire, Burglary and CSFM

Smoke Detectors

- Supports up to 16 two-wire smoke detectors
- Supports four-wire smoke detectors

Communications

- Touchtone or pulse
- Formats supported
 - ADEMCO Contact ID
 - ADEMCO 4 + 2 Express
 - ADEMCO low speed
 - SESCOA/RADIONICS
- 3 + 1, 4 + 1 and 4 + 2 reporting
- Reporting capabilities
 - Split
 - Dual
 - Split/Dual – True dial tone detection
- Low battery reports 11.2 – 11.6VDC
- AC loss and restoral reporting supported

Honeywell Security & Custom Electronics

165 Eileen Way, Syosset, NY 11791
www.ademco.com

6160

ALPHA DISPLAY KEYPAD



The 6160 Deluxe Keypad is easy to install and simple to use. The attractive white console blends with any décor and features a contoured, removable door that conceals illuminated soft-touch keys. The 6160 also features a new larger and brighter 32-character display with easy-to-read plain-English status messages.

The oversized function keys are easily accessed even when the keypad door is closed, and can be programmed for fire, burglary, personal emergencies and other operations. Colored self-adhesive labels are included.

FEATURES

- Large, easy-to-use keypad
- Keys continuously backlit for greater visibility
- Speaker with audible beeps to indicate:
 - System status
 - Entry/exit delay
 - Other alarm situations
- Zones and system events displayed in plain English
- No confusing blinking lights
- Four programmable function keys
- System functions clearly labeled
- Functions performed by just entering security code plus command
- White with removable door blends with any décor

SPECIFICATIONS

Physical

- 5-5/16"H x 7-3/8"W x 1-3/16"D (135mm x 190mm x 30mm)

Current

- Standby-40mA
- Activated Transmission-160mA

Wiring

- - (Black): Ground
- + (Red): +12 VDC (Aux. Power)
- D1 (Green): "Data in" to control panel
- D0 (Yellow): "Data out" from control panel

Compatibility

- Fully compatible with all VISTA controls.

ORDERING

6160

Alpha Display Keypad

Honeywell Security & Custom Electronics

Honeywell International Inc.
PO Box 9035
Syosset, NY 11791
www.honeywell.com

CO06010
L/6160/D
September 2006
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Honeywell

IS3050A-SN

V-Plex® Passive Infrared Motion Sensor with Anti-Mask

The next generation of V-Plex PIR motion sensors, based on the award-winning IS3000 series, features simple installation, superior detection, and minimal false alarms. The sensors are compatible with Honeywell control panels that support V-Plex devices, using two-wire loop technology to save you time and money.

V-Plex® Patented Polling Loop Technology

By using two wires instead of four, V-Plex offers significant advantages over peer-to-peer wiring or the conventional four-wire multiplex.

For example, since each sensor can be installed using only two wires for both power and data, you spend less money on wiring. V-Plex devices also draw minimal amounts of current, therefore requiring fewer auxiliary power supplies.

Designed for Faster Installation

The IS3050A-SN mounting screw pre-drill collars and retention features, removable connector blocks for easy access, and patented flashlight walk test make installation fast, reducing labor costs and enabling you to move on to the next job quicker.



FEATURES AND BENEFITS

- **High Detection Coverage**
Extremely dense, wide, and long detection coverage compared to similar products in the market.
- **Mirror Optics**
Mirror optics provide the most reliable technology, offering the best detection/false alarm ratio.
- **Removable Terminal Strip**
Our easy-access, removable connector provides flexible wiring and easier mounting during installation.
- **Superior IR Anti-Mask Protection**
Highly sensitive, active infrared anti-masking feature can easily detect blocked, sprayed, or obstruction attempts to disable the detector.
- **PIR White Light Immunity**
A patented black bug guard reduces false alarms by providing 6,500 lux of white light immunity. This helps reduce false alarm problems caused by lights, flashlights, or reflective objects.
- **Selectable Look-Down Zone**
Provides better coverage up close with multiple zones in the look-down area.
- **Flashlight Walk Test**
Reduces installation time as the walk test can be enabled by simply waving a flashlight at the detector and automatically times itself out.
- **Integrated Screw Retention**
Honeywell's patented integrated mounting feature holds screws in place for quick, easy installs.
- **Flexible Mounting**
The IS3050A-SN can be mounted on walls or corners with heights from 6' 9" - 8' 9" (2.1 m - 2.7 m).
- **Global Compliance**
Our designs meet many of the world's motion detector standards, including UL, ULC, SIA, and EN50131-2.

IS3050A-SN

V-Plex® Motion Detector with Mirror Optics and Anti-Mask High-Risk Applications

SPECIFICATIONS

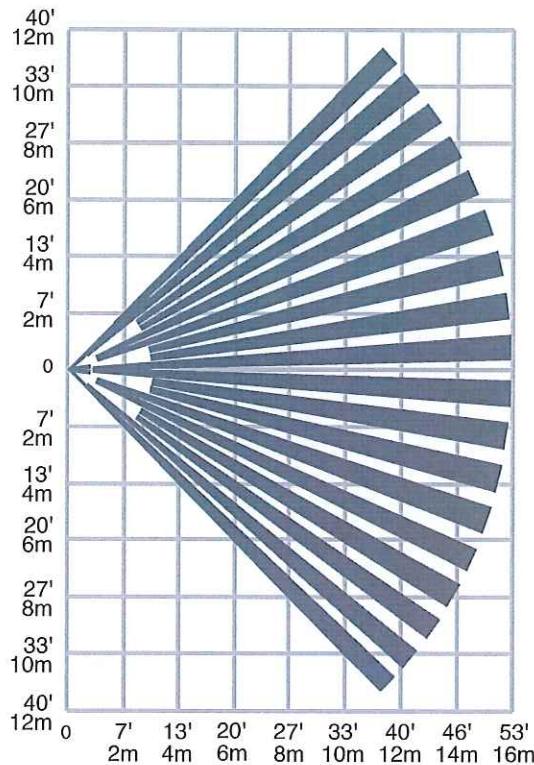
	IS3050A-SN
Type of Detection	PIR (mirror)
Range	53' x 72' / 16 m x 22 m
Detection Zones	36 long range, 10 intermediate, 12 lower, 2 look-down
Quick Warm Up	< 30 seconds
RFI Immunity	20V/m 10-1000 MHz, 15V/m 1000-2700 MHz
Mounting Height	6'9" - 8'9" (2.1m - 2.7m); Optimal 7'6" (2.3m)
Power Requirements	9.0 - 13V PK- PK at polling loop terminals; (UL: 9.5 - 15 VDC); 3 mA maximum
Alarm Relay	Form A/30 mA@25 VDC, max. 22 Ohm/ Duration: 3 s
Anti-mask/Trouble Relay	Form B/30 mA@25 VDC, max. 22 Ohm
Tamper	Cover and Wall
Operating Temperature	14°F to 131°F (-10°C to +55°C)
Temp. Compensation	Advanced dual slope
Relative Humidity	5% - 93% non-condensing
RF Immunity	20V/m 10-1000 MHz, 15V/m 1000-2700 MHz
PIR White Light Immunity	6,500 lux typical
Dimensions	4.57" H x 2.76" W x 1.69" D 11.6 cm H x 7.0 cm W x 4.3 cm D
Weight	4.4 oz / 125 g (net weight)
Approval Listings	<ul style="list-style-type: none"> FCC part 15, Class B verified ICICES-003, Class B verified UL 639 ULC S306-03 SIA-PIR-01 passive infrared detector standard features for false alarm immunity

ACCESSORIES	
SMB-10* (P/N 0-000-110-01)	Swivel Mount Bracket
SMB-10C* (P/N 0-000-111-01)	Swivel Mount Ceiling Bracket
SMB-10T* (P/N 0-000-155-01)	Swivel Mount Bracket with Tamper
Cable* (P/N 1103)	General purpose, Solid 22 AWG, 4 conductor
Cable* (P/N 1104)	General purpose, Stranded 22 AWG, 4 conductor
Cable* (P/N 1106)	General purpose, Solid 22 AWG, 6 conductor
Cable* (P/N 1107)	General purpose, Stranded 22 AWG, 6 conductor

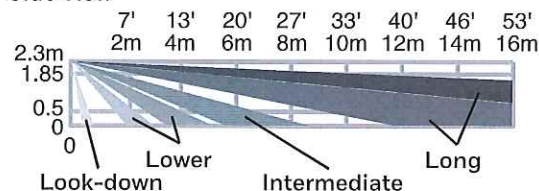
* Not evaluated by UL

Detection Patterns:

Top View



Side View



For more information

www.honeywell.com/security

Honeywell Security and Fire

2 Corporate Center Dr. Suite 100
P.O. Box 9040
Melville, NY 11747
1.800.323.4576
www.honeywell.com

L/3050ASND/D | 12/17
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Honeywell



25244B

18/4 UTP CMP
 Audio, Control, and Low Voltage Power

Construction & Dimensions

CONSTRUCTION & DIMENSIONS	
CONDUCTOR PARAMETER	
• Number of Conductors	4
• AWG Size	18
• Conductor Stranding	7x26
• Conductor Type	Bare copper
• Nominal DCR	6.2 Ohm/1000ft
• Cabling Lay Length	3.5 in
• Twists/Foot	3.4 twist/ft
INSULATION PARAMETER	
• Insulation Type	Plenum PVC
• Insulation Thi kness	0.008 in
• Insulation Color Code	1.Black,2.Red,3.White,4.Green
SHIELDING PARAMETER	
• Shield Type	None
ELECTRICAL CHARACTERISTICS	

Overall Construction

OVERALL CONSTRUCTION PARAMETERS	
Jacket Type	Flexible Plenum
Jacket Thi kness	0.015 in
Nominal Cable O.D.	0.18 in
Plenum	Yes
NEC UL Rating	CMP
RoHS Compliant	Yes
Pull Tension	80 lbs
Bend Radius	1.61 in
Cable Weight	32 lbs

Overall Electrical & Optical Characteristics

OVERALL ELECTRICAL/OPTICAL CHARACTERISTICS	
UL Flammability	NFPA 262 Plenum
Operating Range	-0 to 60 Deg C
UL Voltage Rating	300

Detailed Specification & Technical Data



25244B

18/4 UTP CMP

Audio, Control, and Low Voltage Power

Related Products

RELATED PRODUCTS	
Non Plenum Number	244
Aquaseal Direct Burial Number	AQ244



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PAGING SYSTEM

SUBMITTALS

**EQUIPMENT LIST
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PAGING SYSTEM

Vendor	Equipment	Description
PAGING SYSTEM		
JBL	VMA1120	MIXER-AMPLIFIER
RAULAND	ACC1100	BACKCAN
RAULAND	ACC1004	SPEAKER GRILL
RAULAND	USO215	SPEAKER
WEST PENN	357	SPEAKER WIRE



JBL VMA 1120 Mixer Amplifier with USB/Bluetooth Media Player - 5 Inputs/1 Output, 120W @ 4 Ohms or 70V/100V Line

Ref: JP100238

JBL VMA 1120 Mixer Amplifier with USB/Bluetooth Media Player - 5 Inputs/1 Output, 120W @ 4 Ohms or 70V/100V Line

The JBL VMA 1120 Mixer Amplifier with USB/Bluetooth Media Player is a cost-effective line of Mixer/Amplifier with low impedance functionality (4Ω, 8Ω) and high impedance 70V and 100V output. They are designed with convenient and flexible features to be used by commercial integrators worldwide, ideal for emerging markets.

JBL VMA 1120 Mixer Amplifier with USB/Bluetooth Media Player Features

- 5 inputs with 1 output of 60, 120, or 240-watts of power
- Independent bass and treble controls for each output channel
- 100V and 70V output, or 4Ω/8Ω
- Paging Chime, and Priority muting
- Works with JBL CSR-V wall controllers

- Balanced mic/line inputs; RCA (.775V) inputs
- Rack mounting hardware included

JBL VMA 1120 Mixer Amplifier with USB/Bluetooth Media Player Specifications

- Max Output Power per Channel: into 4 Ω or 8 Ω ; 1kHz, $\leq 0.5\%$ THD: 120W
- Insertion Loss: (70V & 100V outputs): 1dB maximum
- Number of Inputs: 5
- Number of Outputs: 1
- Tone Controls:
 - Bass $\pm 14\text{dB}$ @ 50Hz
 - Treble $\pm 14\text{dB}$ @ 10kHz
- Input Sensitivity:
 - Mic Input: 5.5mVRMS
 - Line Input: 1.3VRMS
 - RCA Input (stereo in): 130mVRMS
- Frequency Response:
 - 4/8 Ω Output: 20Hz - 20kHz, $\pm 2\text{dB}$
 - 70V/100V Outputs: 80Hz - 15kHz $\pm 3\text{dB}$
- Total Harmonic Distortion (THD) Power Amp Output: $<0.5\%$, 20Hz - 20kHz
- Signal to Noise Ratio: $>76\text{dB}$
- Input Impedance (nominal):
 - Mic: 400 Ω
 - Line: 20 k Ω (balanced)
 - RCA: 50 k Ω
- Phantom Power: 27VDC
- Crosstalk (reference rated power, volume at mid position, 1kHz): -70 dB
- Nominal AC Line Voltages: 100V, 120V, 220V, 220-240V, 50/60 Hz
- Minimum Load Impedance:
 - Low Impedance Output: 4 Ω
 - 70V Output: 40 Ω
 - 100V Output: 80 Ω
- Operating Temperature/Humidity: 0°C to 35°C @ 95% R.H. (non-condensing)
- Storage Temperature: -20°C to 85°C

Physical & Dimensions:

- Width: 432 mm
- Depth: 415 mm
- Height: 88 mm
- Net Weight: 9.2 kg
- Shipping Weight: 11.6 kg

MODEL: ACC1100 – SQUARE SPEAKER BACKBOX



ACC1100 – SQUARE SPEAKER BACKBOX

FEATURES

- Heavy Gauge, Spot Welded, Cold-Rolled Steel
- Acoustically Treated Inner Surfaces
- Rust-Preventative Primer Coating
- Ample Combination Conduit Knockouts

SPECIFICATIONS

Type: Square recessed backbox
Material: 18-gauge, cold-rolled steel
Finish: Rust-retardant gray primer
Size:
8.75" (22.2 cm) x 8.75" (22.2 cm)
4.0" (10.2 cm) deep

Weight: 2.2 lbs (1.0 kg)

Recommended Baffle:

- ACC1000 – Round Ceiling Baffle
- ACC1001 – Round Ceiling Baffle
- ACC1004 – Square Vandal Resistant Baffle
- ACC1011 – Round Vandal Resistant Baffle

DESCRIPTION

The Rauland Model ACC1100 Backbox is a square, recessed enclosure for installation in new or existing construction. Made of 18-gauge, cold-rolled steel, and spot welded for stability, it has a rust-retardant gray primer finish and an acoustically treated interior to prevent metallic resonances. The backbox accommodates 8" speaker/baffle assemblies. It provides four combination 0.5" (1.3 cm) and 0.75" (1.9 cm) conduit knockouts. The backbox measures 8.75" (22.2 cm) x 8.75" (22.2 cm) x 4.0" (10.2 cm) deep.

ASSOCIATED EQUIPMENT

Telecenter Communication Systems
ACC1000 – Round Ceiling Baffle
ACC1001 – Round Ceiling Baffle
ACC1004 – Square Vandal Resistant Baffle
ACC1011 – Round Vandal Resistant Baffle



Rauland is a Division of AMETEK, Inc.

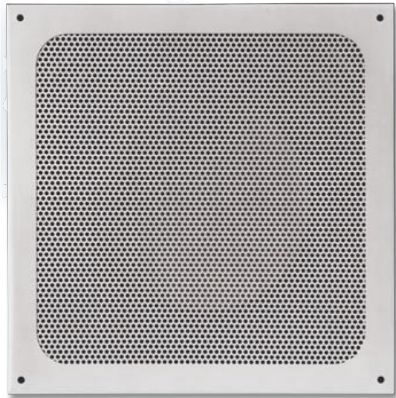
USA +1 800 752 7725
Asia Pacific +65 64835750

www.rauland.com

Mid East & Africa +20 122 2154016
Europe +30 693 7501168
Latin America +1 847 454 4203

*Architect and Engineer (A&E) Specifications
available online at customerconnection.rauland.com
Specifications subject to change without notice.*

MODEL ACC1004 - SQUARE SPEAKER BAFFLE



ACC1004

SPECIFICATIONS

Type: Square, two-piece, one-step contour

Material: 22-gauge, cold-rolled steel

Finish: Baked white epoxy

Size: 12.5" square (31.7 cm)

Weight: 2.3 lbs (1.0 kg)

DESCRIPTION

The Rauland ACC1004 is a popular square, flush mount, wall or ceiling baffle for 8" speakers, featuring an 80° turn on edges. Constructed of 22-gauge, cold-rolled steel, the baffle consists of a perforated front grille and separate concealed black sub-plate to

FEATURES

- Mar-Proof, Baked Epoxy Finish
- 22-Gauge Steel Construction
- Attractive Square Design
- Concealed Speaker Mounting

Recommended Backbox:

- ACC1100 – Flush Mount Square Backbox
- ACC1101 – Flush Mount Round Backbox
- ACC1102 – Surface Mount Square Backbox
- ACC1103 – Flush Mount Round Backbox
- ACC1110 – Flush Mount Round Backbox

facilitate speaker mounting. The external finish is white baked epoxy to minimize scratching and marring. The speaker mounting plate is pre-drilled to mount on the recommended backbox, plaster ring or support bridge.

ASSOCIATED EQUIPMENT

Telecenter Communication Systems

ACC1100 – Flush Mount Square Backbox

ACC1101 – Flush Mount Round Backbox

ACC1102 – Surface Mount Square Backbox

ACC1103 – Flush Mount Round Backbox

ACC1110 – Flush Mount Round Backbox

ACC1104 – Speaker/Baffle Support Bridge

MODEL: USO215 — 8" SPEAKER ASSEMBLY



USO215 — 8" SPEAKER ASSEMBLY

FEATURES

- Dual-Cone Quality Loudspeaker Design
- Full 15 Watts RMS Power Output
- "Whizzer" Cone for Extended High Frequency
- Full 10-Ounce Ceramic Magnet
- With 25V/70V Line Matching Transformer

SPECIFICATIONS

Type: 8" (20.32 cm) dual-cone PM
Frequency Range: 60 to 16,000Hz
Power Rating: 15 watts RMS (per ESA Standard 426A)
Sensitivity: 96dB @ 1 meter with 1 watt input
Magnet Weight: 10 oz. (283.5 g) ceramic
Voice Coil Impedance: 8 ohms
Voice Coil Diameter: 1" (2.54 cm)

Flux Density: 9,000 gauss
Transformer: 25V/70V; taps 5/16, 5/8, 1-1/4, 2-1/2, 5 watts
Speaker Depth: 3 1/8" (7.94 cm)
Finish: Baked enamel
Net Weight: 2 lbs. 9 oz. (1.16 kg)

DESCRIPTION

The Rauland USO215 Speaker is especially suited for use in classrooms or in small areas where quality music distribution is desired. The use of a hard fiber "whizzer" cone provides extended high frequency response with exceptional clarity, while the molded fiber moisture-resistant main cone delivers excellent mid and low range frequency response. The USO215 speaker features rugged construction; with its heavy-gauge metal basket it offers superior protection against shock and aging deterioration.

ARCHITECTS AND ENGINEERS SPECIFICATIONS

The Speaker shall be a Rauland USO188 or approved equal. It shall be an 8" permanent magnet seamless cone type, with an additional cone provided to extend high frequency response. Frequency range shall be 65 to 17,000Hz; ceramic magnet weight shall be at least 5 oz. (141.75 g); axial sensitivity shall be 93dB at 1 meter with 1 watt input; power rating shall be 8 watts RMS; voice coil impedance shall be 8 ohms and shall measure .75" (1.91 cm) in diameter; speaker depth shall be 2.75" (6.99 cm). The speaker shall be equipped with a universal line matching transformer for 25V/70V output line tapped at 5/16, 5/8, 1-1/4, 2-1/2 and 5 watts.



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Europe +30 693 7501168
Latin America +1 847 454 4203

Architect and Engineer (A&E) Specifications available online at customerconnection.rauland.com Specifications subject to change without notice.

Technical Data Sheet

Communication Cables

WEST PENN WIRE



2833 West Chestnut Street
 Washington, PA 15301
 Toll Free: (800) 245-4964
 Fax: (724) 222-6420
 www.westpenn-wpw.com

PART NUMBER:	357
DESCRIPTION:	22/4 Stranded tinned copper conductors, shielded/unshielded with an overall jacket.
NEC RATING:	CMR, NEC Article 800
APPROVALS:	(UL) C(UL) Listed or c(ETL)us Listed
APPLICATION:	Indoor for: Intercom, Security, Sound, Audio, Background Music, and Power Limited Control Circuits.

Construction Parameters:

Conductor	22 AWG Tinned Copper
Stranding	7x30
Insulation Material	PVC
Insulation Thickness	0.007" Nom.
Number of Conductors	4
(2 Shielded)(2 Unshielded)	
Shield	100% Aluminum Polyester Foil
Drain	Stranded Tinned Copper
Jacket Material	PVC
Jacket Thickness	0.017" Nom.
Overall Cable Diameter	0.162" Nom.
Approximate Cable Weight	18.2 Lbs/1M' Nom.
Flame Rating	UL 1666 Riser Flame Test

Electrical & Environmental Properties:

Temperature Rating	-20°C To +60°C
Operating Voltage	300 V RMS
Max.Capacitance Between Conductors @ 1 KHz	55 pf/ft Nom.
Capacitance Between Conductors to Shield @ 1 KHz	99 pf/ft Nom.
DC Resistance per Conductor @ 20deg C	16.4 Ohms/1M' Nom.
Insulation Colors	Shielded: Black, Red Unshielded: White, Green
Jacket Color	Gray
RoHS Compliant	Yes

Mechanical Properties:

Max. Recommended Pull Tension	42 lbs.
Min. Bend Radius (Install)	1.8"



Specification Issue Date: 7/06

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 The Jacket is sequentially footmarked.
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EDUCATIONAL ELECTRONICS CORPORATION

216 OAK AVENUE · HARAHAN, LA 70123
Main Office (504) 737-4545 · Fax (504) 737-7443
North Shore (985) 809-0086

ELECTRONICS
SYSTEMS
SPECIALISTS

NEW ST. BERNARD PARISH LIBRARY

TELECOMMUNICATIONS

SUBMITTALS

**EQUIPMENT LIST
NEW ST BERNARD PARISH LIBRARY**

TELECOMMUNICATIONS

Vendor	Equipment	Description
TELECOMMUNICATIONS		
CORNING	012E88-33131-29	12 STRAND SINGLE MODE FIBER
CORNING	012K8F-31130-29	12 STRAND MULTI MODE FIBER
MONOPRICE	7305	48 PORT PATCH PANEL
KEYSTONE	SKFL-1 & SKLF-2	1 & 2 PORT FACEPLATES
V-MAX DATA JACKS	352-V2714-352-V2721-352V2715-352-V2719	BLUE, GREEN, WHITE, PURPLE, YELLOW
BLONDER TOUNGE	ACA-30-550	AMPLIFIER
UBIQUITI	U6-ENTERPRISE-US	WIRELESS ACCESS POINT
UBIQUITI	UDM-SE	DREAM MACHINE
UBIQUITI	USW-PRO-48-POE	POE SWITCH
SYSRACKS	SFR1000	7' 42U FLOOR RACK
CYBERPOWER	OR500LCDRM1U	UPS
WEST PENN	4246	BLUE, WHITE, GREEN, YELLOW, PURPLE
WEST PENN	RG-6	COAX
WEST PENN	RG-11	COAX

MIC[®] Tight-Buffered Cable, Plenum

12 F, Single-mode (OS2)

CORNING

Corning Cable Systems MIC[®] Plenum Cables are designed for use in plenum, riser and general purpose environments for intrabuilding backbone and horizontal installations. These multi-fiber cables use 900 μ m TBII[®] Buffered Fibers to allow easy, consistent stripping and to facilitate termination. The fibers are surrounded by dielectric strength members and protected by a flame-retardant outer jacket. The all-dielectric cable construction requires no grounding or bonding. MIC Plenum cables are ideal for routing inside buildings, within plenum areas and riser shafts, to the telecommunications rooms and workstations. The MIC Plenum Cables meet the application requirements of the National Electrical Code[®] (NEC[®]) Article 770 and are OFNP and FT-6 listed.

Features and Benefits

900 μ m TBII[®] Buffered Fibers

Easy, consistent stripping

All-dielectric construction

Requires no grounding or bonding

Flame-retardant jacket

Rugged and durable

Standards

Approval and Listings

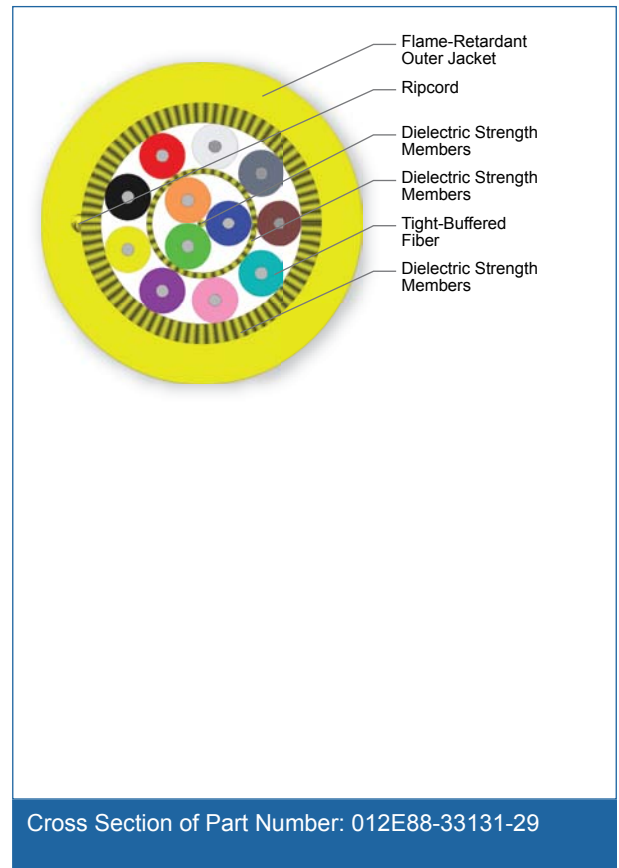
National Electrical Code[®]
(NEC) OFNP, CSA FT-6,
ICEA S-83-596

Flame Resistance

NFPA 262 (for plenum, riser
and general building appli-
cations)



Part Number: 012E88-33131-29



Cross Section of Part Number: 012E88-33131-29



CORNING

MIC[®] Tight-Buffered Cable, Plenum

12 F, Single-mode (OS2)

CORNING

Specifications

General Specifications	
Environment	Indoor
Application	General Purpose Horizontal, Vertical Riser, Plenum
Cable Type	Tight-Buffered
Product Type	Distribution
Flame Rating	Plenum (OFNP)
Fiber Category	Single-mode (OS2)

Temperature Range	
Storage	-40 °C to 70 °C (-40 °F to 158 °F)
Installation	0 °C to 60 °C (32 °F to 140 °F)
Operation	0 °C to 70 °C (32 °F to 158 °F)

Cable Design	
Central element	Yarn
Fiber Count	12
Tight buffer color	Blue, Orange, Green
Tensile strengths elements / armoring - Layer 1	Dielectric strength members
Tight buffer color, layer 2	Brown, Slate, White, Red, Black, Yellow, Violet, Rose, Aqua
Tensile strengths elements / armoring - Layer 2	Dielectric strength members
Number of Ripcords	1
Outer jacket material	Flame-retardant
Outer jacket color	Yellow

MIC[®] Tight-Buffered Cable, Plenum

12 F, Single-mode (OS2)

CORNING

Mechanical Characteristics Cable

Max. Tensile Strengths, Short-Term	440 N (100 lbf)
Max. Tensile Strengths, Long-Term	132 N (30 lbf)
Nominal Outer Diameter	6.1 mm (0.24 in)
Weight	37 kg/km (26 lb/1000 ft)
Min. Bend Radius Installation	92 mm (3.6 in)
Min. Bend Radius Operation	31 mm (1.2 in)

Fiber Specifications

Optical Characteristics (cabled)

Fiber Core Diameter	8.2 μ m
Fiber Type	Single-mode
Fiber Category	OS2
Fiber Code	E
Performance Option Code	31
Wavelengths	1310 nm / 1383 nm / 1550 nm
Maximum Attenuation	0.65 dB/km / 0.65 dB/km / 0.5 dB/km
Serial 1 Gigabit Ethernet	5000 m / - / -
Serial 10 Gigabit Ethernet	10000 m / - / 40000 m

* ITU-T G.652 D compliant

Notes: 1) Improved attenuation and bandwidth options available
2) Bend-insensitive single-mode fibers available on request
3) Contact a Corning Cable Systems Customer Service Representative for additional information

Ordering Information

Order Number	012E88-33131-29
Product description	MIC [®] Tight-Buffered Cable, Plenum, 12 F, Single-mode (OS2)

Corning Cable Systems LLC • PO Box 489 • Hickory, NC 28603-0489 USA

800-743-2675 • FAX: 828-325-5060 • International: +1-828-901-5000 • www.corning.com/cablesystems

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FREEDM® One Tight-Buffered Cable, Riser

12 F, 62.5 μm multimode (OM1)

CORNING

Corning Cable Systems FREEDM® One Cables are flame-retardant, UV-resistant, indoor/outdoor cables designed for aerial, duct and direct-buried applications with no need for a transition splice when entering the building. The tight-buffered construction facilitates easier termination for low-fiber-count applications in the local area network (LAN) and eliminates need for fan-out kits. The design features TIA-598 color-coded 900 μm TBII® Buffered Fibers for easy identification, consistent stripping and direct termination. The small diameter and bend radius of the cable allow for easy installation in space-constrained areas while the innovative waterblocking technology is ideal for OSP applications. The all-dielectric cable construction requires no grounding or bonding and the UV-resistant, flame-retardant jacket is rugged, durable and easy to strip.

This cable is available in 12 different jacket colors - blue, orange, green, brown, slate, white, red, black, yellow, purple, rose and aqua. The colored jacket allows for easy visual identification of the cables while still providing all of the required environmental protection of an indoor/outdoor cable jacket. Black is the standard jacket color using the standard part numbers shown here. Contact Customer Care at 1-800-743-2675 to order other color options.

Features and Benefits

Waterblocking technology

OSP (outdoor) applications

Small diameter and bend-radius

Easy installation in space-constrained areas

Color-coded fibers

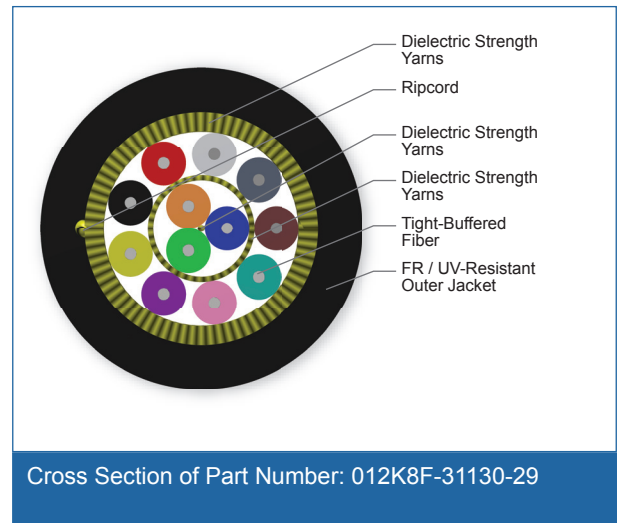
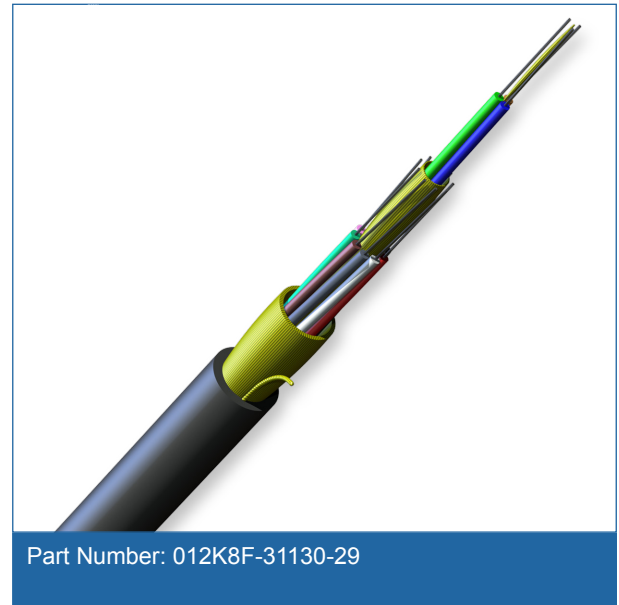
Quick and easy identification

All-dielectric construction

Requires no grounding or bonding

UV-resistant, flame-retardant jacket

Rugged, durable and easy to strip



Standards

Approval and Listings

National Electrical Code®
(NEC®) OFNR, FT-4

Design and Test Criteria

ICEA S-104-696

CORNING

FREEDM® One Tight-Buffered Cable, Riser

12 F, 62.5 µm multimode (OM1)

CORNING

Specifications

General Specifications	
Environment	Indoor/Outdoor Cables
Application	Aerial, Direct Buried, Duct, General Purpose Horizontal, (Vertical Riser)
Cable Type	Tight-Buffered
Product Type	Dielectric
Flame Rating	Riser (OFNR)
Fiber Category	62.5 µm MM (OM1)

Temperature Range	
Storage	-40 °C to 70 °C (-40 °F to 158 °F)
Installation	-10 °C to 60 °C (14 °F to 140 °F)
Operation	-40 °C to 70 °C (-40 °F to 158 °F)

Cable Design	
Central Element	Dielectric
Fiber Count	12
Tight Buffer Color	Blue, Orange, Green, Brown, Slate, White, Red, Black, Yellow, Violet, Rose, Aqua
Tensile Strength Elements and/or Armoring - Layer 1	Water-swellable strength members
Number of Ripcords	1
Outer Jacket Material	Flame-Retardant, UV-Resistant
Outer Jacket Color	Black

Mechanical Characteristics Cable	
Weight	36 kg/km (24 lb/1000 ft)
Nominal Outer Diameter	6.5 mm (.26 in)
Min. Bend Radius Installation	98 mm (3.8 in)
Min. Bend Radius Operation	33 mm (1.3 in)
Max. Tensile Strengths, Short-Term	675 N (150 lbf)
Max. Tensile Strengths, Long-Term	200 N (45 lbf)

FREEDM[®] One Tight-Buffered Cable, Riser

12 F, 62.5 μm multimode (OM1)

CORNING

Chemical Characteristics

RoHS	Free of hazardous substances according to RoHS 2002/95/EG
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Fiber Specifications

Optical Characteristics (cabled)

Fiber Core Diameter	62.5 μm
Fiber Type	Multimode
Fiber Category	OM1
Fiber Code	K
Performance Option Code	30
Wavelengths	850 nm / 1300 nm
Maximum Attenuation	3.4 dB/km / 1.0 dB/km
Min. Overfilled Launch (OFL) Bandwidth	200 MHz*km / 500 MHz*km
Minimum Effective Modal Bandwidth (EMB)	220 MHz*km / -
Serial 1 Gigabit Ethernet	300 m / 550 m
Serial 10 Gigabit Ethernet	33 m / -

Notes: 1) Improved attenuation and bandwidth options available.
2) Bend-insensitive single-mode fibers available on request.
3) Contact a Corning Cable Systems Customer Care Representative for additional information.

Ordering Information

Part Number	012K8F-31130-29
Product Description	FREEDM [®] One Tight-Buffered Cable, Riser, 12 F, 62.5 μm multimode (OM1)



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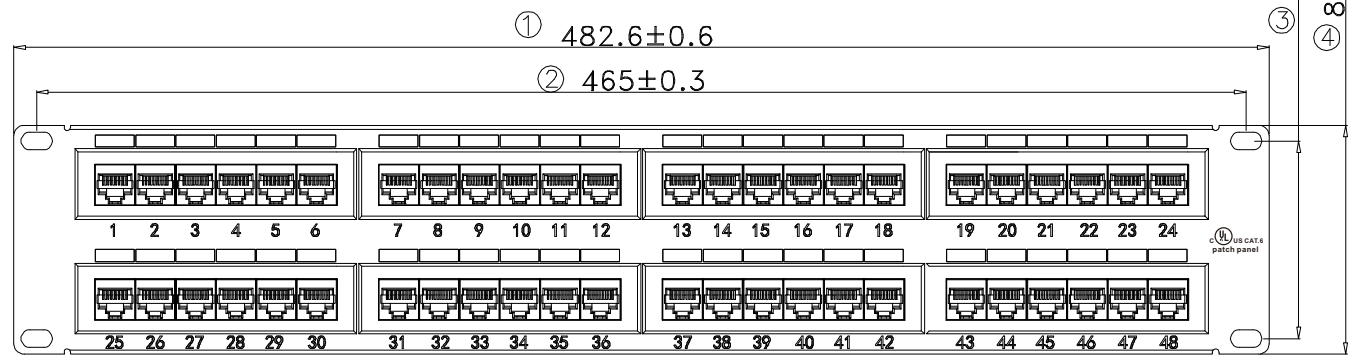
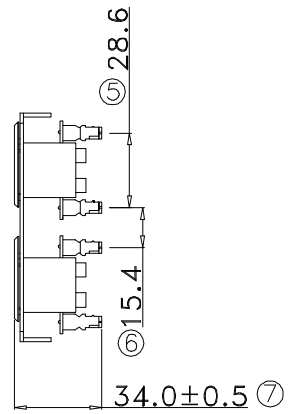
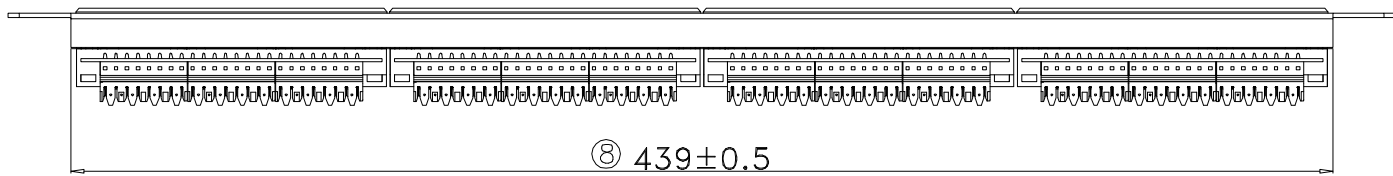
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CORNING

VERSION INFORMATION (Vender)			
Rev.	Rev. Date	Modified By	Brief Description
V1	2020/6/23		Initial Issue

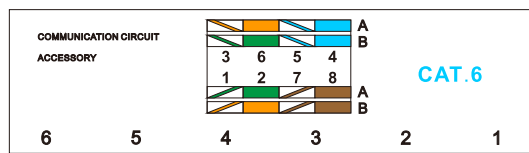


TYPE:
 1. 19" CAT6 48PORT UTP PATCH PANEL
 2. COLOUR: BLACK
 3. 110 TYPE IDC

ELECTRICAL:
 1. CONTACT RESISTANCE: 20m OHM
 2. INSULATION RESISTANCE: <= 250M OHM @100 V DC
 3. WITHSTAND VOLTAGE: DC1000V AC700V RMS 60Hz, IMIN
 4. CAT6 PERMANENT LINK: CONFORM TO ANSI/TIA/EIA 568B. 2-10

ENVIRONMENTAL:
 1. STORAGE: -40°/ +70°
 2. OPERATION: -10°/ +60°

MECHANICAL:
 1. METAL MATERIAL: COLD ROLLED PLATE
 2. IDC MATERIAL: NEW PC, ACCEPT 22-24AWG SOLID WIRE.
 3. TERMINAL: PHOSPHOR BRONZE, TIN GOLD 50U"
 4. RJ45 CONTACT LIFE: 750 TIMES MIN
 5. IDN LIFE: 250 TIMES MIN



PIC						
ITEM	SCREW	NUT	GASKET	CABLE TIE	DUST COVER	WIRE STRIPPER
DESCRIPTION	M6*12mm	M6	M6	3x150mm		
Q'TY	4PCS	4PCS	4PCS	8PCS	48PCS	1PC

NO.	PART NAME	SPECIFICATION DESCRIPTION	QTY	UNIT
③				
②				
①				

VENDOR CODE :		DESCRIPTION : Cat6 Patch Panel 110 Type 48 Port (568A/B Compatible)	
APPROVED BY PM & DATE :		PID # : 7305	
PM PRINT NAME :		DATE : 2020/6/23	UNIT : MM
		SHEET: 1 OF 1	FILE NAME: PID_PRODUCT

Keystone Plastic Faceplates

Signamax Connectivity Systems offers one of the broadest selections of field-configurable, flush-mount faceplates and multimedia surface-mount boxes. From single-gang faceplates to multimedia surface-mount multi-port boxes, Signamax has the solutions to fit your needs.

ORDERING INFORMATION

Single-Gang Faceplates

Single-gang faceplates are available in 1-, 2-, 3-, 4- or 6-port versions and allow for mounting any combination of keystone jacks and multimedia modules.

Part Number	Description
SKF-1	1-Port Single-Gang Keystone Faceplate
SKF-2	2-Port Single-Gang Keystone Faceplate
SKF-3	3-Port Single-Gang Keystone Faceplate
SKF-4	4-Port Single-Gang Keystone Faceplate
SKF-6	6-Port Single-Gang Keystone Faceplate

Standard color:

For other colors add the following to P/N:

Light Ivory	-BK (Black)	-GY (Gray)	-WH (White)
-------------	-------------	------------	-------------

Single-Gang Oversized Faceplates

Single-gang oversized faceplates are available in 1-, 2-, 3-, 4- or 6-port versions and allow for mounting any combination of keystone jacks and multimedia modules. Oversized faceplates are 4.875" x 3.125" x .375", provide a designer look and hide irregular drywall cuts and flaws around outlets.

Part Number	Description
SKFM-1	1-Port Single-Gang Oversized Keystone Faceplate
SKFM-2	2-Port Single-Gang Oversized Keystone Faceplate
SKFM-3	3-Port Single-Gang Oversized Faceplate
SKFM-4	4-Port Single-Gang Oversized Faceplate
SKFM-6	6-Port Single-Gang Oversized Faceplate

Standard color:

For other colors add the following to P/N:

Light Ivory	WH (White)
-------------	------------

Single-Gang Faceplates with Labeling Windows

Faceplates are available in 1-, 2-, 3-, 4- or 6-port versions and allow for mounting any combination of keystone jacks and multimedia modules. These faceplates feature top and bottom designation labeling windows for convenient faceplate identification.

Part Number	Description
SKFL-1	1-Port Single Gang Keystone Faceplate with Labeling
SKFL-2	2-Port Single Gang Keystone Faceplate with Labeling
SKFL-3	3-Port Single Gang Keystone Faceplate with Labeling
SKFL-4	4-Port Single Gang Keystone Faceplate with Labeling
SKFL-6	6-Port Single Gang Keystone Faceplate with Labeling

Standard color:

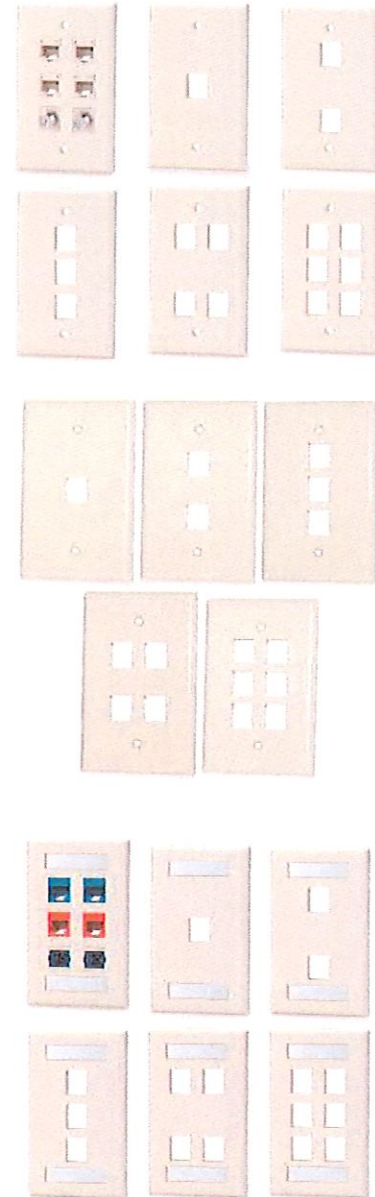
For other colors add the following to P/N:

Light Ivory	-BK (Black)	-GY (Gray)	-WH (White)
-------------	-------------	------------	-------------

Keystone Wall-Mount Phone Plates

Wall mount phone plates provide an easy-to-install method for mounting any wall mountable phone.

Part Number	Description
SKF-1P	1-Port Plastic Keystone Wall Mount Phone Plate, Light Ivory
SKF-1P-WH	1-Port Plastic Keystone Wall Mount Phone Plate, White



SPECIFICATIONS

Keystone Jacks ▶ CAT6 Jacks



Black



Blue



Ivory



Almond



Orange



White



Green



Red



Yellow



Gray



Purple



CAT6 V-Max Keystone Jacks

CAT6 V-Max Jacks are also compatible with the Vertical Cable I-Punch tool hat saves installation time. These sturdy jacks hold well, and can be snapped in and out of multiple times.

LIFETIME WARRANTY

Item #	Description	
352-V2712/AL	CAT6 V-Max, 8 Positions, 8 Conductors, Almond	●
352-V2701/AL/25	CAT6 V-Max, 8 Positions, 8 Conductors, 25 Pack, Almond	●
352-V2713/BK	CAT6 V-Max, 8 Positions, 8 Conductors, Black	●
352-V2702/BK/25	CAT6 V-Max, 8 Positions, 8 Conductors, 25 Pack, Black	●
352-V2714/BL	CAT6 V-Max, 8 Positions, 8 Conductors, Blue	●
352-V2703/BL/25	CAT6 V-Max, 8 Positions, 8 Conductors, 25 Pack, Blue	●
352-V2715/GR	CAT6 V-Max, 8 Positions, 8 Conductors, Green	●
352-V2704/GR/25	CAT6 V-Max, 8 Positions, 8 Conductors, 25 Pack, Green	●
352-V2716/GY	CAT6 V-Max, 8 Positions, 8 Conductors, Gray	●
352-V2705/GY/25	CAT6 V-Max, 8 Positions, 8 Conductors, 25 Pack, Gray	●
352-V2717/IV	CAT6 V-Max, 8 Positions, 8 Conductors, Ivory	○
352-V2706/IV/25	CAT6 V-Max, 8 Positions, 8 Conductors, 25 Pieces, Ivory	○
352-V2718/OR	CAT6 V-Max, 8 Positions, 8 Conductors, Orange	●
352-V2707/OR/25	CAT6 V-Max, 8 Positions, 8 Conductors, 25 Pack, Orange	●
352-V2719/PR	CAT6 V-Max, 8 Positions, 8 Conductors, Purple	●
352-V2708/PR/25	CAT6 V-Max, 8 Positions, 8 Conductors, 25 Pack, Purple	●
352-V2720/RD	CAT6 V-Max, 8 Positions, 8 Conductors, Red	●
352-V2709/RD/25	CAT6 V-Max, 8 Positions, 8 Conductors, 25 Pieces, Red	●
352-V2721/WH	CAT6 V-Max, 8 Positions, 8 Conductors, White	○
352-V2710/WH/25	CAT6 V-Max, 8 Positions, 8 Conductors, 25 Pack, White	○
352-V2722/YL	CAT6 V-Max, 8 Positions, 8 Conductors, Yellow	●
352-V2711/YL/25	CAT6 V-Max, 8 Positions, 8 Conductors, 25 Pack, Yellow	●

Features:

- Available in various colors for easy Identification
- 8 Conductor solder-plated phosphor bronze 110-IDC contacts
- Narrow connectors allow high port density in small areas
- EIA/TIA 568A/B standard
- ISO/IEC11801 2nd edition EN50173 2nd edition
- ANSI/TIA-568-C.2, FCC, 3P
- UL94V-0 Thermoplastic ABS Housing
- UL Listed, ETL Listed, RoHS Compliant

Physical Specifications

- Dimension (mm) 19.75H x 17W x 31.1D

Housing Materials

- Housing UL 94 V-0 self extinguished plastic
- DC Housing UL 94 V-0 self extinguished plastic

Contact Material

- IDC 110 Contacts Phosphor bronze, nickel plated
- Nose Contacts 50µ gold plating over nickel
- Operating Life Minimum 750 insertions
- Compatibility 22 to 26 AWG Solid
- PBC FR-4 1.6mm double sided
- Cap UL 94V-0 rated

Applications:

- 10Base-T Ethernet
- 155/622 Mbps ATM
- 4/16 Mbps Token Ring
- 100VG-Any LAN



CAT6 Shielded Keystone Jack

Vertical Cable CAT6 Shielded Jacks deliver protection from EMI. These work flawlessly with CAT6 shielded cables in indoor applications. Both, A and B, wiring codes are printed on the IDCs.

Item #	Description
302-J2631/S	CAT6, Jack, Shielded, 90° Degree, 8x8 Conductors

Note: Shielded Jack is not compatible with I-Punch Tool



Features:

- 360° Shielding Structure to prevent EMI
- 110/Krone Type Contacts (Terminal Block)
- Color Coded for 568A and 568B
- EIA/TIA 568A/B standards
- ANSI/TIA-568-C.2, ISO/IEC11801, EN50173-1
- Thermoplastic ABS Housing
- UL Listed, ETL Listed, RoHS Compliant

Physical Specifications

- Dimension (mm) 19.35H x 21W x 46.83D

Housing Material

- Housing & Cap Polycarbonate

Contact Material

- 110/Krone Type Contacts 100µ Inch nickel plated over phosphor bronze
- IDC Operating Life Minimum 250 re-terminations
- Jack Contact Phosphor bronze, 50µ inch gold plating over nickel
- Jack Operating Life Minimum 750 insertions
- Compatibility 23 to 26 AWG (solid)
- Shielded Cover 50~60µ inch nickel plated over phosphor bronze

Electrical

- Dielectric Strength 1000V RMS for 1min
- Insulation Resistance 10mΩ min
- Contact Resistance 2mΩ per contact
- Temperature Range -10°C to 60°C max
- Humidity 10%~65% AN

CAT6A Shielded Keystone Jack

Vertical Cable CAT6A Shielded Jacks offer the highest level of performance for modular connections. These work with CAT6A shielded cable, as well as lower category and unshielded cable. A and B wiring codes are stamped on the IDCs. The jacks have tough housings that snap in and out of keystone ports.

Item #	Description
--------	-------------

303-J2637/C6AS	Category 6A Shielded Data Grade Keystone Jack 90° Degree 8x8 Conductors
----------------	---

Note: Shielded Jack is not compatible with I-Punch Tool



Features:

- 110/Krone Type IDC (Terminal Block)
- 360° Shielding Structure to prevent EMI
- TIA/EIA-568C.2, IEEE802.3an
- ISO/IEC11801, EN50173-1 Class EA Specification
- Comply with CISPR/FCC Class A
- 3P Verified for 10G Cat6A
- Flame retardant rating: UL 94V-0
- ETL Listed, RoHS Compliant

Physical Specifications

- Dimension (mm) 19H x 21W x 38.1D

Housing Material

- Housing & Cap Polycarbonate

Contact Material

- 110/Krone Type 100µ Inch nickel plated over phosphor bronze
- IDC Operating Life Minimum 250 re-terminations
- Jack Contact Phosphor bronze, 50µ inch gold plating over nickel
- Jack Operating Life Minimum 750 insertions
- Compatibility 23 to 26 AWG (solid)
- Shielded Cover 50~60µ inch nickel plated over phosphor bronze

Electrical

- Dielectric Strength 1000V RMS for 1min
- Insulation resistance 10mΩ min
- Contact Resistance 2mΩ per contact
- Humidity 10%~65% AN



Handheld Gripper

078-1039/U

CAT6A V-Max Keystone Jacks

Vertical Cable CAT6A Jacks are compatible with all our CAT6A cables. Additionally, all our CAT6A Jacks are compatible with the I-Punch tool.

LIFETIME WARRANTY

Item #	Description
--------	-------------

353-V2812/C6AAL	CAT6A V-Max, 8 Positions, 8 Conductors, Almond	●
353-V2813/C6ABK	CAT6A V-Max, 8 Positions, 8 Conductors, Black	●
353-V2814/C6ABL	CAT6A V-Max, 8 Positions, 8 Conductors, Blue	●
353-V2815/C6AGR	CAT6A V-Max, 8 Positions, 8 Conductors, Green	●
353-V2816/C6AGY	CAT6A V-Max, 8 Positions, 8 Conductors, Gray	●
353-V2817/C6AIV	CAT6A V-Max, 8 Positions, 8 Conductors, Ivory	○
353-V2818/C6AOR	CAT6A V-Max, 8 Positions, 8 Conductors, Orange	●
353-V2819/C6APR	CAT6A V-Max, 8 Positions, 8 Conductors, Purple	●
353-V2820/C6ARD	CAT6A V-Max, 8 Positions, 8 Conductors, Red	●
353-V2821/C6AWH	CAT6A V-Max, 8 Positions, 8 Conductors, White	○
353-V2822/C6AYL	CAT6A V-Max, 8 Positions, 8 Conductors, Yellow	●

Applications:

- 10GBase-T Ethernet
- 1000Base-Tx Gigabit Ethernet
- 100Base-Tx Fast Ethernet



Features:

- 8 Conductor solder-plated phosphor bronze 110-IDC contacts
- Improved PCB Design and IDC Geometry provide superior performance
- TIA/EIA 568C.2, IEEE802.3an for 10GBase-T Requirements
- ISO 11801, EN 50173-1 Class EA Specification
- UL94V-0 Thermoplastic ABS Housing
- UL Listed, ETL Listed, RoHS Compliant

Physical Specifications

- Dimension (mm) 19.75H x 17W x 31.1D

Housing Materials

- Housing High-Impact Thermoplastic (UL 94 V-0)
- DC Housing Polycarbonate (UL 94 V-0)

Contact Material

- IDC 110 Contacts Solder-Plated Phosphor Bronze
- Nose Contacts 50µ of gold plating over nickel plating
- Operating Life Minimum 750 insertions
- Compatibility 22 to 26 AWG Solid
- PBC FR-4 1.6mm thickness
- Cap High-Impact Thermoplastic (UL 94 V-0)



Black



Blue



Ivory



Almond



Orange



White



Green



Red



Yellow



Gray



Purple



Fit the I-Punch Tool

078-2150



Blonder Tongue

ACA-30-550

Apartment Complex Amplifier

SOLUTIONS FOR ALL YOUR APPLICATIONS

The **ACA-30-550** is a 550 MHz broadband indoor hybrid distribution amplifier designed for RF distribution systems whose input signal source is a "cable drop", the output of an MATV headend, or a small CATV headend. The amplifier is designed for apartment complexes, hospitals, schools, prisons, and hotel applications. The **ACA-30-550** has a flat operational gain, which is variable from 12 to 32 dB using a built-in gain control. A variable slope control with 10 dB of range is also provided. Using a push-pull hybrid module as its gain block, it delivers high output level signals with low distortion.

The unit is powered by an external universal AC/DC power supply.



Features

- Hybrid IC Circuitry for High Output with Low Distortion
- Exceptional Temperature Stability Range of -20° C to +60° C
- Low 47 MHz Band Edge
- Line Transient Protection

Ordering Information

Model	Stock #	Description
ACA-30-550	5450	Apartment Complex Amplifier; 30 dB, 47-550 MHz

Specifications

RF

Frequency Range (MHz):	47-550
Channel Loading:	77
Flatness (dB):	±1.00
Gain (Reverse) (dB):	32, (--)
Noise Figure (dB) (a):	7.0
Output Level (dBmV):	+36/+44
Gain Control Range (dB):	20
Slope Control Range (dB):	10
Composite Triple Beat - CTB (dB) (b):	-64
Cross Modulation - XMOD (dB) (b):	-64
Composite Second Order - CSO (dB) (b):	-64
Hum Modulation (dB):	-65
Input Return Loss (dB):	10 dB (min.)
Output Return Loss (dB):	12 dB (min.)

(a) Measured at full gain with 0 dB slope.

(b) At rated output capability and channel loading.

General

Dimensions (WxHxD):	8.875" x 4.5" x 1.875" inches (225.42 mm x 114.3 mm x 47.63 mm)
Power Requirements:	External Power Supply Input 100-240VAC 50/60Hz Output 24VDC, 1000mA
Weight:	3.7 lbs (1.7kg)
Operating Temperature Range (°C):	-20 to +60

Related Products

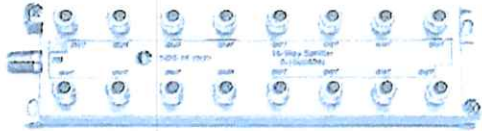
Model	Stock #	Description
ACA-30-55R	5750	Apartment Complex Amplifier; 30 dB, 47-550 MHz, Passive Return, Single Hybrid
ACA-30-75R	5770	Apartment Complex Amplifier; 30 dB, 47-750 MHz, Passive Return, Dual Hybrid
ACA-35-1000	5470	Apartment Complex Amplifier; 35 dB, 40-1000 MHz, Push/Pull Discrete

Indoor 5-1000 MHz Splitters

SDS Series



SDS-12



SDS-16

○ Features & Benefits

- Zinc Die-cast Housing with Corrosion Protection
- Solder Back
- -120 dB RFI

○ Specifications

	SDS-12	SDS-16
Loss (dB)		
5 - 40 MHz:	11	14
40 - 400 MHz:	11	14
400 - 500 MHz:	11.5	14.5
500 - 600 MHz:	12	15.5
600 - 1000 MHz:	13	15.5
Isolation (dB)		
5 - 40 MHz:	28	23
40 - 400 MHz:	32	28
400 - 500 MHz:	30	25
500 - 600 MHz:	28	22
600 - 1000 MHz:	25	22
Return Loss Input (dB)		
5 - 40 MHz:	18	18
40 - 400 MHz:	18	18
400 - 500 MHz:	18	18
500 - 600 MHz:	18	18
600 - 1000 MHz:	18	18
Return Loss Output (dB)		
5 - 40 MHz:	18	18
40 - 400 MHz:	20	22
400 - 500 MHz:	20	22
500 - 600 MHz:	20	20
600 - 1000 MHz:	18	18

○ Ordering Information

Model	Stock No.	Description
SDS-12	1938	Splitter, 12 Way Solder Back, 5-1000 MHz
SDS-16	1939	Splitter, 16 Way Solder Back, 5-1000 MHz

Access Point U6 Enterprise



Mechanical

Dimensions	Ø220 x 48 mm (Ø8.7 x 1.9")
Weight	Without mount: 960 g (2.1 lb) With mount: 1090 g (2.4 lb)
Enclosure materials	Top housing: polycarbonate Bottom housing: aluminium
Mount material	Stainless steel (SUS304)

Hardware

Networking interface	(1) 2.5GbE RJ45 port	
Management interface	Ethernet Bluetooth	
Power method	PoE+	
Power supply	UniFi PoE switch 48V, 0.5A PoE adapter (optional)	
Supported voltage range	44–57V DC	
Max. power consumption	22W	
Max. TX power	2.4 GHz	22 dBm
	5-7 GHz	26 dBm
MIMO	2.4 GHz	2 x 2 (UL MU-MIMO)
	5 GHz	4 x 4 (DL/UL MU-MIMO)
	6 GHz	4 x 4 (DL/UL MU-MIMO)
Throughput rate	2.4 GHz	573.5 Mbps
	5 GHz	4.8 Gbps
	6 GHz	4.8 Gbps
Antenna gain	2.4 GHz	3.2 dBi
	5 GHz	5.3 dBi
	6 GHz	6 dBi
LEDs	White/blue	
Buttons	Reboot and factory reset	
Mounting	Wall/ceiling (Included)	
Operating temperature	-30 to 60° C (-22 to 140° F)	
Operating humidity	5 to 95% noncondensing	
Certifications	CE, FCC, IC	

Software

WiFi standards	802.11a/b/g WiFi 4/WiFi 5/WiFi 6/WiFi 6E
Wireless security	WPA-PSK, WPA-Enterprise (WPA/WPA2/WPA3)
BSSID	8 per radio
VLAN	802.1Q



Advanced QoS	Per-user rate limiting
Guest traffic isolation	Supported
Concurrent clients	600+
Zero wait DFS	Yes

Supported Data Rates

802.11a	6, 9, 12, 18, 24, 36, 48, 54 Mbps
802.11b	1, 2, 5.5, 11 Mbps
802.11g	6, 9, 12, 18, 24, 36, 48, 54 Mbps
802.11n (WiFi 4)	6.5 Mbps to 600 Mbps (MCS0 - MCS31, HT 20/40)
802.11ac (WiFi 5)	6.5 Mbps to 3.4 Gbps (MCS0 - MCS9 NSS1/2/3/4, VHT 20/40/80/160)
802.11ax (WiFi 6/6E)	7.3 Mbps to 4.8 Gbps (MCS0 - MCS11 NSS1/2/3/4, HE 20/40/80/160)



UniFi Network

Datasheet
UDM-SE

Dream Machine Special Edition



Mechanical

Dimensions	442.4 x 43.7 x 285.6 mm (17.4 x 1.7 x 11.2")
Weight	4.95 kg (10.9 lb)
Enclosure materials	Aluminium CNC, SGCC steel
Mount material	SGCC steel

Hardware

Processor	Quad-core ARM® Cortex®-A57 at 1.7 GHz
System memory	4 GB DDR4
On-board storage	16 GB eMMC Integrated 128 GB SSD
Management interface	Ethernet Bluetooth
Networking interface	(8) LAN: GbE RJ45 ports (1) WAN: 2.5 GbE RJ45 port
SFP+ interface	(1) LAN: 10G SFP+ (1) WAN: 10G SFP+
PoE interface	(6) PoE (Pair A 1, 2+; 3, 6-) (2) PoE+ (Pair A 1, 2+; 3, 6-)
IDS/IPS throughput	3.5 Gbps* <small>*Measured with iPerf3</small>
Power method	(1) Universal AC input, 100–240V AC, 4.4A Max., 50/60 Hz (1) USP-RPS DC input, 52V DC, 3.94A
Power supply	AC/DC, internal, 240W
Supported voltage range	100–240V AC
Max. power consumption	50W (Excluding PoE output)
Max. PoE wattage per port by PSE	PoE: 15.4W PoE+: 30W
Voltage range PoE mode	PoE: 44–57V PoE+: 50–57V
ESD/EMP protection	Air: ± 15kV, contact: ± 8kV
LCM display	(1) 1.3" touchscreen
Button	Factory reset
Operating temperature	-10 to 40° C (14 to 104° F)
Operating humidity	5 to 95% noncondensing
Certifications	CE, FCC, IC

LEDs

Ethernet	White: link/activity
SFP+	White: link/activity
HDD	White: disk activity Amber: disk error





Switch Pro 48 PoE



Mechanical

Dimensions	442.4 x 399.6 x 43.7 mm (17.4 x 15.7 x 1.7")
Weight	Without mounting brackets: 6.2 kg (13.8 lb) With mounting brackets: 6.3 kg (14 lb)
Enclosure material	SGCC steel

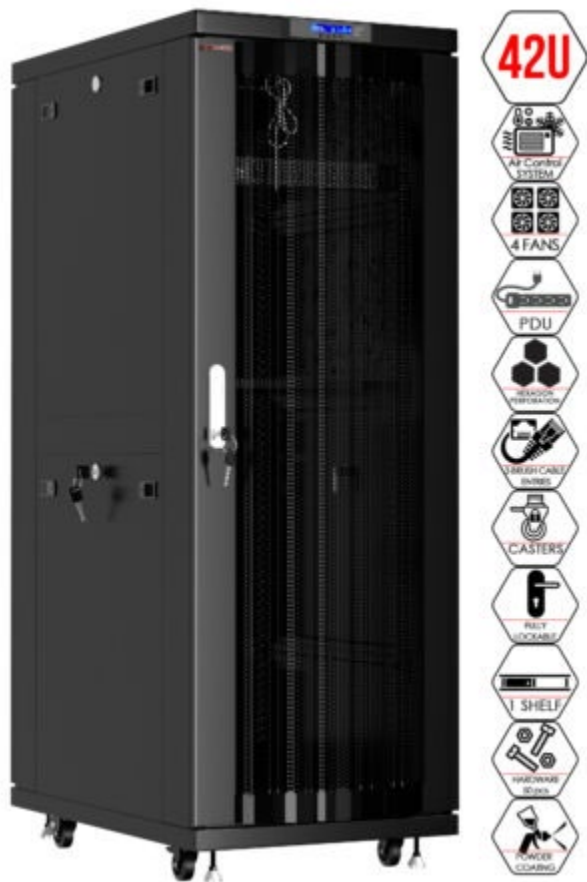
Hardware

Management interface	Ethernet In-band
Networking interface	(48) GbE RJ45 ports (4) 1/10G SFP+ ports
PoE interface	(40) PoE/PoE+ (Pins 1, 2+; 3, 6-) (8) 60W PoE++; PoE/PoE+ (Pins 1, 2+; 3, 6-) / PoE++ (Pair A 1, 2+; 3, 6-) (Pair B 4, 5+; 7, 8-)
Total non-blocking throughput	88 Gbps
Switching capacity	176 Gbps
Forwarding rate	130.944 Mpps
Power method	Universal input, 100–240V AC, 50/60 Hz USP RPS DC input, 52V DC, 11.54A / 11.5V DC, 5.22A
Power supply	AC/DC, internal, 660W
Supported voltage range	100–240V AC
Max. power consumption	60W (Excluding PoE output)
Total available PoE	600W
Max. PoE wattage per port by PSE	PoE+: 32W PoE++: 64W
Voltage range PoE mode	PoE: 44–57V PoE+: 50–57V
ESD/EMP protection	Air: ± 16kV, contact: ± 12kV
LCM display	(1) 1.3" touchscreen
Button	Factory reset
Shock and vibration	ETSI300-019-1.4 Standard
Operating temperature	-5 to 40° C (23 to 104° F)
Operating humidity	10 to 90% noncondensing
Certifications	CE, FCC, IC

LEDs

System	Status
Ethernet	PoE Speed/link/activity
SFP+	Speed/link/activity
RPS	Status





Sysracks

19" Floor Standing Server Rack Cabinet 42U (24"w x39"d x84"h) (600x1000x2132mm.) (WxDxH), Mesh Doors (**TEMPERATURE CONTROL PANEL**, 4 fans,1 shelf, [1PDU](#))

Types of doors:

- Front Arc Mesh door with hexagon perforation
- Rear Flat Mesh door with hexagon perforation

Cable input:

- Top and bottom have dust-tight brush panels

Ventilation:

- Passive – convection heat flow due to perforation of front and rear doors
- Active – Temperature Control System with 4 fans (all models)

IP protection:

- IP20: perforated door

Capacity:

- Static load not exceeding 1600 lb.

Material:

- Rolled steel profile
- Frame thickness:1.2 mm; 19" profiles 2mm; side panels:1.0 mm; other components parts:1.2 mm

Coating:

- Powder paint with degreasing and anticorrosive phosphate

Color:

- Black: RAL9005

Supplied non assembled in 4 packages.

Carrying construction – welded front and rear frames.

Base model includes:

- o Temperature Control System with 4 fans
- o 3 Brush cable entry
- o [1 PDU 8 ways](#)
- o 1 fix shelf
- o 4 rollers and legs
- o 2 Latch locks
- o Set of screws and nuts (50 pcs).



OR500LCDRM1U SMART APP LCD UPS



Cost-effective feature-rich power protection for networking, servers and telecommunications equipment

A rackmount UPS with line interactive topology, the CyberPower Smart App LCD OR500LCDRM1U provides battery backup (using simulated sine wave output) and surge protection for department servers, workgroup servers, workstations, network devices, and telecom installations without active PFC power supplies. The OR500LCDRM1U uses Automatic Voltage Regulation (AVR) to correct minor power fluctuations without switching to battery power, which extends battery life. AVR is essential in areas where power fluctuations occur frequently. The OR500LCDRM1U comes with a three-year warranty and a \$300,000 Connected Equipment Guarantee.

TYPICAL APPLICATIONS

- Workstations
- Corporate Servers
- Automatic Voltage Regulation
- Department Servers
- Network Devices
- Telecom Installations

FEATURES

- Capacity: 500VA / 300W
- Topology: Line Interactive
- Waveform: Simulated Sine Wave
- Output: 120Vac +/- 10%
- Runtime (half/full): 12 minutes / 3 minutes
- Plug type & cord: NEMA 5-15P, 10-ft. cord
- Outlets: 6 (2 surge, 4 surge + battery backup)
- Outlet types: 6 x NEMA 5-15R
- Communication: USB, Relay, SNMP
- Data line protection: Network
- Management software: PowerPanel® Business
- Remote management: Yes, with optional RMCARD205
- Environmental sensor: Yes, with optional RMCARD205 and ENVIROSENSOR
- ENERGY STAR® certified: Yes
- Warranty: Three-Year
- Connected Equipment Guarantee: \$300,000

SPECIFICATIONS

GENERAL	
Energy Saving	GreenPower UPS™ Bypass Technology
ENERGY STAR® certified	Yes
UPS Topology	Line Interactive

INPUT	
Adjustable Voltage Range	88 - 144 VAC
Circuit Breaker	15 A
Cord Length	10 ft (3.0 m)
Input Frequency Range	57 Hz - 63 Hz
Input Plug Type	NEMA 5-15P
Input Voltage Range	90 VAC - 140 VAC
Nominal Input Voltage	120 VAC
Plug Style	Right Angle - 45° Offset

OR500LCDRM1U SMART APP LCD UPS



SPECIFICATIONS - CONT.

OUTPUT

Automatic Voltage Regulation	Single Boost
On Battery Frequency	60Hz +/- 1%
On Battery Voltage	120 VAC +/- 10%
On Battery Waveform	Simulated Sine Wave
Outlet Type	6 - NEMA 5-15R
Outlets - Battery and Surge Protected	4
Outlets - Surge Only Protected	2
Outlets - Total	6
Output Power Factor	0.6
Overload Protection	Internal Circuitry Limiting Circuit Breaker Protected
Typical Transfer Time	8 ms
VA	500 VA
Watts	300 W

BATTERY

Battery Quantity	2
Battery Size	6 V / 7 Ah
Battery Type	Sealed Lead-Acid Battery
Hot-Swappable	Yes
Replacement Battery Cartridge	1 x RB0670X2
Runtime at Full Load	3 minutes
Runtime at Half Load	12 minutes
Typical Recharge Time	8 hours
User-Replaceable Battery	Yes

SURGE PROTECTION AND FILTERING

EMI/RFI Filtration	Yes
Network Protection RJ45	1-in / 1-Out (10/100/1000)
Surge Suppression (Joules)	1150 J

MANAGEMENT & COMMUNICATIONS

Audible Alarms	Battery Mode Low Battery Overload Fault
HID Compliant USB Port	Yes
LCD	Multifunction LCD
LED Indicators	Power On Wiring Fault
Management Cable	USB Cable
Serial Port	1 Dry Contact
SNMP / HTTP Remote Monitoring	Yes - with optional RMCARD205
Software (Free Download)	PowerPanel® Business

PHYSICAL

Color	Black
Form Factor	Rackmount
Material of Construction	Metal
Rack Height	1U

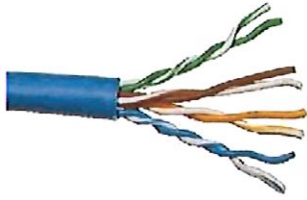
OR500LCDRM1U SMART APP LCD UPS

SPECIFICATIONS - CONT.

DIMENSIONS	
Physical Dimensions - Width/Height/Depth (cm)	43.31 x 4.45 x 23.5 cm
Physical Dimensions - Width/Height/Depth (mm)	433 x 44 x 235 mm
Physical Dimensions - Width/Height/Depth (in.)	17.05 x 1.75 x 9.25 in.
Weight (kg)	8.16 kg
Weight (lbs.)	18.0 lbs.
SHIPPING DIMENSIONS	
Shipping Dimensions - Width/Height/Depth (cm)	31.75 x 14.61 x 52.07 cm
Shipping Dimensions - Width/Height/Depth (mm)	317.5 x 146.05 x 520.7 mm
Shipping Dimensions - Width/Height/Depth (in.)	12.5 x 5.75 x 20.5 in.
Shipping Weight (kg)	9.34 kg
Shipping Weight (lbs.)	20.6 lbs.

ENVIRONMENTAL	
Operating Elevation	0 - 10,000 ft (0 - 3,048 m)
Operating Relative Humidity	0 - 95% (non-condensing)
Operating Temperature	32 - 104 °F (0 - 40 °C)
Storage Elevation	0 - 50,000 ft (0 - 15,239 m)
Storage Relative Humidity	0 - 95% (non-condensing)
Storage Temperature	5 - 113 °F (-15 - 45 °C)
CERTIFICATIONS	
Environmental	RoHS Compliant
Safety	UL1778 cUL 107.1 FCC DOC Class B
WARRANTY	
CEG Amount	\$300,000
Connected Equipment Guarantee (CEG)	Lifetime
Extended Warranty Option	WEXT5YR-UIB
Product Warranty	3-Year Limited

Technical Data Sheet- Category 6 Network



WEST PENN WIRE

2833 West Chestnut Street
Washington, PA 15301
Toll Free: (800) 245-4964
Fax: (724) 222-6420
www.westpenn-wpw.com

PART NUMBER:	4246
DESCRIPTION:	23 AWG.- 4 PAIR Solid bare copper conductors, unshielded with an overall jacket.
NEC RATING:	CMR
APPROVALS:	(UL) C(UL) Listed or c(ETL)us Listed
APPLICATION:	Indoor - Category 5E/6 Applications- Ethernet, IP Cameras, Digital Integration Meets or exceeds TIA/EIA 568B.2.1 Category 6 Specifications

Construction Parameters:

Conductor	23 AWG Bare Copper
Stranding	Solid
Number of Conductors	8 (4 Pair)
Insulation	Thermoplastic - .008"
Shield	None
Drain	None
Core Separator	Yes
Jacket Material	PVC
Overall Cable Diameter	0.225" Nom.
Approximate Cable Weight	30 Lbs/1M' Nom.
Flame Rating	UL1666

Electrical & Environmental Properties:

Operating Temperature Rating	-20°C To +60°C
Operating Voltage Rating	300 V RMS
DC Resistance per Conductor @ 20deg C	7.8 Ohms/100m Nom.
Mutual Capacitance	14pf/ft Nominal
Nominal Impedance	100 Ohms+/-15% (1-100Mhz)
Velocity of Propagation	66% Nominal
Delay Skew	45ns/100m MAX
Standards	TIA/EIA568-B.2 1
Insulation Colors	1.Blue/White-Blue, 2. Orange/White-Orange 3. Green/White-Green, 4. Brown/White-Brown
Jacket Color	Gray, White, Blue – Other Colors Available Example: 4246-BL
RoHS Compliant	Yes

Electrical Specifications:

Frequency: MHz	1	10	25	100	250	400
Insertion Loss: dB/100m	1.8	5.7	9.1	19.0	31.5	41.3
NEXT: dB/100m	74.3	59.3	53.3	44.3	38.3	35.3
ACR: dB/100m	72.3	53.3	46.3	24.5	5.5	--
PS-NEXT: dB/100m	72.3	57.3	51.3	42.3	36.3	33.3
PS-ACR: dB/100m	70.3	51.3	41.8	22.5	3.5	--
ELFEXT: dB/100m	67.8	47.8	39.8	27.8	19.8	15.8
PS-ELFEXT: dB/100m	64.8	44.8	36.8	24.8	16.8	12.8
RL: dB	20	25	24.3	20.1	17.3	15.9

Operating Temp	-20 C to +60 C
Storage Temp	-20 C to +75 C
Installation Temp	0 C to + 60 C
Delay Skew	45ns/100m Max

Mechanical Properties:

Max. Recommended Pull Tension	25 lbs.
Min. Bend Radius (Install)	1.00"

Accessories:

Connectors: Jacks

KJ458MT-C6C-xx
Xx: BK,BU, WH, YE, RD

Connectors: Plugs

32-6EZP – EZ Plugs
32-6198UL Cat 6

Boots

32-1900-xx – xx: Colors

Tools:

TL-135 110 Punch down tool
TL-114 Crimp Tool
TL-EZRJ45 Crimp Tool – EZ Plugs

Cable Assemblies:

C6C-114CC-xx

CC: Color: BK, BU, GY, RD, WH, YE
xx: Length Footage: 3,7,10,15,20,25

Patch Panels:

12458MD-C6C 12 Port
24458MC-C6C 24 Port
48458MD-C6C 48 Port

Specification Issue Date: 11/12

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Standard Lengths are 1000ft.
The Jacket is sequentially footmarked.
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conditions of use are beyond our control, all
recommendations or suggestions are presented
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information contained herein or otherwise.



25841

RG6/U 18AWG BC Type CATV Dual Shield Plenum
 CATV/MATV DBS

Construction & Dimensions

CONSTRUCTION & DIMENSIONS		-
CONDUCTOR PARAMETER		-
• Number of Conductors		1
• AWG Size		18
• Conductor Stranding		Solid
• Conductor Type		Bare copper
• Nominal DCR		6.5 Ohm/1000ft
INSULATION PARAMETER		-
• Insulation Type		Foam FEP
• Insulation Thickness		0.17 in
SHIELDING PARAMETER		-
• Shield Type		Overall 100% Aluminum Foil
• Shield Type 2		Aluminum Braid
ELECTRICAL CHARACTERISTICS		-
• Nominal Impedance		75 Ohm
• Nom. Cap. Between Conductors		16.2 pF/ft

Overall Construction

OVERALL CONSTRUCTION PARAMETERS		-
Jacket Type		Flexible Plenum
Nominal Cable O.D.		0.237 in
Plenum		Yes
NEC UL Rating		CATV, CMP
RoHS Compliant		Yes
Pull Tension		70 lbs
Bend Radius		2.37 in
Cable Weight		32 lbs

Overall Electrical & Optical Characteristics

OVERALL ELECTRICAL/OPTICAL CHARACTERISTICS		-
Nominal Velocity of Propagation (VP)		82 %
UL Flammability		NFPA 262 Plenum
Operating Range		-20 to 60 Deg C
UL Voltage Rating		300

Detailed Specification & Technical Data



25841

Attenuation Performance

FREQUENCY (MHz)	ATTENUATION (dB/100ft)
5 MHz	0.45 dB
55 MHz	1.6 dB
100 MHz	2 dB
270 MHz	2.9 dB
400 MHz	4.5 dB
540 MHz	4.9 dB
750 MHz	6.6 dB
1000 MHz	8 dB
1450 MHz	10.3 dB
2250 MHz	13.36 dB
3000 MHz	15.42 dB

Related Products

RELATED PRODUCTS	
Non Plenum Number	841
Aquaseal Number	AQC841
"F" Type Crimp	CN-F56TFE
"F" Type Compression	CN-F6MCV

Part Numbers

Part Numbers	
25841IV1000	Ivory Jacket 1000ft Wooden Reel
25841BK1000	Black Jacket 1000ft Wooden Reel

Technical Data Sheet
RG11/U Type CATV Coaxial Cable
Plenum



2833 West Chestnut Street
 Washington, PA 15301
 Toll Free: (800) 245-4964
 Fax: (724) 222-6420
 www.westpenn-wpw.com

PART NUMBER:	25821
DESCRIPTION:	RG11/U – 1 Conductor 14 AWG Solid, 100% Al. Foil + 65% Al. Braid and an overall Plenum Jacket.
NEC RATING:	CATVP/ CL2P
APPROVALS:	(UL) Listed
APPLICATION:	Indoor Plenum for:– CATV/MATV

Construction Parameters:

Conductor	14 AWG Bare Copper
Stranding	Solid
Insulation Material	Gas Injected Polyethylene
Insulation Thickness	.280" Nom.
Number of Conductors	1 Center Conductor
Shield	100% Al Foil + 65% Al. Braid
Jacket Material	Copolymer
Overall Cable Diameter	0.352" Nom.
Approximate Cable Weight	43 Lbs/1M' Nom.
Flame Rating	NFPA 262

Electrical & Environmental Properties:

		<u>Mhz</u>	<u>db/100ft</u>
Temperature Rating	-20deg C to 60deg C	5	.25
Max.Capacitance Between Conductors @ 1 KHz	16.2 pf/ft Nom.	55	1.00
Velocity of Propagation	82% Nom.	100	1.50
Impedance	75 ohms Nom.	270	2.0
DC Resistance per Conductor @ 20deg C	2.6 Ohms/1M' Nom.	400	2.98
Jacket Color	Natural	550	3.5
RoHS Compliant	Yes	750	4.9

Mechanical Properties:

Max. Recommended Pull Tension	230 lbs.	1000	5.5
Min. Bend Radius (Install)	3.5"	2000	7.5
		2250	7.95
		3000	9.19

Connectors and Accessories

F Crimp:	CN-F11TFE
F Compression:	CN-FS11PL

Specification Issue Date: 7/06

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Standard Lengths are 1000ft.
 The Jacket is sequentially footmarked.
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EDUCATIONAL ELECTRONICS CORPORATION

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Main Office (504) 737-4545 · Fax (504) 737-7443
North Shore (985) 809-0086

ELECTRONICS
SYSTEMS
SPECIALISTS

NEW ST. BERNARD PARISH LIBRARY

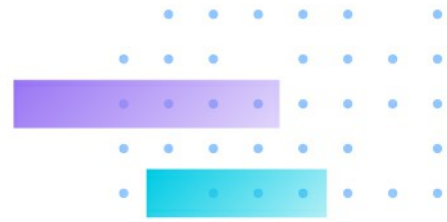
VIDEO SURVEILLANCE SYSTEM

SUBMITTALS

**EQUIPMENT LIST
NEW ST BERNARD PARISH LIBRARY**

VIDEO SURVEILLANCE

Vendor	Equipment	Description
VIVOTEK	NR9681	64 CHANNEL NVR
VIVOTEK	FD9388-HTV	INDOOR CAMERA
VIVOTEK	FD9380-H	OUTDOOR CAMERA
VIVOTEK	FE9191-H-V2	FISHEYE CAMERA
VIVOTEK	IB9380-H	POLE CAMERAS
WESTERN DIGITAL	WD40PURZ	HARD DRIVE
HEWLETT PACKARD	64V81A6ABA	19" MONITOR
CYBERPOWER	OR500LCDRMIU	UPS
WEST PENN	4246	CAT 6 CABLE



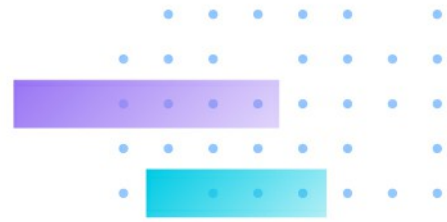
NR9681-v2

H.265 2U 64-CH NVR

H.265 • VAST 2 Inside • 64 Channel • 8x HDD • ONVIF • Dual LAN • Fisheye Dewarp • Local Display • RAID • Redundant Power

- H.265/H.264 Compression Technology
- 64-CH Recording, 64-CH Display
- 8 Hot-Swappable HDD Bays
- Support RAID 0/1/5/6/10 Storage
- Redundant Power
- Dual Lan Giga Network Ports
- Multiple Fisheye Dewarp Support
- VIVOTEK VAST 2 Inside
- Smart Search II: People/Vehicle Search
- Analytics Integration: Smart VCA, Parking Violation/Restricted Zone Detection
- Cybersecurity Management Solution
- Comprehensive VIVOTEK Solution Support





Technical Specifications

Device

Model	NR9681-v2
OS	Embedded Windows 10
Watchdog	Hardware + Software
Power Restoration	System Restart Automatically after Power Recovery

Display

LiveView Display	64 Channels Equal: 1x1, 2x2, 3x3, 4x4, 5x5, 6x6, 7x7, 8x8 Panorama: 1P+6, 2P, 2P+3, 3P Focus: 1+12, 1+16, 1+3, 1+5, 1+7, 1+9, 2+8 Vertical: 1V+6, 2V+2, 2V+3, 3V, 3V+4, 4V, 4V+4, 5V Single layout display, full screen display, custom layout, layout rotation
Video Output	HDMI x1, Display Port x1
Display Resolution	HDMI: 4096x2160 DP: 4096x2304
Dual Monitor	Supported
Camera Position	Change the viewcell position on the Live View screens
Stream Application	Stream Selection & Auto Stream Size
Monitor Enhancement	E-Map Embedded, Drag & Drop, Remote I/O Control, PiP (Digital Zoom), Instant Playback, Video Display Mode (Aspect Ratio & Camera Information), Metadata Display (VCA, POS and Data Magnet)
Fisheye Dewarp	10, 1P, 1R, 103R, 4R, 2P, 4R Pro, 108R and Fisheye Auto-Pan
PTZ/ePTZ Operation	Direction Control, Home, Zoom, Focus, Isis, Preset, Patrol (Group), Tracking, Pan, Stop, Speed, Wiper Blade Control

Video

Video Format	MJPEG, MPEG4, H.264 AVC, H.264 SVC, H.265
Graphic Decoder	Software decoding
Decoding Resolution	Up to 8192x8192
Decoding Capability	H.264: 1920x1080 @ 540 fps H.265: 1920x1080 @ 270 fps

Audio

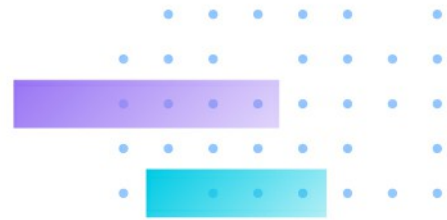
Audio Format	G.711, G.726, AMR, AAC
Audio In/Out	Microphone audio jack Input x1 3.5 Line input audio jack x1 3.5 Line output audio jack x1
2-way Audio	Supported

Record

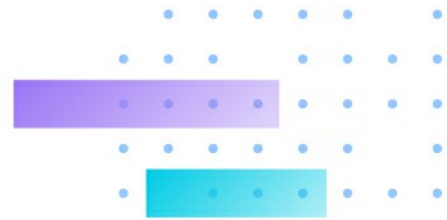
Recording Time (sec.)	Pre-Record: 3-15 Post-Record: 10-60
Recording Stream	Single
Recording Throughput	512 Mbps
Recording Mode	Continuous, Event, Customized Schedule, Activity Adaptive Streaming
Recording Setting	Recycling time depends on the remaining storage space or the set number of days
Watermark	Supported
Seamless Recording	Supported

Storage & Backup

HDD Devices	Hot-Swappable Tray x8 *HDD is purchased by separately.
HDD Max. Capacity	*Please refer to recommended HDD list on the VIVOTEK website.
RAID	RAID 0, 1, 5, 6, 10
Disk Management	Create, format and remove disk
Video Clip Export	USB Dongle (FAT Format) NAS (SMB & CIFS)



Schedule Backup	NAS (SMB & CIFS)
Playback	
Playback Display	64 Channels (the max. number of monitors supported depends on the decoding capability of your system) Equal: 1x1, 2x2, 3x3, 4x4, 5x5, 6x6, 7x7, 8x8 Panorama: 1P+6, 2P, 2P+3, 3P Focus: 1+12, 1+16, 1+3, 1+5, 1+7, 1+9, 2+8 Vertical: 1V+6, 2V+2, 2V+3, 3V, 3V+4, 4V, 4V+4, 5V Single layout display, full screen display, custom layout, layout rotation
Playback Control	Play, rewind, pause, stop, next/previous video start, next/previous frame, 1/8X ~ 64X speed control, bookmark
Video Search	Calendar, Event, Alarm, Bookmark, Thumbnail, Smart Search II, Transaction (POS), Data Magnet, Log
Snapshot	BMP & JPEG
Video Clip Export	3GP & EXE
Network	
Ethernet	10/100/1000Mbps Ethernet (RJ-45) x2
Video Throughput for Remote Client	400 Mbps
Protocols	IPv4, TCP/IP, HTTP, HTTPS, UPnP, RTSP/RTP/RTCP, SMTP, FTP, DHCP, NTP, DNS, DDNS, IP Filter
Alarm Management	
Alarm Period (sec.)	Max. 30
Alarm Filter	Time, Trigger Type (Camera/Substation/System), Status, Name, Trigger Source
Alarm Setting	Realtime System Notification Alarm Result Display by List or Thumbnail
Schedule Type	Continuous, schedule, manual
Camera Event	General: Motion detection, Camera DI, Camera DO, IR (Infrared), PIR (Passive infrared), Tampering detection, Temperature, Camera disconnected, Recording error, Stop recording, Video loss (Video server only), SD card life expectancy detection, Audio detection, Shock detection Smart VCA: Line crossing detection, Intrusion detection, Loitering detection, Face detection, Missing object detection, Unattended object detection, Crowd detection, Running Detection Trend Micro IoT Security: Brute force attack, Cyberattack, Quarantine event
Substation	NV Series NVR: Abnormal G-sensor Motion, Speeding, GPS Disconnected ND Series NVR: Fan Status, Network Disconnected, Storage Failure, Storage Full, Number of remaining people, Brute force attack, Cyberattack, Quarantine event NR Series NVR: Network Disconnected, Storage Failure, Storage Full
External Devices Event	DI/O (with I/O Box), TCP Message
Action	Start to record videos, Set DO status, Go to camera presets, Send HTTP requests, Send live streaming, Send email with snapshot of assigned camera(s), Go to E-Map, Sound the alarm and Add bookmark
Alarm State for Management	New, In Progress, False Alarm and Close
Alarm Result Export	.csv File
eMap	
Source	Import picture & folder
Device	Camera, external DI/O
Marked	Add, remove, direction control, PTZ control, FOV control, live view & playback
Event Notification	One or More Live Streaming
External Interface	
USB	USB 3.0 Type- A x3 USB 3.0 Type-C X1
Audio	Microphone audio jack Input x1 3.5 Line input audio jack x1 3.5 Line output audio jack x1
System	
POS Integration	Supported



UPS Integration	Supported
Camera Integration	ONVIF Profile S
I/O Box Integration	Advantech ADAM-6000 Series CHIYU CYT-133SC MOXA ioLogik E1210, E1211 and E1212
User Management	Authentication: Basic Account / Windows AD Account User Account: 1024 User Level: Administrator / Customized User
Log	Operation, system and event log
Date & Time	Sync server

Advanced Features

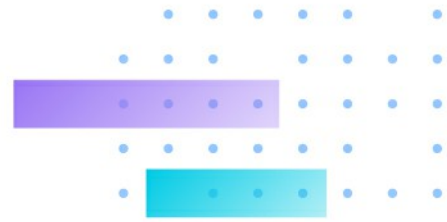
VCA Counting Solution	Supported
LPR Solution	Supported
VCA Event Search	Smart VCA
Smart Search	Smart Search I & Smart Search II
Cybersecurity Management	Supported
Failover	Supported

Remote Client

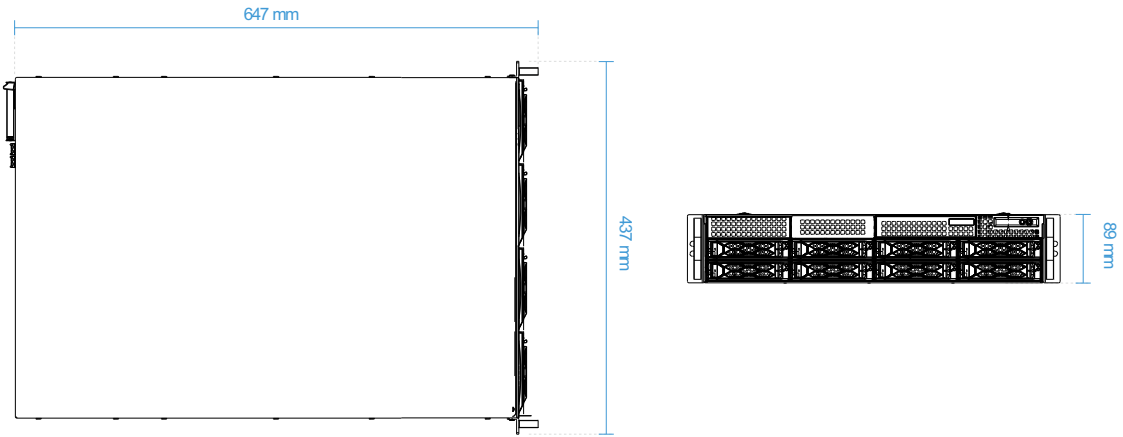
Software AP	Shepherd, VAST 2
Mobile/Tablet App	iViewer (iOS/Android)

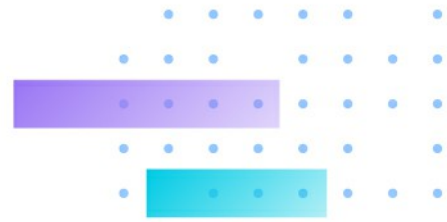
General

Power Input	Redundant power 100~220V AC
Power Consumption	Max. 650 W
Redundant Power	Supported
80 Plus Certified	Platinum
Dimensions	89 (H) x 437 (W) x 647 (D) mm
Weight	15.8 kg (without HDD)
Operating Temperature	5°C ~ 35°C (41°F ~ 95°F)
Humidity	0 ~ 95%
Safety Certifications	CE, FCC, VCCI, C-Tick, UL, CB, BSMI
Warranty	36 months



Dimensions





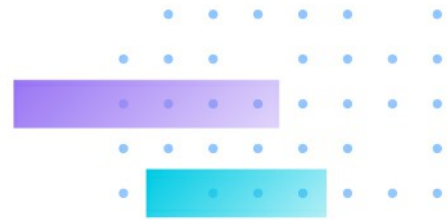
FD9388-HTV

Fixed Dome Network Camera

5MP • SNV • WDR Pro • Smart IR • 30M IR • Smart Stream III • IP66 • IK10

- H.265 Compression Technology
- 20 fps @ 2560x1920 (WDR Pro on)
- 2.8~12 mm, Remote Focus
- SNV (Supreme Night Visibility) for Low Light Conditions
- WDR Pro for Unparalleled Visibility in Extremely Bright and Dark Environments
- Smart Stream III to Optimize Bandwidth Efficiency
- Built-in IR Illuminators, Effective up to 30 Meters
- Trend Micro IoT Security
- Weather-proof IP66-rated and Vandal-proof IK10-rated Housing
- Built-in MicroSD/SDHC/SDXC Card Slot for On-board Storage
- Built-in Microphone





Technical Specifications

System Information

Model	FD9388-HTV
CPU	Multimedia SoC (System-on-Chip)
Flash	128 MB
RAM	512 MB

Camera Features

Image Sensor	1/2.7" Progressive CMOS
Max. Resolution	2560x1920 (5MP)
Lens Type	Motorized, Vari-focal, Remote Focus
Focal Length	f = 2.8 ~ 12 mm
Aperture	F1.4 ~ F2.8
Iris Type	Fixed iris
Field of View	90° ~ 30° (Horizontal) 65° ~ 23° (Vertical) 115° ~ 38° (Diagonal)
Shutter Time	1/5 sec. to 1/32,000 sec.
WDR Technology	WDR Pro
Day/Night	Yes
Removable IR-cut Filter	Yes
IR Illuminators	Built-in IR illuminators, effective up to 30 meters with Smart IR, IR LED*2
Minimum Illumination	0.035 lux @ F1.4 (Color) <0.005 lux @ F1.4 (B/W) 0 lux with IR illumination on
Pan Range	353°
Tilt Range	75°
Rotation Range	350°
Pan/Tilt/Zoom Functionalities	ePTZ: 48x digital zoom (4x on IE plug-in, 12x built-in)
Storage	Seamless Recording to MicroSD/SDHC/SDXC card and recording to network-attached storage (NAS)
Built-in Installation Aids	Remote focus, remote zoom

Video

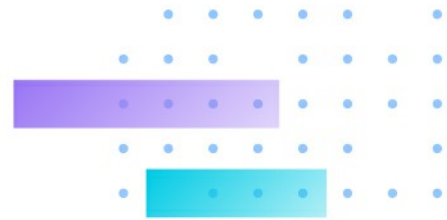
Video Compression	H.265, H.264, MJPEG
Maximum Frame Rate	20 fps @ 2560x1920
Maximum Streams	3 video streams (Up to 8 configurable profiles)
S/N Ratio	61 dB
Dynamic Range	120 dB
Video Streaming	Adjustable resolution, quality and constant bit rate control, Smart Stream III
Image Settings	General settings: video title and time stamp overlay, video orientation (flip, mirror, rotation), day/night settings; Illuminators: illuminators, anti-overexposure; Image settings: white balance, image adjustment (brightness, contrast, saturation, sharpness, gamma curve), defog, 3DNR; Exposure: BLC, HLC, exposure control (exposure level, exposure time, gain control), AE speed adjustment, WDR; Privacy mask; Scheduled profile settings

Audio

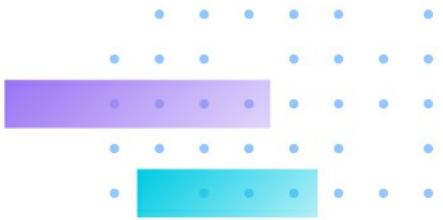
Audio Capability	One-way Audio
Audio Compression	G.711, G.726
Audio Interface	Built-in microphone
Effective Range	5 meters

Network

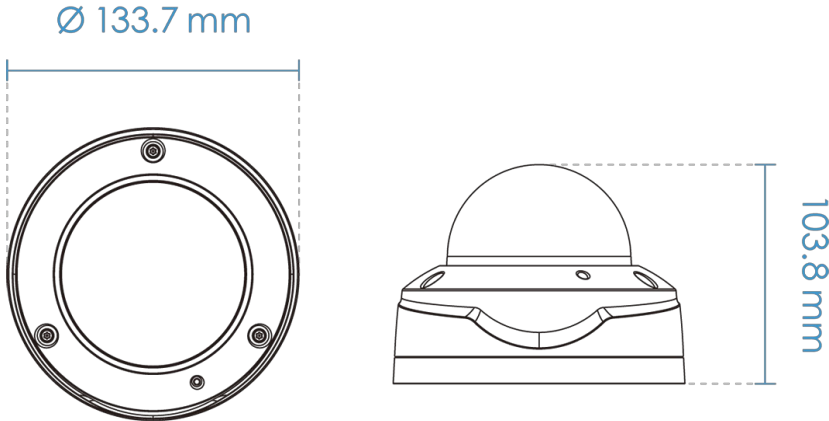
Users	Live viewing for up to 10 clients
Security	Access list, digest authentication, HTTPS, IEEE 802.1x, password protection, Trend Micro IoT Security (brute force attack event, cyberattack event, quarantine event), user access log, user account management



Protocols	802.1X, ARP, Bonjour, CIFS/SMB, DDNS, DHCP, DNS, FTP, HTTP, HTTPS, ICMP, IGMPv3, IPv4, IPv6, NTP, PPPoE, QoS (CoS/DSCP), RTSP/RTP/RTCP, SMTP, SNMP, SSL, TCP/IP, TLS 1.2, UDP, UPnP
Interface	10 Base-T/100 Base-TX Ethernet (RJ-45) *It is highly recommended to use standard CAT5e & CAT6 cables which are compliant with the 3P/ETL standard.
ONVIF	Profile G, S, T supported, specification available at www.onvif.org
Solution Integration	
Video Motion Detection	Five-window video motion detection
VADP Package	Stratocast, Trend Micro IoT Security (1-year free trial), VIVOCLOUD
Alarm and Event	
Event Trigger	Audio detection, camera tampering detection, cybersecurity events (brute force attack event, cyberattack event, quarantine event), manual trigger, motion detection, periodical trigger, recording notification, SD card life expectancy, system boot
Event Action	Event notification via email, HTTP, FTP, NAS server, SD card, push notification File upload via email, HTTP, FTP, NAS server, SD card
General	
Connectors	RJ-45 cable connector for 10/100Mbps Network/PoE connection
LED Indicator	System power and status indicator
Power Input	IEEE 802.3af PoE Class 0
Power Consumption	Max. 12.95 W/9 W (IR on/off)
Dimensions	ø 133.7 x 103.8 mm
Weight	819 g
Certifications	EMC: CE (EN 55032 Class B, EN 55024), FCC (FCC Part 15 Subpart B Class B), RCM (AS/NZS CISPR 32 Class B), VCCI (VCCI-CISPR 32 Class B); Safety: UL (UL 62368-1), CB (IEC/EN 62368-1, IEC/EN 60950-22, IEC/EN 62471); Environment: IK10 (IEC 62262), IP66 (IEC 60529); IA: BIS (IS 13252)
Operating Temperature	Starting Temperature: -10°C ~ 60°C (14°F ~ 140°F) Working Temperature: -30°C ~ 60°C (-22°F ~ 140°F)
Humidity	90%
Warranty	36 months
System Requirements	
Operating System	Microsoft Windows 10/8/7 Mac 10.12 (Chrome only)
Web Browser	Chrome 58.0 or above Internet Explorer 10/11
Other Players	VLC: 1.1.11 or above
Included Accessories	
Packing Contents	Quick installation guide, alignment sticker, screw pack, cable gland



Dimensions



Compatible Accessories

Kits de montage



AM-21A (V02)
Montage en L

Kits de montage



AM-51D
Plaque d'adaptation

Kits de montage

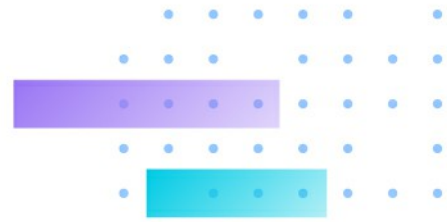


AM-528
Adaptateur de montage

Kits de montage



AM-71B
Boîtier de connexion étanche

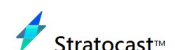


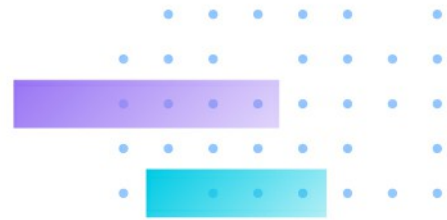
FD9380-H

Fixed Dome Network Camera

5MP • SNV • WDR Pro • Smart IR • 30M IR • Smart Stream III • IP66

- H.265 Compression Technology
- 20 fps @ 2560x1920 (WDR Pro on)
- SNV (Supreme Night Visibility) for Low Light Conditions
- WDR Pro for Unparalleled Visibility in Extremely Bright and Dark Environments
- Smart Stream III to Optimize Bandwidth Efficiency
- Built-in IR Illuminators, Effective up to 30 Meters
- Trend Micro IoT Security
- Weather-proof IP66-rated and Vandal-proof IK10-rated Housing
- Built-in MicroSD/SDHC/SDXC Card Slot for On-board Storage





Technical Specifications

System Information

Model	FD9380-H (2.8mm) FD9380-H (3.6mm)
CPU	Multimedia SoC (System-on-Chip)
Flash	128 MB
RAM	512 MB

Camera Features

Image Sensor	1/2.7" Progressive CMOS
Max. Resolution	2560x1920 (5MP)
Lens Type	Fixed-focal
Focal Length	FD9380-H (2.8mm): f = 2.8 mm FD9380-H (3.6mm): f = 3.6 mm
Aperture	F2.0
Iris Type	Fixed iris
Field of View	FD9380-H (2.8mm): 103° (Horizontal) 76° (Vertical) 134° (Diagonal) FD9380-H (3.6mm): 76° (Horizontal) 59° (Vertical) 100° (Diagonal)
Shutter Time	1/5 sec. to 1/32,000 sec.
WDR Technology	WDR Pro
Day/Night	Yes
Removable IR-cut Filter	Yes
IR Illuminators	Built-in IR illuminators, effective up to 30 meters with Smart IR, IR LED*2
Minimum Illumination	0.03 lux @ F2.0 (Color) <0.005 lux @ F2.0 (B/W) 0 lux with IR illumination on
Pan Range	350°
Tilt Range	75°
Rotation Range	350°
Pan/Tilt/Zoom Functionalities	ePTZ: 48x digital zoom (4x on IE plug-in, 12x built-in)
Storage	Seamless Recording to MicroSD/SDHC/SDXC card and recording to network-attached storage (NAS)

Video

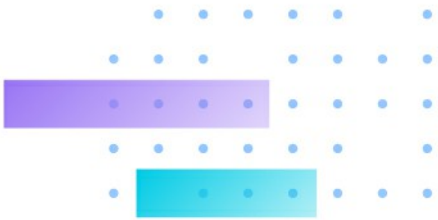
Video Compression	H.265, H.264, MJPEG
Maximum Frame Rate	20 fps @ 2560x1920
Maximum Streams	3 video streams (Up to 8 configurable profiles)
S/N Ratio	FD9380-H (2.8mm): 65 dB FD9380-H (3.6mm): 67 dB
Dynamic Range	120 dB
Video Streaming	Adjustable resolution, quality and bit rate control, Smart Stream III
Image Settings	General settings: video title and time stamp overlay, video orientation (flip, mirror, rotation), day/night settings; Illuminators: illuminators, anti-overexposure; Image settings: white balance, image adjustment (brightness, contrast, saturation, sharpness, gamma curve), defog, 3DNR; Exposure: BLC, HLC, exposure control (exposure level, exposure time, gain control), AE speed adjustment, WDR; Privacy mask; Scheduled profile settings

Network

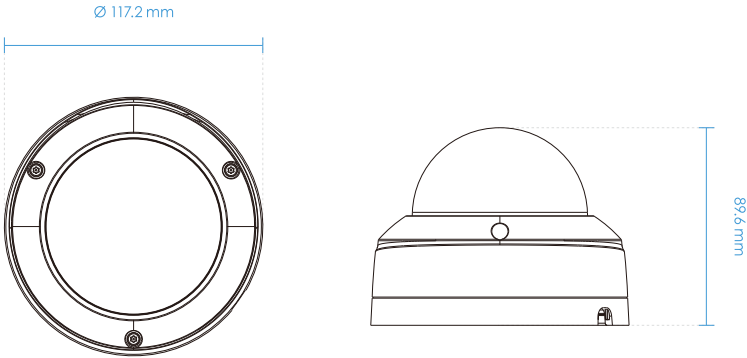
Users	Live viewing for up to 10 clients
Security	Access list, digest authentication, HTTPS, IEEE 802.1x, password protection, Trend Micro IoT Security (brute force attack event, cyberattack event, quarantine event), user access log, user account management



Protocols	802.1X, ARP, Bonjour, CIFS/SMB, DDNS, DHCP, DNS, FTP, HTTP, HTTPS, ICMP, IGMPv3, IPv4, IPv6, NTP, PPPoE, QoS (CoS/DSCP), RTSP/RTP/RTCP, SMTP, SNMP, SSL, TCP/IP, TLS 1.2, UDP, UPnP
Interface	10 Base-T/100 Base-TX Ethernet (RJ-45) *It is highly recommended to use standard CAT5e & CAT6 cables which are compliant with the 3P/ETL standard.
ONVIF	Profile G, S, T supported, specification available at www.onvif.org
Solution Integration	
Video Motion Detection	Five-window video motion detection
VADP Package	Stratocast, Trend Micro IoT Security (1-year free trial), VIVOcloud
Alarm and Event	
Event Trigger	Camera tampering detection, cybersecurity events (brute force attack event, cyberattack event, quarantine event), manual trigger, motion detection, periodical trigger, recording notification, SD card life expectancy, system boot
Event Action	Event notification via email, HTTP, FTP, NAS server, SD card, push notification File upload via email, HTTP, FTP, NAS server, SD card
General	
Connectors	RJ-45 cable connector for 10/100Mbps Network/PoE connection
LED Indicator	System power and status indicator
Power Input	IEEE 802.3af PoE Class 2
Power Consumption	Max. 6.49 W/3.69 W (IR on/off)
Dimensions	Ø 117.2 x 89.6 mm
Weight	540 g
Certifications	EMC: CE (EN 55032 Class B, EN 55024), FCC (FCC Part 15 Subpart B Class B), RCM (AS/NZS CISPR 32 Class B), VCCI (VCCI-CISPR 32 Class B); Safety: UL (UL 62368-1), CB (IEC/EN 62368-1, IEC/EN 60950-22, IEC/EN 62471); Environment: IK10 (IEC 62262), IP66 (IEC 60529); IA: BIS (IS 13252)
Operating Temperature	Starting Temperature: -10°C ~ 60°C (14°F ~ 140°F) Working Temperature: -30°C ~ 60°C (-22°F ~ 140°F)
Humidity	90%
System Requirements	
Operating System	Microsoft Windows 10/8/7 Mac 10.12 (Chrome only)
Web Browser	Chrome 58.0 or above Internet Explorer 10/11
Other Players	VLC: 1.1.11 or above
Included Accessories	
Packing Contents	Quick installation guide, alignment sticker, screw pack, cable gland



Dimensions



Compatible Accessories

Mounting Kits



AM-21A (V02)
L-shape Bracket

Mounting Kits



AM-51G
Adapting Plate

Mounting Kits



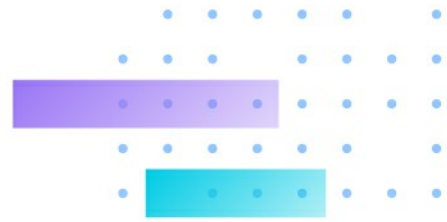
AM-52E
Mounting Adapter

Mounting Kits



AM-71D
Outdoor Conduit Box





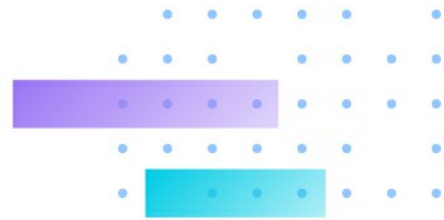
FE9191-H-v2

Fisheye Network Camera

12MP • 360° Fisheye • WDR Pro • Smart Stream III • Smart VCA • IK10

- 12-Megapixel CMOS Sensor
- 30 fps @ 2944x2944
- WDR Pro (120dB) for Improved Visibility in High Contrast Scenes
- Smart Motion Detection to Reduce False Alarms
- Smart VCA (Intrusion Detection, Crowd Detection, Loitering Detection)
- Trend Micro IoT Security
- Built-in Microphone
- Local Dewarp





Technical Specifications

System Information

Model	FE9191-H-v2
CPU	Multimedia SoC (System-on-Chip)
Flash	8 GB
RAM	2 GB

Camera Features

Image Sensor	1/2.3" Progressive CMOS in 4056x3040
Max. Resolution	2944x2944
Lens Type	Fixed-focal
Focal Length	f = 1.22 mm
Aperture	F2.0
Iris Type	Fixed iris
Field of View	180° (Horizontal) 180° (Vertical) 180° (Diagonal)
Shutter Time	1/5 sec. to 1/32,000 sec.
WDR Technology	WDR Pro
Day/Night	Yes
Removable IR-cut Filter	Yes
Minimum Illumination	0.1 lux @ F2.0 (Color) <0.005 lux @ F2.0 (B/W)
Pan/Tilt/Zoom Functionalities	ePTZ: 12x digital zoom (12x on IE plug-in)
Storage	Seamless Recording to MicroSD/SDHC/SDXC card and recording to network-attached storage (NAS)
Built-in Installation Aids	Pixel calculator

Video

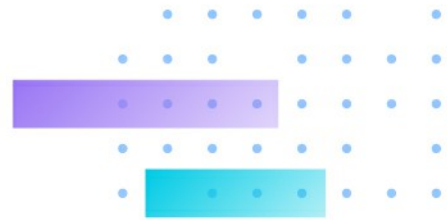
Video Compression	H.265, H.264, MJPEG
Maximum Frame Rate	30 fps @ 2944x2944 (WDR off) 20 fps @ 2944x2944 (WDR on)
Maximum Streams	3 video streams (Up to 8 configurable profiles)
S/N Ratio	56.9 dB
Dynamic Range	120 dB
Video Streaming	Adjustable resolution, quality and constant bit rate control, Smart Stream III
Image Settings	General settings: video title and time stamp overlay, video orientation (flip, mirror), day / night settings; anti-overexposure; Image settings: white balance, image adjustment (brightness, contrast, saturation, sharpness, gamma curve), defog, 3DNR; Exposure: BLC, exposure control, AE speed adjustment, WDR; Privacy mask; Scheduled profile settings; Pixel calculator
Display Mode	Client Dewarping Ceiling mounted: 1O Fisheye, 1P Panoramic, 2P Two Panoramics, 1R One Region, 4R Four Regions, 1O3R One Fisheye Three Regions, 1O8R One Fisheye Eight Regions Wall mounted: 1O Fisheye, 1P Panoramic, 1R One Region, 4R Four Regions, 1P2R One Panoramic Two Regions, 1P3R One Panoramic Three Regions, 1O3R, One Fisheye Three Regions Local Dewarping Ceiling mounted: 1O Fisheye, 1P Panoramic, 2P Two Panoramics, 1R One Region, 4R Four Regions Wall mounted: 1O Fisheye, 1P Panoramic, 1R One Region, 4R Four Regions

Audio

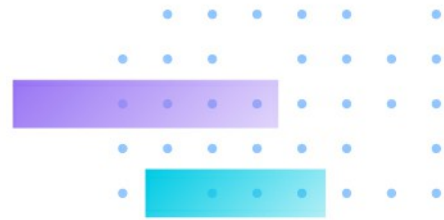
Audio Capability	Two-way Audio (full duplex)
Audio Compression	G.711, G.726
Audio Interface	Built-in microphone
Effective Range	5 meters

Network

Users	Live viewing for up to 10 clients
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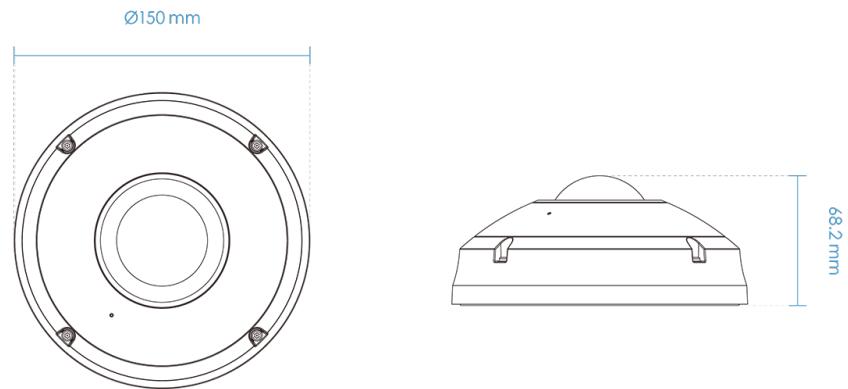


Security	Access list, digest authentication, HTTPS , IEEE 802.1x, password protection, secure boot, signed firmware, Trend Micro IoT Security (brute force attack event, cyberattack event, quarantine event), user access log, user account management
Protocols	802.1X, ARP, Bonjour, CIFS/SMB, DDNS, DHCP, DNS, FTP, HTTP, HTTPS, ICMP, IGMPv3, IPv4, IPv6, NTP, PPPoE, QoS (CoS/DSCP), RTSP/RTP/RTCP, SMTP, SNMP, SSL, TCP/IP, TLS 1.2, UDP, UPnP
Interface	10 Base-T/100 Base-TX Ethernet (RJ-45) *It is highly recommended to use standard CAT5e & CAT6 cables which are compliant with the 3P/ETL standard.
ONVIF	Profile G, S, T supported, specification available at www.onvif.org
AI Analytics	
Compute Capability	Built-in CNN acceleration module
Vision Object Analytics	Object Detection: people, vehicle (4-wheeled, 2-wheeled); Attribute Extraction: people (gender, color, bag, hat), vehicle (bike, bus, car, motorcycle, truck, color); Re-Search Extraction; Path Extraction
Event Application	Smart Motion Detection (Five-window video motion detection, people detection, vehicle detection, time filter), Smart VCA (Intrusion detection, loitering detection, line crossing detection, unattended object detection, missing object detection, crowd detection, running detection, parking violation detection*, restricted zone detection*) *License required. Please access https://license.vivotek.com/ for free trial license.
Applications	Deep Learning VCA (Smart Motion Detection, Smart VCA)
Solution Integration	
Applications	Stratocast, Trend Micro IoT Security (3-year free trial)
Alarm and Event	
Event Trigger	Audio detection, camera tampering detection, cybersecurity events (brute force attack event, cyberattack event, quarantine event), manual trigger, motion detection, periodical trigger, recording notification, SD card life expectancy, shock detection, system boot
Event Action	Event notification via audio clip*, email, HTTP, FTP, NAS server, SD card File upload via email, HTTP, FTP, NAS server, SD card, Camera link
General	
Connectors	RJ-45 cable connector for 10/100 Mbps Network/PoE connection
LED Indicator	System power and status indicator
Power Input	IEEE 802.3af PoE Class 0
Power Consumption	Max. 9 W
Dimensions	ø 150 x 68.2 mm
Weight	701 g
Certifications	EMC: CE (EN 55032 Class B, EN 55035), FCC (FCC Part 15 Subpart B Class B), RCM (AS/NZS CISPR32 Class B), VCCI (VCCI-CISPR 32 Class B), UKCA (BS EN 55032:2015+A11: 2020, BS EN 55035:2017+A11:2020, BS EN IEC 62368-1:2020+A11:2020), ICES-003 Issue 7 BSMI (EMC: CNS 13438, Safety: CNS 14336-1) Safety: UL (UL62368-1) CB (IEC/EN 62368-1, IEC/EN 60950-22, IEC/EN 62471); IA: BIS (IS 13252) BSMI (EMC: CNS 13438, Safety: CNS 14336-1) *IK10 (Metal Housing)
Operating Temperature	Starting Temperature: 0°C ~ 50°C (32°F ~122°F) Working Temperature: -10°C ~ 50°C (14°F ~122°F)
Humidity	90% RH (non-condensing)
Warranty	36 months
System Requirements	
Operating System	Microsoft Windows 10/8/7 Mac 10.12 (Chrome only)
Web Browser	Chrome 58.0 or above Internet Explorer 11
Other Players	VLC: 1.1.11 or above
Included Accessories	
Packing Contents	Quick installation guide, alignment sticker, screw pack, mounting bracket
DORI (EN 62676-4 Standard)	
Detect (25PPM 8PPF)	31.5 m (103.3 ft)



Observe (63PPM/ 19PPF)	12.5 m (41 ft)
Recognize (125PPM/ 38PPF)	6.3 m (20.7 ft)
Identify (250PPM/ 76PPF)	3.1 m (10.2 ft)

Dimensions

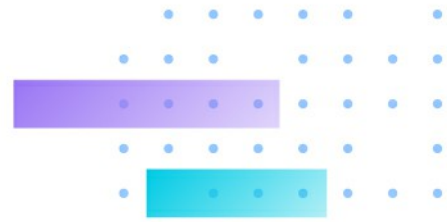


Compatible Accessories

Mounting Kit



AM-525
Mounting Adapter

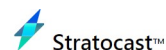


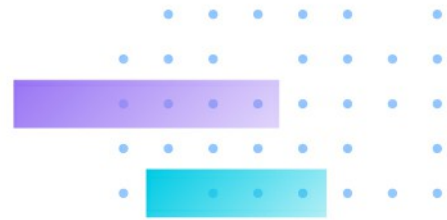
IB9380-H

Bullet Network Camera

5MP • SNV • WDR Pro • Smart IR • 30M IR • Smart Stream III • IP66

- H.265 Compression Technology
- SNV (Supreme Night Visibility) for Low Light Conditions
- 20 fps @ 2560x1920 (WDR Pro on)
- WDR Pro for Unparalleled Visibility in Extremely Bright and Dark Environments
- Smart Stream III to Optimize Bandwidth Efficiency
- Built-in IR Illuminators, Effective up to 30 Meters
- Trend Micro IoT Security
- Weather-proof IP66-rated and Vandal-proof IK10-rated Housing
- Built-in MicroSD/SDHC/SDXC Card Slot for On-board Storage





Technical Specifications

System Information

Model	IB9380-H
CPU	Multimedia SoC (System-on-Chip)
Flash	128 MB
RAM	512 MB

Camera Features

Image Sensor	1/2.7" Progressive CMOS
Max. Resolution	2560x1920 (5MP)
Lens Type	Fixed-focal
Focal Length	f = 3.6 mm
Aperture	F2.0
Iris Type	Fixed iris
Field of View	76° (Horizontal) 59° (Vertical) 100° (Diagonal)
Shutter Time	1/5 sec. to 1/32,000 sec.
WDR Technology	WDR Pro
Day/Night	Yes
Removable IR-cut Filter	Yes
IR Illuminators	Built-in IR illuminators, effective up to 30 meters with Smart IR, IR LED*2
Minimum Illumination	0.03 lux @ F2.0 (Color) <0.005 lux @ F2.0 (B/W) 0 lux with IR illumination on
Tilt Range	90°
Rotation Range	180°
Pan/Tilt/Zoom Functionalities	ePTZ: 48x digital zoom (4x on IE plug-in, 12x built-in)
Storage	Seamless Recording to MicroSD/SDHC/SDXC card and recording to network-attached storage (NAS)

Video

Video Compression	H.265, H.264, MJPEG
Maximum Frame Rate	20 fps @ 2560x1920
Maximum Streams	3 video streams (Up to 8 configurable profiles)
S/N Ratio	67 dB
Dynamic Range	120 dB
Video Streaming	Adjustable resolution, quality and bit rate control, Smart Stream III
Image Settings	General settings: video title and time stamp overlay, video orientation (flip, mirror, rotation), day/night settings; Illuminators: illuminators, anti-overexposure; Image settings: white balance, image adjustment (brightness, contrast, saturation, sharpness, gamma curve), defog, 3DNR; Exposure: BLC, HLC, exposure control (exposure level, exposure time, gain control), AE speed adjustment, WDR; Privacy mask; Scheduled profile settings

Network

Users	Live viewing for up to 10 clients
Security	Access list, digest authentication, HTTPS, IEEE 802.1x, password protection, Trend Micro IoT Security (brute force attack event, cyberattack event, quarantine event), user access log, user account management
Protocols	802.1X, ARP, Bonjour, CIFS/SMB, DDNS, DHCP, DNS, FTP, HTTP, HTTPS, ICMP, IGMPv3, IPv4, IPv6, NTP, PPPoE, QoS (CoS/DSCP), RTSP/RTP/RTCP, SMTP, SNMP, SSL, TCP/IP, TLS 1.2, UDP, UPnP
Interface	10 Base-T/100 Base-TX Ethernet (RJ-45) *It is highly recommended to use standard CAT5e & CAT6 cables which are compliant with the 3P/ETL standard.
ONVIF	Profile G, S, T supported, specification available at www.onvif.org

Solution Integration



Video Motion Detection	Five-window video motion detection
VADP Package	Stratocast, Trend Micro IoT Security (1-year free trial), VIVOCloud

Alarm and Event

Event Trigger	Camera tampering detection, cybersecurity events (brute force attack event, cyberattack event, quarantine event), manual trigger, motion detection, periodical trigger, recording notification, SD card life expectancy, system boot
Event Action	Event notification via email, HTTP, FTP, NAS server, SD card, push notification File upload via email, HTTP, FTP, NAS server, SD card

General

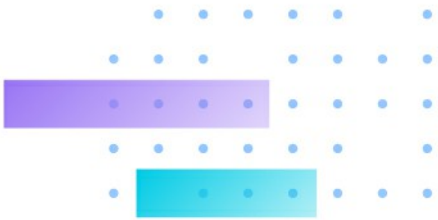
Connectors	RJ-45 cable connector for 10/100Mbps Network/PoE connection
Power Input	IEEE 802.3af PoE Class 2
Power Consumption	Max. 6.49 W/3.6 W (IR on/off)
Dimensions	Ø 91.1 x 176.8 mm
Weight	530 g
Certifications	EMC: CE (EN 55032 Class B, EN 55024), FCC (FCC Part 15 Subpart B Class B), RCM (AS/NZS CISPR 32 Class B), VCCI (VCCI-CISPR 32 Class B); Safety: UL (UL 62368-1), CB (IEC/EN 62368-1, IEC/EN 60950-22, IEC/EN 62471); Environment: IK10 (IEC 62262), IP66 (IEC 60529); IA: BIS (IS 13252)
Operating Temperature	Starting Temperature: -10°C ~ 60°C (14°F ~ 140°F) Working Temperature: -30°C ~ 60°C (-22°F ~ 140°F)
Humidity	90%

System Requirements

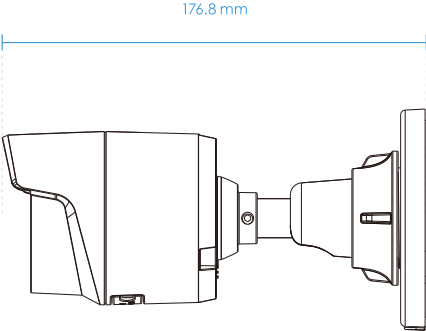
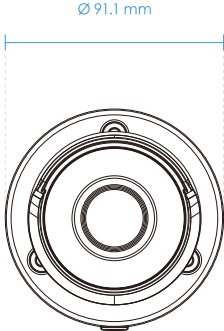
Operating System	Microsoft Windows 10/8/7 Mac 10.12 (Chrome only)
Web Browser	Chrome 58.0 or above Internet Explorer 10/11
Other Players	VLC: 1.1.11 or above

Included Accessories

Packing Contents	Quick installation guide, alignment sticker, screw pack, cable gland
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Dimensions



Compatible Accessories

Mounting Kits



AM-312
Pole Mount Adapter

Mounting Kits



AM-412
Corner Mount Adapter

Mounting Kits



AM-523
Adapting Plate

Mounting Kits



AM-71C
Outdoor Junction Box

Mounting Kits



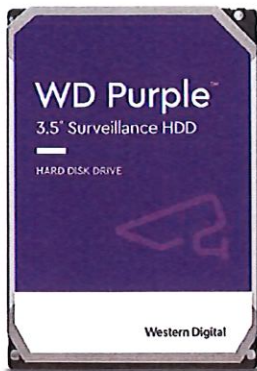
AM-71E
Outdoor Conduit Box

Mounting Kits



AM-71F
Indoor Conduit Box





Product Highlights

- Capacity up to 22TB¹
- Designed for mainstream surveillance systems
- WD AllFrame™ technology delivers optimizations for write-intensive, low bit-rate, high stream-count workloads typical to surveillance applications
- Supports up to 550 TB/yr workload rate⁷
- 5-year limited warranty⁹

WD Purple™ Pro Hard Drives

The Right Drive for Smart Video Surveillance

WD Purple™ drives are designed to meet the challenges of 24x7 video surveillance recording. These drives are engineered specifically for surveillance to help withstand the elevated heat fluctuations and equipment vibrations within NVR environments. An average desktop drive is built to run for only short intervals, not the harsh 24/7 always-on environment of a high-definition surveillance system. With WD Purple drives, you get reliable, surveillance-class storage that's tested for compatibility in a wide range of security systems. Exclusive WD AllFrame™ technology helps reduce frame loss and improve overall video playback.

Industry-Leading Storage. Surveillance You Can Trust.

Western Digital has provided surveillance-grade storage for more than a decade. With WD Purple™ surveillance storage, drives are engineered for high temperature, always-on surveillance systems so you can rely on quality video when you need it most. WD Purple delivers smart video storage that you can trust and are backed by a 3-year limited warranty⁹.

Western Digital's Exclusive WD AllFrame™ Technology

All WD Purple™ drives are equipped with AllFrame™ technology, which helps reduce video frame drops and improves video recording and playback.

Enhanced Workload Ratings

WD Purple™ drives feature a workload rating of up to 180TB/year⁷ – up to three times that of desktop drives – to handle the unique demands of mainstream video surveillance DVR and NVR systems.

Multiple Cameras, Multiple Streams

Modern recorders now support multiple video streams per camera. WD Purple™ drives support up to 64 single-stream HD cameras. Modern recorders now support multiple video streams per camera. Select WD Purple™ drives support up to 64 single-stream HD cameras¹. With so many options, you have the flexibility to upgrade or expand your security applications in the future.

Designed for Reliable Operation

Engineered for reliability with an MTBF of up to 1 million hours⁸ and backed with a 3-year limited warranty⁹, WD Purple drives feature tarnish-resistant components¹¹ and support for storage systems with up to 16 drive bays¹². WD Purple hard drives are designed with RAID error recovery control to help reduce failures in supported video recorders.

Wide Compatibility. Seamless Integration.

WD Purple™ hard drives are built with compatibility in mind, so you can quickly and seamlessly add capacity to your surveillance system. With a wide range of industry-leading enclosures and chipsets supported, you're sure to find the DVR or NVR configuration that's right for you.

Five-Year Limited Warranty

As an industry-leading hard drive manufacturer, Western Digital stands behind their surveillance storage solutions with a 3-year limited warranty⁹ included with every WD Purple™ drive.

Specifications

	8TB	6TB	4TB	3TB	2TB	1TB
Model Number	WD85PURZ	WD64PURZ	WD43PURZ	WD33PURZ	WD23PURZ	WD11PURZ
Formatted capacity ¹	8TB	6TB	4TB	3TB	2TB	1TB
Form factor	3.5-inch	3.5-inch	3.5-inch	3.5-inch	3.5-inch	3.5-inch
Advanced Format (AF)	Yes	Yes	Yes	Yes	Yes	Yes
Recording Technology	CMR	CMR	CMR	CMR	CMR	CMR
Interface	SATA 6Gb/s	SATA 6Gb/s	SATA 6Gb/s	SATA 6Gb/s	SATA 6Gb/s	SATA 6Gb/s
RoHS compliant ²	Yes	Yes	Yes	Yes	Yes	Yes
Product Features						
Cameras supported ³	Up to 64 HD	Up to 64 HD	Up to 64 HD	Up to 64 HD	Up to 64 HD	Up to 64
Maximum Drive Bays Supported	16	16	16	16	8	8
Firmware Feature Name	AllFrame	AllFrame	AllFrame	AllFrame	AllFrame	AllFrame
Tarnish resistant components	Yes	Yes	Yes	Yes	No	No
RV Sensors	Yes	Yes	Yes	Yes	No	No
Performance						
Interface transfer rate (max) ⁴	6 Gb/s	6 Gb/s	6 Gb/s	6 Gb/s	6 Gb/s	6 Gb/s
Buffer to host	215 MB/s	180MB/s	180MB/s	180MB/s	180MB/s	180MB/s
Host to/from drive (sustained) ⁵	215 MB/s	180MB/s	180MB/s	180MB/s	180MB/s	180MB/s
Cache (MB) ¹	256	256	256	256	64	64
Reliability/Data Integrity						
Load/unload cycles ⁶	300,000	300,000	300,000	300,000	300,000	300,000
Annualized workload rating ⁷	180TB/yr	180TB/yr	180TB/yr	180TB/yr	180TB/yr	180TB/yr
Non-recoverable read errors per bits read	<1 in 10 ¹⁴	<1 in 10 ¹⁴	<1 in 10 ¹⁴	<1 in 10 ¹⁴	<1 in 10 ¹⁴	<1 in 10 ¹⁴
MTBF ⁸	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000
Limited warranty (years) ⁹	3	3	3	3	3	3
Power Management¹⁰						
Average power requirements (W)						
Read/Write	5.3	4.7	4.7	4.6	3.8	3.8
Idle	4.7	4.3	4.3	3.7	3.2	3.2
Standby and Sleep	0.4	0.3	0.3	0.3	0.3	0.3
Environmental Specifications						
Temperature (°C, on the base casting)						
Operating	0 to 65	0 to 65	0 to 65	0 to 65	0 to 65	0 to 65
Non-operating	-40 to 70	-40 to 70	-40 to 70	-40 to 70	-40 to 70	-40 to 70
Shock (Gs)						
Operating (2 ms, read/write)	70	30	30	30	30	30
Operating (2 ms, read)	70	65	65	65	65	65
Non-operating (2 ms)	250	250	250	250	250	250
Acoustics (dBA)						
Idle	24	23	23	23	21	21
Seek (average)	28	27	27	27	26	26
Physical Dimensions						
Height (in./mm, max)	1.028/26.1	1.028/26.1	1.028/26.1	1.028/26.1	1.028/26.1	1.028/26.1
Length (in./mm, max)	5.787/147	5.787/147	5.787/147	5.787/147	5.787/147	5.787/147
Width (in./mm, ± .01 in.)	4/101.6	4/101.6	4/101.6	4/101.6	4/101.6	4/101.6
Weight (lb/kg, ± 3%)	1.58/0.72	1.26/0.57	1.26/0.57	1.26/0.57	0.99/0.45	0.99/0.45

1 1MB = 1 million bytes, 1GB = 1 billion bytes, and 1TB = 1 trillion bytes. Actual user capacity may be less depending on operating environment.

2 This drive is in compliance with the European Union Directive 2011/65/EU and Directive (EU) 2015/863 on the restriction of the use of certain hazardous substances in electrical and electronic equipment.

3 Single stream at 3.2Mbps (1080p, H.265, 25 fps). Results may vary depending on camera resolution, file format, frames per second, software, system settings, video quality, and other factors.

4 Gigabit per second (Gb/s) = one billion bits per second. Effective maximum SATA 6 Gb/s transfer rate calculated according to the Serial ATA specification published by the SATA-IO organization as of the date of this specification sheet. Visit www.sata-io.org for details.

5 1 MB/s = 1 million bytes per second. Based on internal testing; performance may vary depending upon host device, usage conditions, drive capacity, and other factors.

6 Controlled unload at ambient condition.

7 Workload Rate is defined as the amount of user data transferred to or from the hard drive. Workload Rate is annualized (TB transferred x 8760 / recorded power-on hours). Workload Rate will vary depending on your hardware and software components and configurations.

8 MTBF specifications are based on a sample population and are estimated by statistical measurements and acceleration algorithms under typical operating conditions: workload of 90TB/year and drive temperature of 40°C. Derating of MTBF will occur above these parameters, up to 65°C drive temperature. MTBF does not predict an individual drive's reliability and does not constitute a warranty.

9 See <http://support.wdc.com/warranty> for regional specific warranty details.

10 Power measurements at room-ambient temperature.

11 Tarnish resistant components for capacities 3TB and higher.

12 1TB through 2TB support up to eight bays; 3TB and above support up to 16 bays.



HP - 21.4" VA LED FHD 75Hz Monitor (VGA, HDMI) - Black

Key Specs Refresh Rate 75Hz Maximum Resolution 1920 x 1080 Response Time 5 milliseconds Panel Type VA Synchronization Technology Not Applicable Screen Size 21.4 inches Display Connector(s) 1 x HDMI, 1 x VGA General Product Name 21.4" VA LED FHD 75Hz Monitor (VGA, HDMI) Brand HP Operating System Compatibility Not Applicable Model Number 64V81A6ABA Color Black Color Category Black Display Refresh Rate 75Hz Maximum Resolution 1920 x 1080 Native Resolution 1920 x 1080 Contrast Ratio 8,000,000:1 Response Time 5 milliseconds Display Type LED Panel Type VA Synchronization Technology Not Applicable Aspect Ratio 16:9 Curved Screen No Brightness 200 candela per square meter Screen Size 21.4 inches High Dynamic Range (HDR) No Horizontal Frequency 88.1 kilohertz Horizontal Viewing Angle 178 degrees Vertical Viewing Angle 178 degrees Touch Screen No Display Surface Anti-glare Color Gamut (Standard RGB) 72 percent Connectivity Number of HDMI Inputs (Total) 1 Number of VGA Ports 1 Display Connector(s) 1 x HDMI, 1 x VGA Compatibility Wall Mountable Yes Voice Assistant Built-in No Features Tiltable Yes Adjustable Stand Height Yes Eye Relief Features Low blue light, Flicker free, Anti-glare Anti-Glare Yes Built-In Webcam No Integrated Speaker(s) No Dimensions Product Height With Stand 15 23/100 inches Product Height Without Stand 11 9/10 inches Product Width 19 9/10 inches Product Depth (With Stand) 7 11/100 inches Product Depth Without Stand 2 inches Product Weight 5.29 pounds Stand Included Yes



OR500LCDRM1U SMART APP LCD UPS



Cost-effective feature-rich power protection for networking, servers and telecommunications equipment

A rackmount UPS with line interactive topology, the CyberPower Smart App LCD OR500LCDRM1U provides battery backup (using simulated sine wave output) and surge protection for department servers, workgroup servers, workstations, network devices, and telecom installations without active PFC power supplies. The OR500LCDRM1U uses Automatic Voltage Regulation (AVR) to correct minor power fluctuations without switching to battery power, which extends battery life. AVR is essential in areas where power fluctuations occur frequently. The OR500LCDRM1U comes with a three-year warranty and a \$300,000 Connected Equipment Guarantee.

TYPICAL APPLICATIONS

- Workstations
- Corporate Servers
- Automatic Voltage Regulation
- Department Servers
- Network Devices
- Telecom Installations

FEATURES

- Capacity: 500VA / 300W
- Topology: Line Interactive
- Waveform: Simulated Sine Wave
- Output: 120Vac +/- 10%
- Runtime (half/full): 12 minutes / 3 minutes
- Plug type & cord: NEMA 5-15P, 10-ft. cord
- Outlets: 6 (2 surge, 4 surge + battery backup)
- Outlet types: 6 x NEMA 5-15R
- Communication: USB, Relay, SNMP
- Data line protection: Network
- Management software: PowerPanel® Business
- Remote management: Yes, with optional RMCARD205
- Environmental sensor: Yes, with optional RMCARD205 and ENVIROSENSOR
- ENERGY STAR® certified: Yes
- Warranty: Three-Year
- Connected Equipment Guarantee: \$300,000

SPECIFICATIONS

GENERAL	
Energy Saving	GreenPower UPS™ Bypass Technology
ENERGY STAR® certified	Yes
UPS Topology	Line Interactive

INPUT	
Adjustable Voltage Range	88 - 144 VAC
Circuit Breaker	15 A
Cord Length	10 ft (3.0 m)
Input Frequency Range	57 Hz - 63 Hz
Input Plug Type	NEMA 5-15P
Input Voltage Range	90 VAC - 140 VAC
Nominal Input Voltage	120 VAC
Plug Style	Right Angle - 45° Offset

OR500LCDRM1U SMART APP LCD UPS



SPECIFICATIONS - CONT.

OUTPUT

Automatic Voltage Regulation	Single Boost
On Battery Frequency	60Hz +/- 1%
On Battery Voltage	120 VAC +/- 10%
On Battery Waveform	Simulated Sine Wave
Outlet Type	6 - NEMA 5-15R
Outlets - Battery and Surge Protected	4
Outlets - Surge Only Protected	2
Outlets - Total	6
Output Power Factor	0.6
Overload Protection	Internal Circuitry Limiting Circuit Breaker Protected
Typical Transfer Time	8 ms
VA	500 VA
Watts	300 W

BATTERY

Battery Quantity	2
Battery Size	6 V / 7 Ah
Battery Type	Sealed Lead-Acid Battery
Hot-Swappable	Yes
Replacement Battery Cartridge	1 x RB0670X2
Runtime at Full Load	3 minutes
Runtime at Half Load	12 minutes
Typical Recharge Time	8 hours
User-Replaceable Battery	Yes

SURGE PROTECTION AND FILTERING

EMI/RFI Filtration	Yes
Network Protection RJ45	1-in / 1-Out (10/100/1000)
Surge Suppression (Joules)	1150 J

MANAGEMENT & COMMUNICATIONS

Audible Alarms	Battery Mode Low Battery Overload Fault
HID Compliant USB Port	Yes
LCD	Multifunction LCD
LED Indicators	Power On Wiring Fault
Management Cable	USB Cable
Serial Port	1 Dry Contact
SNMP / HTTP Remote Monitoring	Yes - with optional RMCARD205
Software (Free Download)	PowerPanel® Business

PHYSICAL

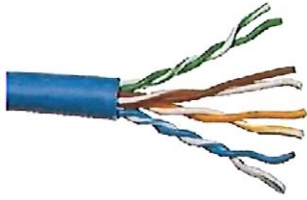
Color	Black
Form Factor	Rackmount
Material of Construction	Metal
Rack Height	1U

OR500LCDRM1U SMART APP LCD UPS

SPECIFICATIONS - CONT.

DIMENSIONS		ENVIRONMENTAL	
Physical Dimensions - Width/Height/Depth (cm)	43.31 x 4.45 x 23.5 cm	Operating Elevation	0 - 10,000 ft (0 - 3,048 m)
Physical Dimensions - Width/Height/Depth (mm)	433 x 44 x 235 mm	Operating Relative Humidity	0 - 95% (non-condensing)
Physical Dimensions - Width/Height/Depth (in.)	17.05 x 1.75 x 9.25 in.	Operating Temperature	32 - 104 °F (0 - 40 °C)
Weight (kg)	8.16 kg	Storage Elevation	0 - 50,000 ft (0 - 15,239 m)
Weight (lbs.)	18.0 lbs.	Storage Relative Humidity	0 - 95% (non-condensing)
SHIPPING DIMENSIONS		CERTIFICATIONS	
Shipping Dimensions - Width/Height/Depth (cm)	31.75 x 14.61 x 52.07 cm	Environmental	RoHS Compliant
Shipping Dimensions - Width/Height/Depth (mm)	317.5 x 146.05 x 520.7 mm	Safety	UL1778 cUL 107.1 FCC DOC Class B
Shipping Dimensions - Width/Height/Depth (in.)	12.5 x 5.75 x 20.5 in.	WARRANTY	
Shipping Weight (kg)	9.34 kg	CEG Amount	\$300,000
Shipping Weight (lbs.)	20.6 lbs.	Connected Equipment Guarantee (CEG)	Lifetime
		Extended Warranty Option	WEXT5YR-UIB
		Product Warranty	3-Year Limited

Technical Data Sheet- Category 6 Network



WEST PENN WIRE

2833 West Chestnut Street
Washington, PA 15301
Toll Free: (800) 245-4964
Fax: (724) 222-6420
www.westpenn-wpw.com

PART NUMBER:	4246
DESCRIPTION:	23 AWG.- 4 PAIR Solid bare copper conductors, unshielded with an overall jacket.
NEC RATING:	CMR
APPROVALS:	(UL) C(UL) Listed or c(ETL)us Listed
APPLICATION:	Indoor - Category 5E/6 Applications- Ethernet, IP Cameras, Digital Integration Meets or exceeds TIA/EIA 568B.2.1 Category 6 Specifications

Construction Parameters:

Conductor	23 AWG Bare Copper
Stranding	Solid
Number of Conductors	8 (4 Pair)
Insulation	Thermoplastic - .008"
Shield	None
Drain	None
Core Separator	Yes
Jacket Material	PVC
Overall Cable Diameter	0.225" Nom.
Approximate Cable Weight	30 Lbs/1M' Nom.
Flame Rating	UL1666

Electrical & Environmental Properties:

Operating Temperature Rating	-20°C To +60°C
Operating Voltage Rating	300 V RMS
DC Resistance per Conductor @ 20deg C	7.8 Ohms/100m Nom.
Mutual Capacitance	14pf/ft Nominal
Nominal Impedance	100 Ohms+/-15% (1-100Mhz)
Velocity of Propagation	66% Nominal
Delay Skew	45ns/100m MAX
Standards	TIA/EIA568-B.2 1
Insulation Colors	1.Blue/White-Blue, 2. Orange/White-Orange 3. Green/White-Green, 4. Brown/White-Brown
Jacket Color	Gray, White, Blue – Other Colors Available Example: 4246-BL
RoHS Compliant	Yes

Electrical Specifications:

Frequency: MHz	1	10	25	100	250	400
Insertion Loss: dB/100m	1.8	5.7	9.1	19.0	31.5	41.3
NEXT: dB/100m	74.3	59.3	53.3	44.3	38.3	35.3
ACR: dB/100m	72.3	53.3	46.3	24.5	5.5	--
PS-NEXT: dB/100m	72.3	57.3	51.3	42.3	36.3	33.3
PS-ACR: dB/100m	70.3	51.3	41.8	22.5	3.5	--
ELFEXT: dB/100m	67.8	47.8	39.8	27.8	19.8	15.8
PS-ELFEXT: dB/100m	64.8	44.8	36.8	24.8	16.8	12.8
RL: dB	20	25	24.3	20.1	17.3	15.9

Operating Temp	-20 C to +60 C
Storage Temp	-20 C to +75 C
Installation Temp	0 C to + 60 C
Delay Skew	45ns/100m Max

Mechanical Properties:

Max. Recommended Pull Tension	25 lbs.
Min. Bend Radius (Install)	1.00"

Accessories:

Connectors: Jacks

KJ458MT-C6C-xx
Xx: BK,BU, WH, YE, RD

Connectors: Plugs

32-6EZP – EZ Plugs
32-6198UL Cat 6

Boots

32-1900-xx – xx: Colors

Tools:

TL-135 110 Punch down tool
TL-114 Crimp Tool
TL-EZRJ45 Crimp Tool – EZ Plugs

Cable Assemblies:

C6C-114CC-xx

CC: Color: BK, BU, GY, RD, WH, YE
xx: Length Footage: 3,7,10,15,20,25

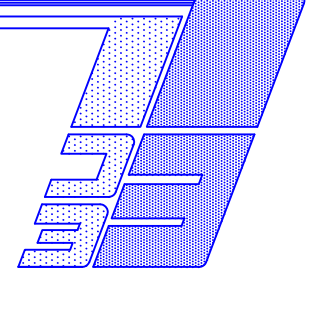
Patch Panels:

12458MD-C6C 12 Port
24458MC-C6C 24 Port
48458MD-C6C 48 Port

Specification Issue Date: 11/12

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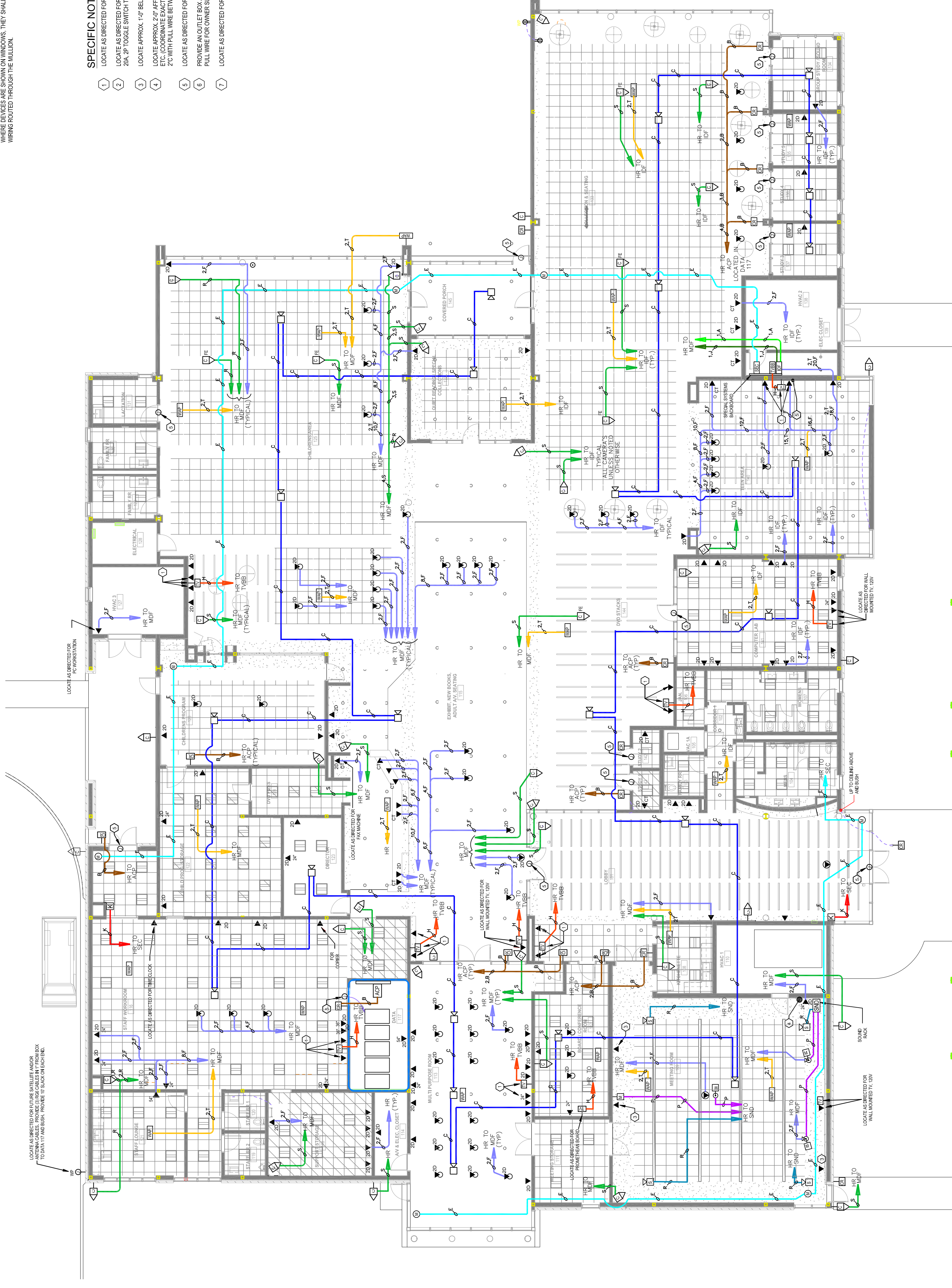
Standard Lengths are 1000ft.
The Jacket is sequentially footmarked.
The information presented here is, to the best of our
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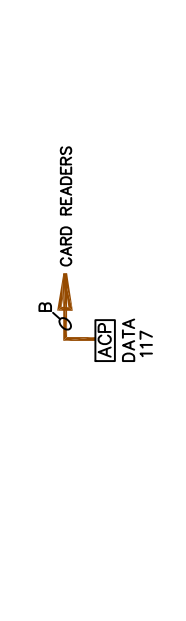
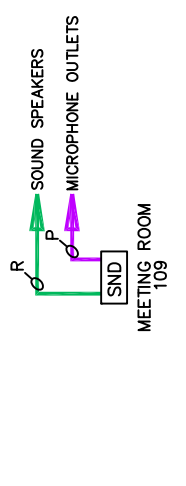
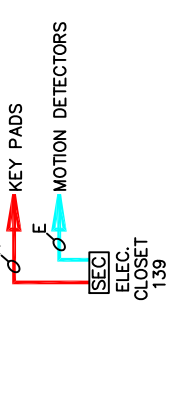
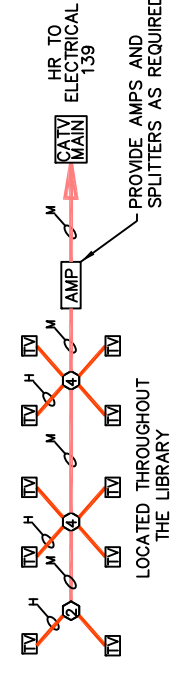
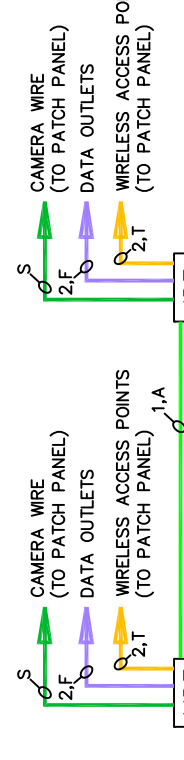
EDUCATIONAL ELECTRONICS	
216 OAK AVE.	
HARRAHAN, LA	
SPM CERT. #FS1	
BY: _____	DATE: _____
BY: _____	DATE: _____
BY: _____	DATE: _____
BY: _____	DATE: _____
PROJECT NUMBER	D
SIZE	D
SPECIAL SYSTEM	
SHEET	1 OF 1

NOTES:
 MAINTAIN A MINIMUM OF 2" SERVICE CLEARANCE ON THE LEFT SIDE, RIGHT SIDE, AND REAR OF EACH IAW BOX. THERE SHALL BE NO SPRINKLER HEADS, SPRINKLER RISERS, ELECTRICAL RACEWAYS, SPECIAL SYSTEM RACEWAYS, CONTROL RACEWAYS, CABLES, OR SERVICE AND EXCEPT FOR BRANCH TRIPPING AND TRIPPING DEVICES SERVING THE RESPECTIVE IAW BOX, COORDINATE TRACES.
 WHERE RISERS ARE BUSH ON WINDOWS, THEY SHALL BE INSTALLED ON THE NEAREST FINISH WALL WITH THE ASSOCIATED WIRING ROUTED THROUGH THE MULLION.

- SPECIFIC NOTES:**
1. LOCATE AS DIRECTED FOR DISPLAY TV.
 2. LOCATE AS DIRECTED FOR VERTICAL LIFT WALL (DIP, 20V, 10V). ROUTE CIRCUIT THROUGH A 20A 2P TOGGLE SWITCH TO BE INSTALLED NEAR CONNECTION.
 3. LOCATE APPROX. 1'-0" BELOW CEILING FOR REMOTE-CONTROLLED HDMI CAMERA BY OWNER.
 4. LOCATE APPROX. 6'-0" AFF. FOR IAW. IAW'S USUALLY SUSPENDED CABLES. ASSESS CABLES, ETC. LOCATE APPROXIMATE EXACT LOCATION AND CONNECTION NEEDED (WITH OWNER). PROVIDE 5'-0" 2" WITH PULL WIRE BETWEEN SOUND BACK AND PROJECTOR.
 5. LOCATE AS DIRECTED FOR DOOR HARDWARE AND CONNECT. 120V.
 6. PROVIDE AN OUTLET BOX AT 1'-0" AFF. AND OUTLET BOX AT HEIGHT. PROVIDE A 2" WITH PULL WIRE FOR WIRE SUPPLIES CABLES SERVED BY A LOCAL IAW.
 7. LOCATE AS DIRECTED FOR PLUG-IN CIRCLES WITH LED LIGHTS.



SPECIAL SYSTEMS FLOOR PLAN
 SCALE: 3/32" = 1'-0"



WIRE LEGEND	
PLENUM RATED	
A	12-STRAND FIBER SINGLE-MODE
B	3195 (LICKETY SPLIT)
C	WPW#25224B 2 Cond. 18 AWG SLD.
D	WPW#25241B 4 Cond. 22 AWG STRND.
E	WPW#20224B 2 Cond. 18 AWG SLD.
F	CAT6 - CABLE (BLUE FOR DATA)
G	CAT6 - CABLE (WHITE FOR PHONE)
H	R68 COAX CABLE
J	12-STRAND FIBER MULTI-MODE
K	WPW#25244B 4 Cond. 18 AWG SLD.
L	CAT16E - CABLE
M	RG-11
P	WPW#25291B 2 Cond. 16 AWG SLD.
R	WPW#25225B 2 Cond. 16 AWG STRND.
S	CAT 6-GREEN JACKET-CAMERA WIRE ONLY
T	CAT 6-YELLOW JACKET-WAP ONLY

SYMBOL LEGEND	
INTERCOM	
[Symbol]	PAGING SYSTEM AMPLIFIER
[Symbol]	PAGING SYSTEM SPEAKER CEILING MOUNT
ACCESS CONTROL	
[Symbol]	ACCESS CONTROL PANEL
[Symbol]	CARD READER, WALL MNT. AT HEIGHT AS DIRECTED IN 1" CONDUIT TO DOOR CONTROLLER.
SOUND SYSTEM	
[Symbol]	SOUND SYSTEM RACK
[Symbol]	SOUND SYSTEM SPEAKER CEILING MOUNT
[Symbol]	FLOOR OUTLET WITH (1) MICROPHONE JACK
[Symbol]	FLOOR OUTLET WITH (1) MICROPHONE JACK, AND DATA JACK
DATA	
[Symbol]	MAIN DISTRIBUTION FRAME
[Symbol]	INTERMEDIATE DISTRIBUTION FRAME
[Symbol]	WIRELESS ACCESS POINT
[Symbol]	SINGLE PORT DATA OUTLET ('CT' DENOTES COUNTER TOP)
[Symbol]	TWO PORT DATA OUTLET
[Symbol]	'CT' DENOTES COUNTER TOP HEIGHT (VERIFY COUNTER TOP HEIGHT AND HEIGHT OF BACK SPLASH)
[Symbol]	FLOOR MNT. DATA OUTLET
[Symbol]	CEILING MNT. DATA OUTLET
CABLE TV	
[Symbol]	CABLE TV AMPLIFIER
[Symbol]	TELEVISION OUTLET
CAMERA'S	
[Symbol]	CAMERA (CEILING MOUNT)
[Symbol]	CAMERA (WALL OR POLE MOUNT)



EDUCATIONAL ELECTRONICS CORPORATION

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North Shore (985) 809-0086

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SYSTEMS
SPECIALISTS

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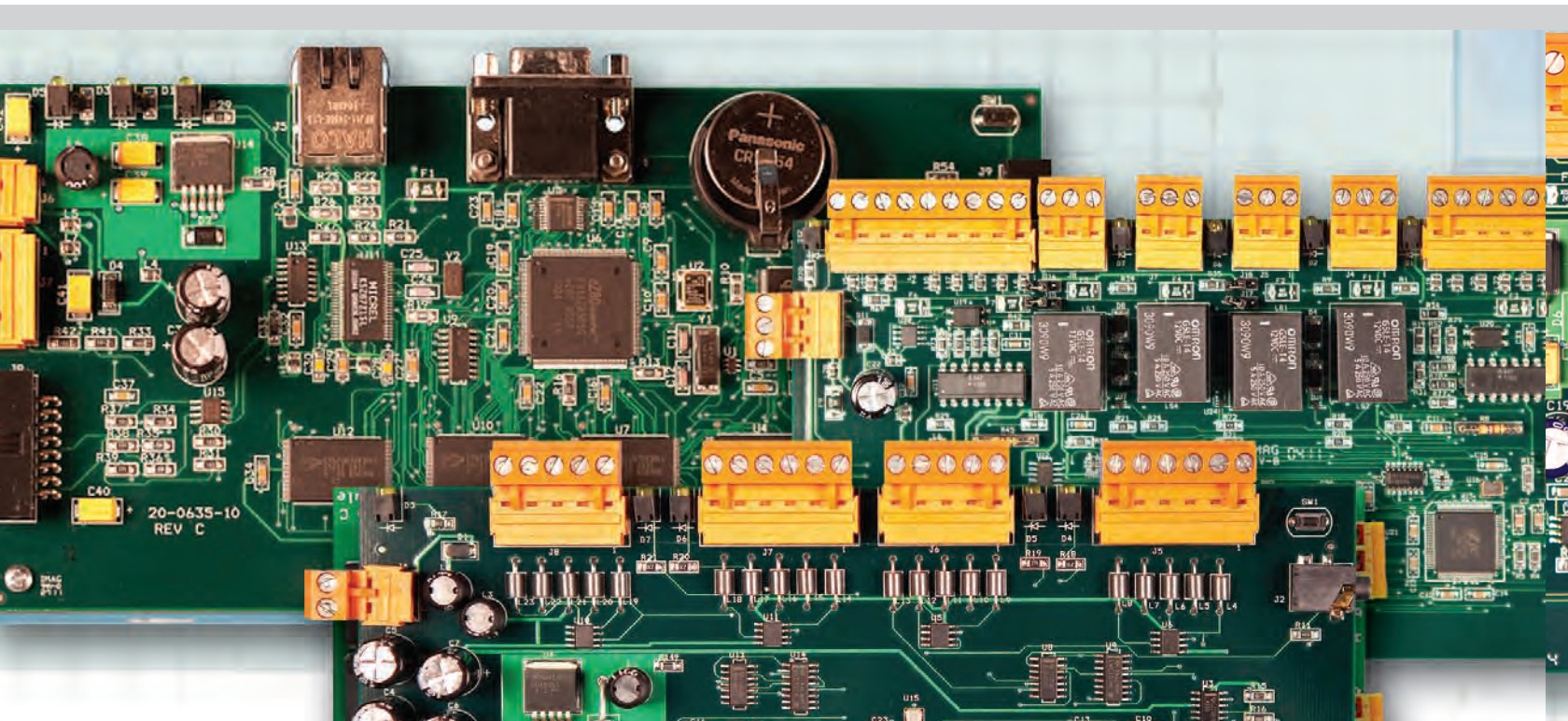
ACCESS CONTROL

SUBMITTALS

EQUIPMENT LIST
NEW ST. BERNARD PARISH LIBRARY

ACCESS CONTROL

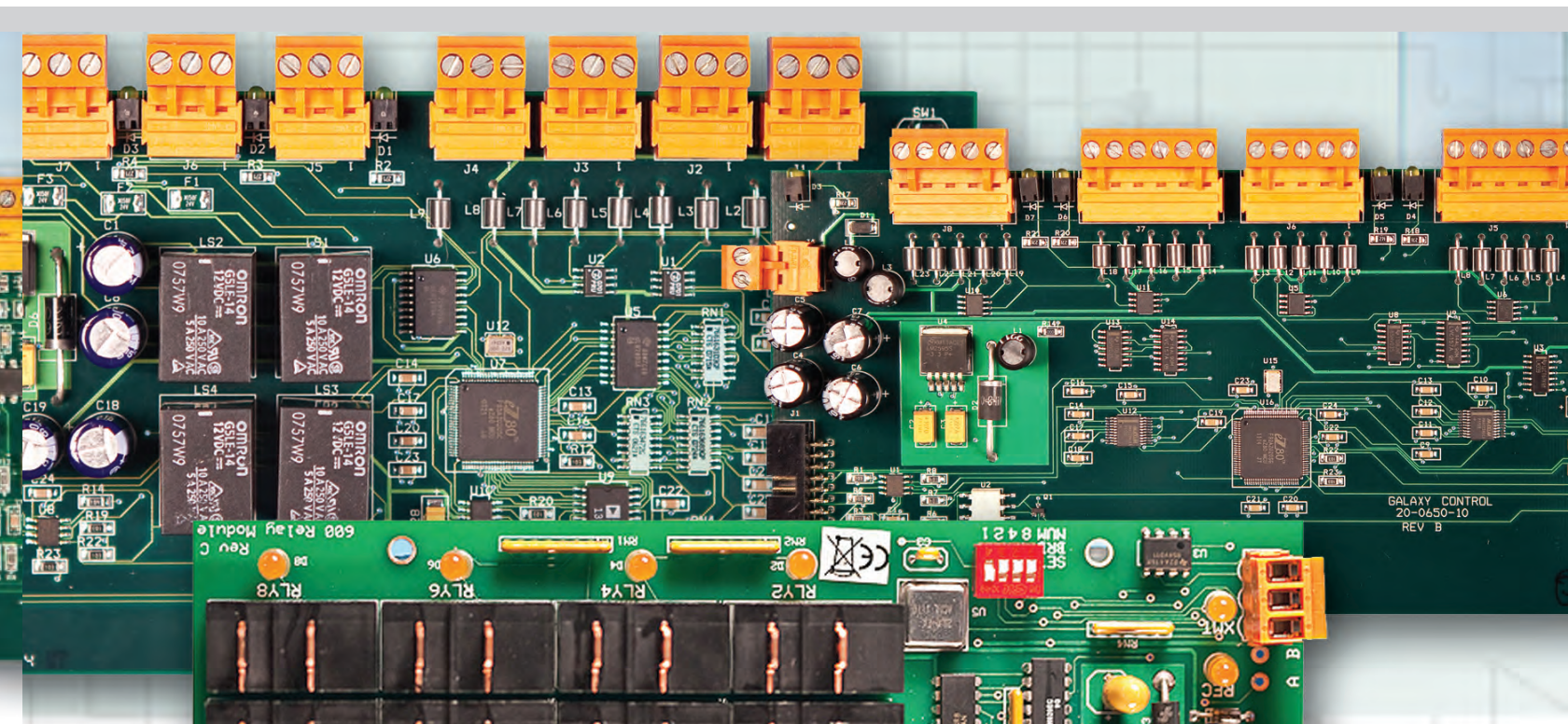
<u>Vendor</u>	<u>Equipment</u>	<u>Description</u>
ACCESS CONTROL SYSTEM		
GALAXY	635 SERIES	MAIN STATION
HID	OP40HON	CARD READER
GENESIS	3195	LICKETY SPLIT ACCESS CONTROL WIRE
WEST PENN	3270	CARD READER WIRE



Mailing: PO Box 158 Walkersville, MD 21793 • Shipping: 3 N Main St. Walkersville, MD 21793
Phone: 301-845-6600 • Fax: 301-898-3331 • E-mail: orders@galaxysys.com, info@galaxysys.com



SYSTEM GALAXY HARDWARE 600 Series (600, 635)



600 SERIES (600, 635) CONTROL PANELS

Galaxy's 600-series Control Panel provides the most flexible, reliable, and complete access control & security management solution available. The 600-series hardware is robust and capable of supporting virtually any security situation.

Flexible • Expandable • Complete

Our 600-series Control Panel touts an unsurpassed flexibility that makes it simple to integrate system hardware with the full-featured System Galaxy software. Galaxy supports any combination of access control, biometrics, alarm & monitoring equipment, DVR/CCTV surveillance equipment, visitor & personnel verification, time & attendance, elevator controls, and more.

Galaxy 600-series control panels are modular and easily expanded. Each panel can be uniquely configured to fit the specific requirements of any facility. The panels accommodate the 600-series interface boards in any combination. Inputs, outputs, relays, card readers, and RS-485 devices can coexist in the same panel. So there is no reason to buy more equipment than you need.

600-series products are brand-neutral and fully compatible with the complete range of technologies, including smart card, biometric, proximity, barcode, magnetic swipe and wireless. And because the communication ports are designed to work independently, you can intermix technologies at the board level. This provides seamless operation with the System Galaxy software that is convenient and cost-effective.

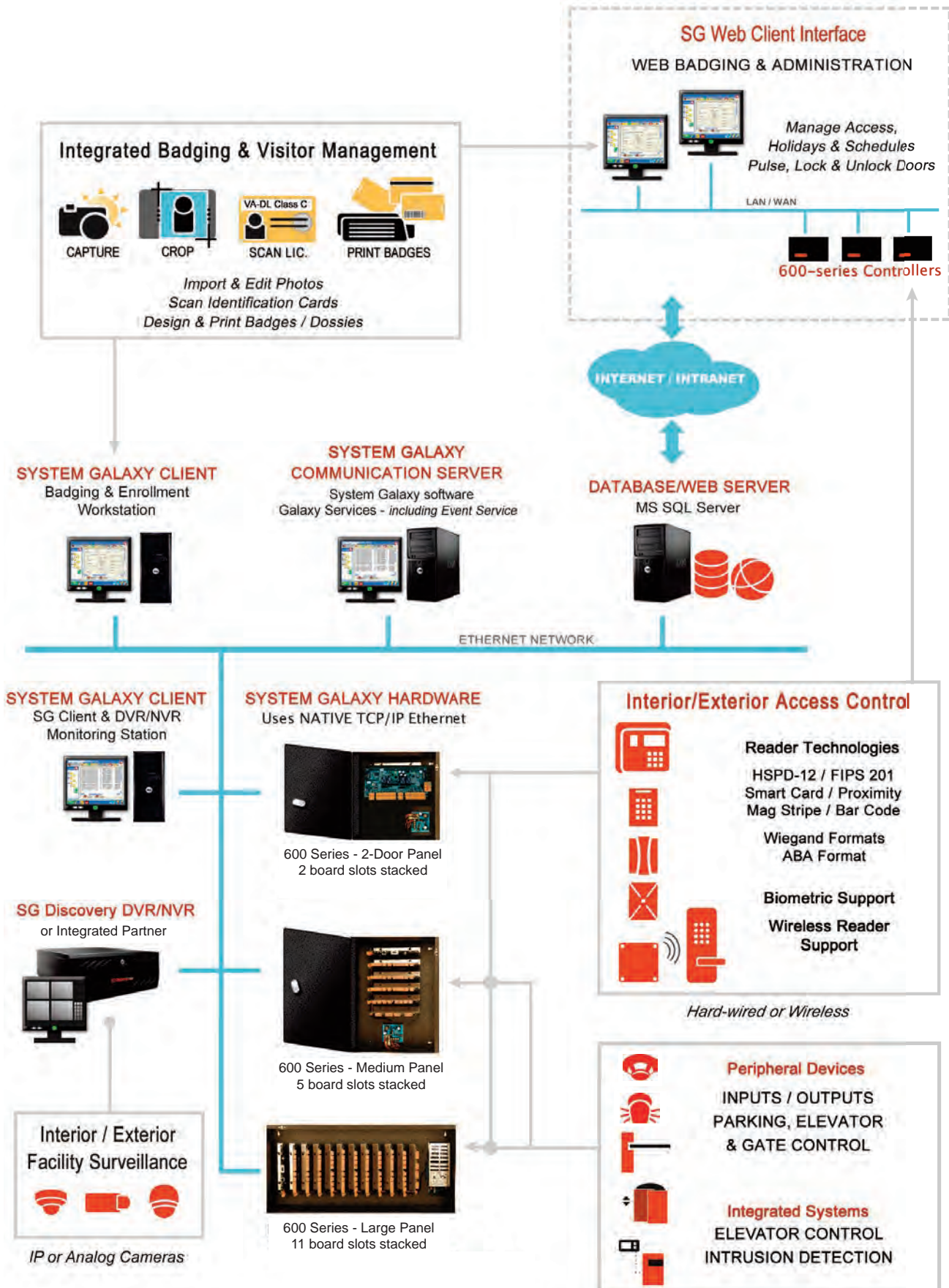
Galaxy Control Systems develops, manufactures and assembles all of our equipment in the United States. This means we have the greatest measure of control over quality and the availability of parts. And our ability to maximize long-term compatibility with existing technology makes Galaxy clearly the best choice for your security.

Galaxy extends its compatibility to government listings and compliances including HSPD-12/FIPS 201, PIV/PIV-II, CAC, and TWIC, as well as GSA/GSA Advantage and DIACAP Certification.

Supported Hardware Features:

- Expandable, modular design
- Real-time, on-site or remote operation
- Built-in Surge Protection
- Supervised Communication
- Remote Output Control
- Alarm Priority Levels
- Input/Output Linking
- Selectable LED Behavior (reader)
- Supports Biometric Identification & Authentication
- Supports Wireless Reader Technologies
- Protects Personnel, Visitors, Buildings, Equipment and other Assets

SYSTEM DIAGRAM



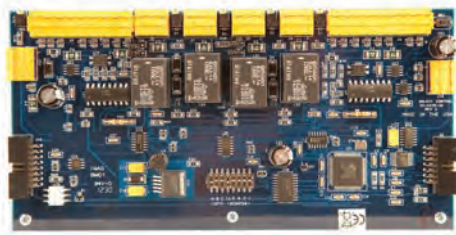
600 SERIES (600, 635) CONTROL PANELS



The 600-series **Central Processing Unit (CPU)** manages the access rules, schedules, and cards, as well as handling event data to and from the peripheral hardware (doors, readers, inputs and outputs, etc.). This allows the controller, interface boards, and hardware to work seamlessly with the System Galaxy software and remain fully functional when operating independently of the software.

Control Panel Features:

- LAN/WAN capable via Native TCP/IP
- 10,000 event buffer per panel
- 50,000 card/user capacity
- 254 time schedules (per cluster)
- 256 I/O Groups (per cluster)
- 2000 access groups and/or unlimited personal doors (per cluster)
- Scheduled lock/unlock
- Programmable duress
- Programmable temporary cards
- Programmable temporary access groups
- Unlimited holidays/special days
- Two-man access rule
- Interface boards are hot-swappable



Door Reader Module: The DRM board has two independent reader ports per board and two relays for each reader port. The DRM offers supervision of door contacts and provides surge protection to guard against equipment damage from electrical spikes.

635 DRM provides an additional RS-485 port, which allows it to be remotely distributed over doors in multi-drop configuration.

STANDARD CARDS

- Proximity 125KHz
- Barcode
- Magnetic Stripe

SMART CARDS

- HID® iClass®
- MIFARE®
- MIFARE DESFire™
- MIFARE DESFire™ EVI

SUPPORTS:

- 2 readers (doors) per DRM
- 16 readers per DSI-485 port;
- Biometric Identification and Authentication

GOVERNMENT COMPLIANT

- HSPD-12 & FIPS 201 Compliant
- CHUID 75 bits, FASC-N 200 BITS (controller accepts up to 256 bits)
- PIV, PIV-II, TWIC cards
- CAC-Legacy, Transition, Endpoint
- Option to perform PKI challenge to the Personal Certificate (PAK)

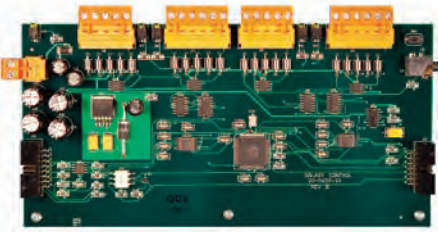
All 600-series interface boards are 'hot swappable' and intelligent. You can change or add boards while the panel is powered up and operating. And the intelligent design means the boards will synchronize to the system and begin operating within minutes. This provides uninterrupted security during maintenance and upgrades.

600 SERIES (600, 635) CONTROL PANELS



Digital Input/Output Board (DIO): The DIO board controls inputs & outputs with user-defined schedules and an extensive array of configurable options. The DIO board reports the appropriate input status and alarm event (trouble or safe) based on configuration.

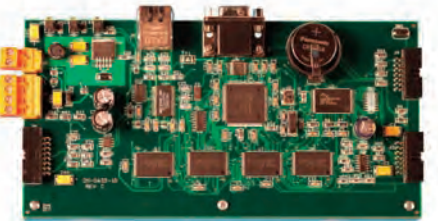
Supervision of inputs is supported by the DIO board. And as an added layer of protection, the DIO also offers an on-board feature, known as Hypervision, which protects the supervision from being defeated.



Dual Serial Interface (DSI) Interface Board: The DSI board is designed as a 3rd party integration solution for devices using RS-485 protocol. There are two RS-485 ports per board that support RS-485 devices in a single or multi-drop configuration. The board supports wireless reader technology, relay controls, LCD displays and Galaxy RS-485 Remote DPI modules.



General Relay & Elevator Relay Interface Boards: Relay boards can be used to drive General Relay Outputs or Elevator Relay Outputs. The Relay board supports eight relays per board and interoperates with the Galaxy DSI board using RS-485 protocol in a multi-drop configuration.



Otis Elevator Interface (OEI) Interface Board: The OEI board integrates access control with the Otis Compass™ System using native UDP/IP. The OEI manages Otis DEC Modes, supports Otis Floor Groups and Special Flags (i.e. Handicap, VIP, Split Group, etc.).



The USB Enrollment Reader: The fastest, and most convenient way to add or replace access cards. Simply connect it to the PC's USB port, and any industry standard access card can be entered into the system. It is available with Proximity, Wiegand, Magnetic Stripe, or US Government Readers for FIPS 201. The USB Reader also features an interface that allows the connection of any industry standard reader for entering different types of cards.



Galaxy LCD Display: The LCD module provides custom messages to cardholders at the point of access. The unit displays alpha-numeric characters on backlit LCD screen. The unit can display a maximum of 80 characters on a 4-line display as well as several formats of date/time and decrementing card-swipes, which can be used for greetings, time clocks and parking lot applications. The unit uses RS-485 protocol in a multi-drop configuration via the Galaxy DSI board.

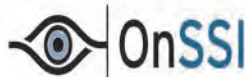
PARTNERED SOLUTIONS

Galaxy Control Systems expands its offerings to include solutions from leading manufacturers. This gives Galaxy customers the advantage of using the best in wireless solutions, biometric technologies and intrusion detection systems.

Biometric Solutions: Galaxy integrates with the full product line of Sagem MorphoAccess™ indoor and outdoor readers for identification (1:1) and authentication (1:n). Galaxy also supports integration with L1-Identity's 4G-series biometric readers. The System Galaxy software seamlessly supports reading and writing biometric data on Philips MIFARE® smart cards and HID® iClass® cards, including BIO-PIN for people whose prints are difficult to identify.

Wireless Solutions: Galaxy partners with SCHLAGE® and ASSA ABLOY to offer superior wireless solutions. The 600-series DSI serial interface board provides reliable integration with the SCHLAGE® AD-400 series and ASSA ABLOY Aperio™ products. Each RS-485 port on the Galaxy DSI board can support up to 16 wireless communication devices in a multi-drop configuration, affording you the most flexibility when accommodating the structural design of your facility.

Intrusion Detection Systems: Galaxy integrates with intrusion detection systems from Honeywell-Bosch and Ademco. By opening our product offerings to include intrusion detection, Galaxy provides a localized and consolidated solution for monitoring and reporting events.



WALL MOUNT CONTROLLERS

SPECIFICATIONS

Input Power

- 2-door controller – 2 amps
- 2-door POE - 15/30 watts
- 8-door controller – 2 amps
- 16-door controller – 10 amps

Relay Outputs

- Form-C contacts,
- 24 VAC, 1.5 amps max

Temperature Range

- 10° C to +60° C, non-condensing

Communications

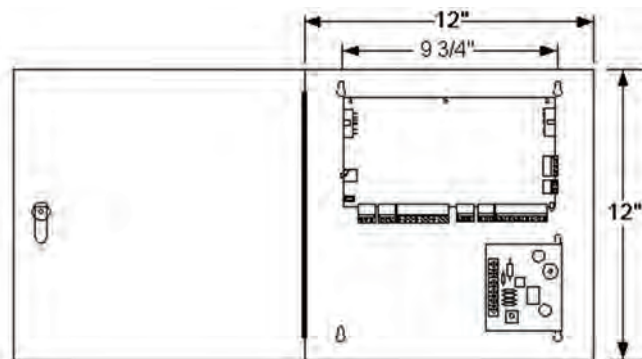
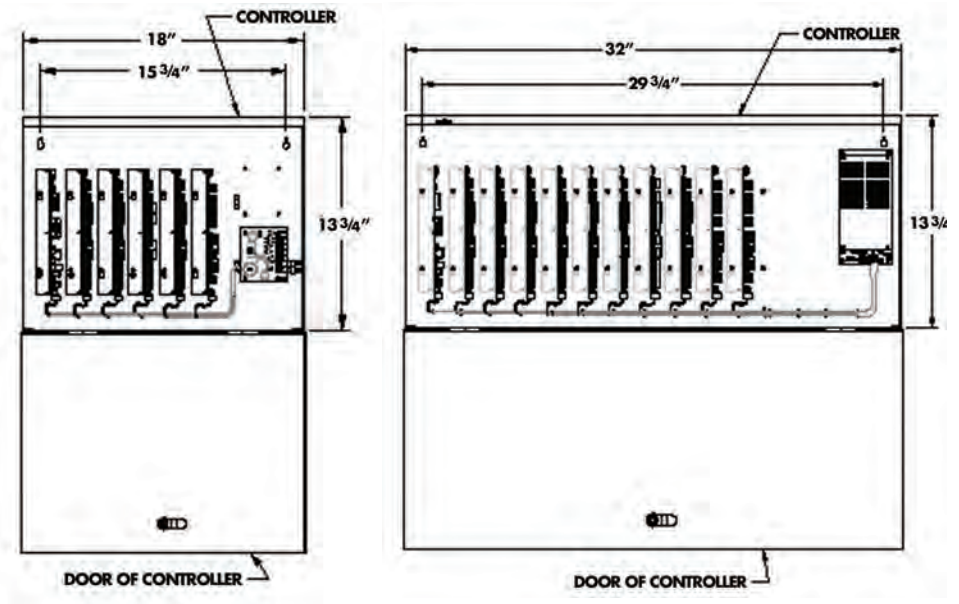
- TCP/IP; 10/100 Mbps

Certifications

- UL 294, UL 1076
- CE EN-50133
- RoHS Compliant

Enclosure Dimensions

- 18 ga electrical cabinet, hinged
- 2-door controller (12" x 12" x 4")
- 8-door controller (18" x 13.75" x 6.25")
- 16-door controller (32" x 13.75" x 6.25")



RACK MOUNT CONTROLLER

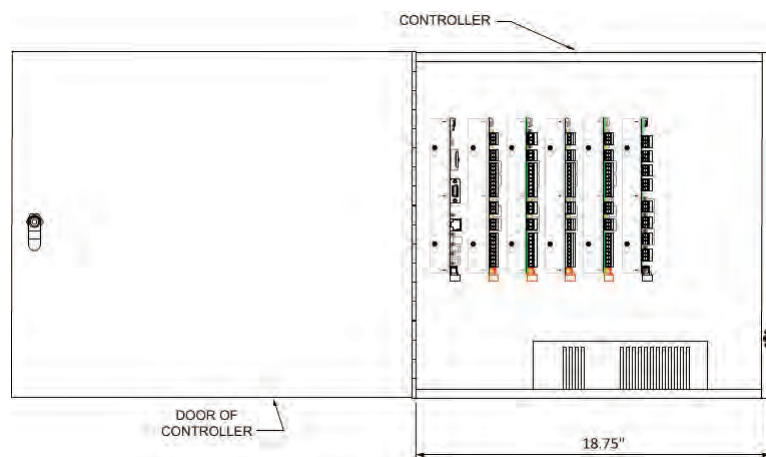
SPECIFICATIONS

Electrical

- Power Requirements 85/264 VAC,
- 60/50 Hz, 220 Watts

Physical Dimensions

- (HxWxD) 7x19x18.75 in (18 x 49 x 48 cm)
- Std. Rack Units – 4 units
- Weight – 26 lbs (11.79 kg)



OmniProx™

Proximity Card Readers

Honeywell's OmniProx™ family is a complete line of 125 kHz HID compatible proximity readers that delivers outstanding and consistent performance in a small package with attractive styling and colors to fit any décor.

All OmniProx™ readers (except the OP90 & OP95) include three bezels: black, charcoal gray and ivory and are constructed with rugged polycarbonate materials potted for both indoor and outdoor applications.

The OmniProx™ family of readers combines unique functionality, high-quality engineering and design for a variety of applications in the electronic access control market.

OmniProx™ readers offer superb reliability and consistent read range. Installation is simple and fast with a mounting template included in all models.

Increased security functions like optical tamper and security screw prevent unauthorized users from removing the reader from the wall or attempting to compromise the system.

For locations that require a proximity reader to be able to withstand vandal-prone environments, the OP90 & OP95 vandal resistant readers are an ideal choice.



FEATURES AND BENEFITS

- Variety of sizes to choose from to fit any décor:
 - Mullion and mini-Mullion style
 - Single-gang style (US)
 - Single-gang style (UK)
- Host LED control and optical tamper output
- Hidden mounting screws deter vandalism
- Potted for superior weather-resistance
- Wiegand or Clock & Data output
- HID & EM410x Prox Compatible
- Includes vandal-resistant security and installation tool with every reader
- Adhesive-backed mounting template reduces installation time and risk of mounting errors
- Three bezels included with OP10, OP30, OP40 and OP45 reader models: black, charcoal gray & ivory
- Lifetime warranty
- CE, RoHS and RED certified
- Compatible with card formats up to 85 bits in length including 26-bit, 34-bit and Corporate 1000 formats

OmniProx™ Proximity Card Readers Technical Specifications



	OP10 MINI-MULLION	OP30 MULLION	OP40 US GANG BOX	OP45 EURO GANG BOX	OP90 VANDAL RESISTANT	OP95 VANDAL RESISTANT
DESCRIPTION	Mini-mullion proximity reader	Large mullion proximity reader	Switch plate size, single-gang electrical box style for US	Switch plate size, single-gang electrical box style for UK	Vandal Resistant, single-gang reader	Vandal Resistant, single-gang reader with programmable keypad
DIMENSIONS	3.0" H x 1.5" W x 0.5" D (7.6cm x 3.8cm x 1.3cm)	5.6" H x 1.5" W x 0.8" D (14.2cm x 3.8cm x 2.0cm)	4.2" H x 2.8" W x 0.6" D (10.7cm x 7.1cm x 1.5cm)	3.3" H x 3.4" W x 0.6" D (8.4cm x 8.6cm x 1.5cm)	4.7" H x 3.0" W x 0.9" D (11.9cm x 7.6cm x 2.3cm)	4.7" H x 3.0" W x 0.9" D (12.0cm x 7.6cm x 2.2cm)
MAX. READ RANGE ¹	3.0' (7.6cm)	3.5' (8.9cm)	4.13' (10.5cm)	3.75' (9.5cm)	1.5' (3.8cm)	1.5' (3.8cm)
ENVIRONMENT	Indoor/Outdoor weather resistant, IP65 rated					
OPERATING CURRENT @ 12 VDC	60mA standby / 145 mA max					90mA standby / 135mA max
OPERATING VOLTAGE	5.0 - 16 VDC					
POWER SUPPLY TYPE	Linear or switching					
INTERFACE TO CONTROLLER	Max. cable distance to host: 500 ft./150 m (Wiegand output)					
INDICATORS	ADA compliant buzzer audible indicator, single tri-color (green-yellow-red) LED visual indicator					
TAMPER OUTPUT	Open collector, active high, max. sink current is 16 mA					
RED & GREEN LED CONTROL INPUT	Dry Contact, N.O.					
RF MODULATION	125kHz, FSK / ASK					
HUMIDITY	0 - 95%, non-condensing					
TEMPERATURE	-35°C - 66°C (-31°F - 150°F)					
COLOR	Black, Charcoal Gray and Ivory (all three included)				Silver	Silver
REGULATORY APPROVALS	USA and Canada: FCC Part 15B, Industry Canada RSS-210, UL294; Europe: CE					
WARRANTY ²	Lifetime					

¹ Actual operating distance will vary depending on installation environment; separation of 16 inches is recommended when mounting multiple readers in close proximity. Read ranges obtained using clamshell credential.

² See Honeywell Access Systems' Sales Policy for complete warranty details.

ORDERING

OP10HONS	OmniProx™ HID Compatible, Mini-Mullion Reader
OP30HONS	OmniProx™ HID Compatible, Mullion Reader
OP40HONS	OmniProx™ HID Compatible, Switch Plate, Single-Gang (US) Reader
OP45HONS	OmniProx™ HID Compatible, Switch Plate, Single-Gang (Euro) Reader
OP90HONS	OmniProx™ HID Compatible, Metal, Single-Gang (US) Reader
OP95HONS	OmniProx™ HID Compatible, Metal, Single-Gang (US) Reader with Programmable Keypad

For more information

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Honeywell

-GENESIS-

Plenum Rated Profusion® Access Control Cable Part Number: 3195

22/6 Stranded Shielded, 22/4 Stranded, 22/2 Stranded, 18/4 Stranded

Ratings CMP, CL3P, FT6
Approvals ETL Listed

Construction

Component	Door Strike	Card Reader	Door Contact	Request to Exit
Conductor	18 AWG 19 Strand Bare Copper	22 AWG 7 Strand Bare Copper	22 AWG 7 Strand Bare Copper	22 AWG 7 Strand Bare Copper
Conductor Count	4	6	2	4
Insulation	LSPVC	LSPVC	LSPVC	LSPVC
Insulation Colors	Black, Red, White, Green	Black, Red, White, Green, Brown, Blue	Black, Red	Black, Red, White, Green
Shielding	N/A	Aluminum Foil/Mylar with Drain	N/A	N/A
Rip Cord	Yes	Yes	Yes	Yes
Jacket / Color	LSPVC / Orange	LSPVC / White	LSPVC / Blue	LSPVC / Green
Assembly	Four components are cabled			
Overall Jacket Type / Diameter	None - Profusion® Jacketless Technology / 0.350" nom.			

Print Legends

GENESIS DOOR STRIKE P/N 3115 4C 18AWG 3038058 (ETL) CL3P OR FPLP OR CMP C(ETL)US FT6 75C (RoHS) W/O# XXXXXX-XXXXXXX XXXXFT A B C D E F 1 2 3 4 5 6 7 8 9

GENESIS CARD READER P/N 3206 6C 22AWG SHIELDED 3038058 (ETL) CL3P OR FPLP OR CMP C(ETL)US FT6 75C (RoHS) W/O# XXXXXX-XXXXXXX XXXXFT A B C D E F 1 2 3 4 5 6 7 8 9

GENESIS DOOR CONTACT P/N 3102 2C 22AWG 3038058 (ETL) CL3P OR FPLP OR CMP C(ETL)US FT6 75C (RoHS) W/O# XXXXXX-XXXXXXX XXXXFT A B C D E F 1 2 3 4 5 6 7 8 9

GENESIS REQUEST-TO-EXIT P/N 3104 4C 22AWG 3038058 (ETL) CL3P OR FPLP OR CMP C(ETL)US FT6 75C (RoHS) W/O# XXXXXX-XXXXXXX XXXXFT A B C D E F 1 2 3 4 5 6 7 8 9

Properties

Component	Door Strike	Card Reader	Door Contact	Request to Exit
Operating Voltage	300 Volts max.	300 Volts max.	300 Volts max.	300 Volts max.
DC Resistance @20°C	6.5 Ohms/1000' nom.	16.5 Ohms/1000' nom.	16.5 Ohms/1000' nom.	16.5 Ohms/1000' nom.
Capacitance	28 pF/ft. nom.	47 pF/ft. nom.	22 pF/ft. nom.	22 pF/ft. nom.
Impedance @20°C	67 Ohm. nom.	40 Ohms nom.	88 Ohms nom.	88 Ohms nom.

Temperature -20°C to 75°C
Flame Rating NFPA 262 (Plenum); CSA C22.2 No. 2556 (FT6)
RoHS Compliant Yes
Country of Origin USA