

Westell® | ProtectLink™ Class A & B BDAs

UL2524 & NFPA Public Safety BDA, Fiber DAS ready

General Information

The Westell ProtectLink Public Safety BDAs represent the next revolution in Public Safety DAS design, offering the most flexible platform available on the market. The platform includes 700/800 MHz band support, 1 Watt and 2.5 Watt RF output options, Class A or Class B operation, single-band or dual-band operation, all easily software license upgradeable. And with the addition of an Optical Master Unit the same BDA can expand to support up to 8 optical remotes. Westell's ProtectLink public safety BDAs are an integral part of any NFPA complaint ERRCS (Emergency Responder Radio Enhancement System).

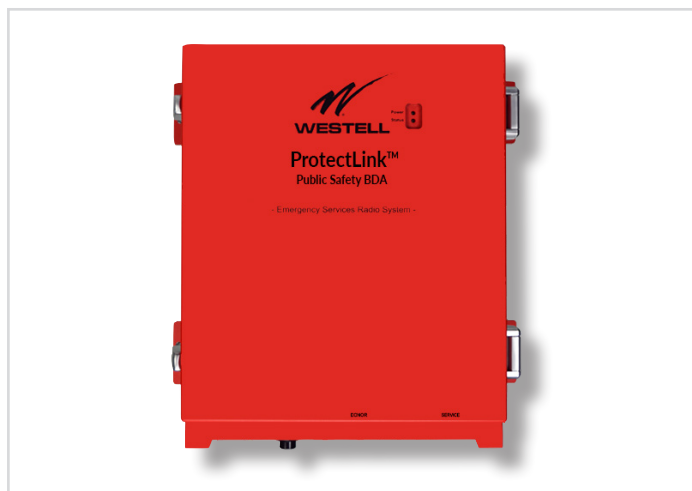
All versions include a full-featured, easy to use web GUI. The product also includes adjustable frequency filters, intelligent oscillation management, dedicated FirstNet® filter profile, built-in isolation test, NFPA/UL2524 alarm capabilities, built-in annunciator communication link with an optional remote annunciator panel, built-in battery backup circuitry, and accessory outputs for future enhancement to add fiber DAS remotes. Class A units include 32 filters per band with individual filter bandwidths from 12.5KHz to 10MHz. Class B units include four individual filters starting at 250KHz bandwidth to full band.

Frequency Range

- Uplink: 788-806 / 806-824 MHz
- Downlink: 758-776 / 851-869 MHz

Product Highlights

- RF power, and Class B to A are upgradeable via license keys
- Intelligent oscillation management and self-healing
- 90 dB downlink gain, 80dB uplink
- Listed to UL2524, UL62368-1, UL50E Type4
- Built-in battery charging and alarm circuitry
- Built-in annunciator communications link
- EPO (Emergency Power Off)
- Uplink & downlink squelch per filter
- Independent gain control per filter
- Compact footprint
- Fiber DAS ready design
- NEMA4 conduit glands included
- Supports both digital and analog modulation
- Supports P25 phase 1 & 2
- Supports SNMP
- 3-year warranty



ProtectLink BDA

Ordering Information

Part Number	Description
CS40-734834-00D-A0	Dual-band-700/800 MHz, 2.5 watt, Class A/B
CS40-734834-00D-B0	Dual-band-700/800 MHz, 2.5 watt, Class B
CS40-730830-00D-A0	Dual-band-700/800 MHz, 1 watt, Class A/B
CS40-734000-00D-A0	Single-band 700MHz, 2.5 watt, Class A/B
CS40-000834-00D-A0	Single-band 800MHz, 2.5 watt, Class A/B
CS40-ANNUNC	BDA Remote Annunciator, for monitoring a single device
CS40-PWRUPGRADE	Upgrade license from 1 watt to 2.5 watts
CS40-CLAUPGRADE	Upgrade license from Class B to Class A/B
CS19-BBC-003	Wall-mountable battery cabinet
CS19-PYL12V45FS	45AH sealed Lead-Acid battery (2 required, 4 hour)
CS19-PYL12V100FT	100AH sealed Lead-Acid battery (2 required, 12 hour)
CS19-PYL12V160FT	160AH sealed Lead-Acid battery (2 required, 24 hour)

Certification References

UL 2524	In-building 2-way Emergency Radio Communication Enhancement Systems (ERCES)
UL 62368-1	Audio/video, information and communication technology equipment - Part 1: safety requirements
UL 508A	Industrial control panels (UL50E Type 4)
FCC ID	NVRDPSA81090-78



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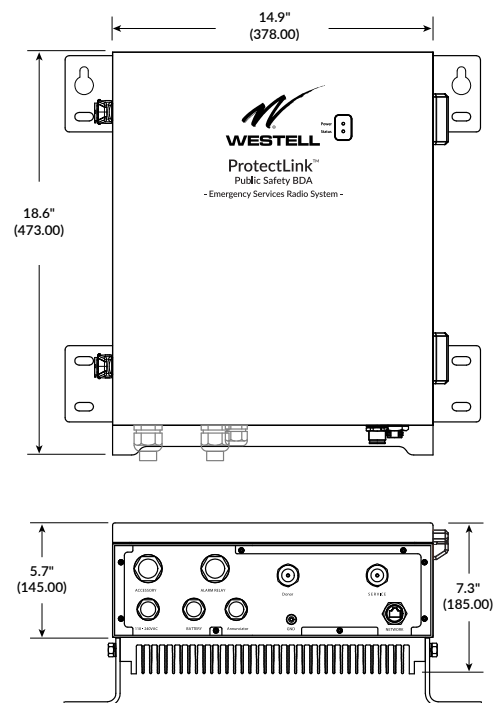
BDA Electrical Specifications

Main power input	110 VAC (88-264VAC)
AC power consumption	210W max. (1.9Amps @ 110VAC)
Battery charger output	28 VDC
DC input range	24 - 30 VDC
DC power consumption (dual-band)	130 watts (5.3 Amps)
DC power consumption (single-band)	90 watts (3.7 Amps)
DL output power	34dBm (2.5W) or 30dBm (1W)
UL output power	27dBm, ½ watt
DL gain	90dB +/- 3dB
UL gain	80dB
Noise figure @ max gain	<7dB
AGC dynamic range	60dB
Gain adjustment range	30dB
Filter gain adjustment	30dB
Squelch adjustment range	-60 to -90dBm
VSWR	<1.5:1
Number of filters class A BDA	32 per band
Number of filters class B BDA	4 per band
Class A BDA filter bandwidths	12.5KHz, 25KHz, 50KHz, 75KHz, 100KHz, 150KHz
Class B BDA filter bandwidths	250KHz, 500KHz, 1MHz, 2MHz, 3MHz, 7MHz, 10MHz, 18MHz

Propagation delay	12.5KHz, 60us 25KHz, 36us 50KHz, 25us 75KHz, 15us 100KHz, 15us 150KHz, 15us 250KHz, 15us 500KHz, 9us 1MHz, 8us 2MHz, 7us 3MHz, 7us 7MHz, 6us 10MHz, 6us
55dB filter rejection, from band edge	12.5KHz, 30KHz 25KHz, 50KHz 50KHz, 105KHz 75KHz, 210KHz 100KHz, 210KHz 150KHz, 210KHz 250KHz, 210KHz 500KHz, 500KHz 1MHz, 500KHz 2MHz, 750KHz 3MHz, 750KHz 7MHz, 1MHz 10MHz, 1MHz
UL max input power	+10dBm
DL max input power	0dBm

BDA Mechanical Specifications

Dimensions (H x W x D)	18.6 x 14.9 x 7.3 in
Approximate weight (lbs)	49.5
Mounting	Wall-mount
Weatherproofing	IP65/NEMA Type 4
Cable feedthroughs	Cordgrips and Flex Conduit Fittings included
Connectors	
Antenna ports	4.3-10 female
User interface: GUI & NMS	RJ45 Jack, web browser based
Alarm connections	Compression screw terminals
Annunciator	RJ45 Jack
AC & DC power	Compression screw terminals
Operating temperature	-30° C - +50° C
Color	Red



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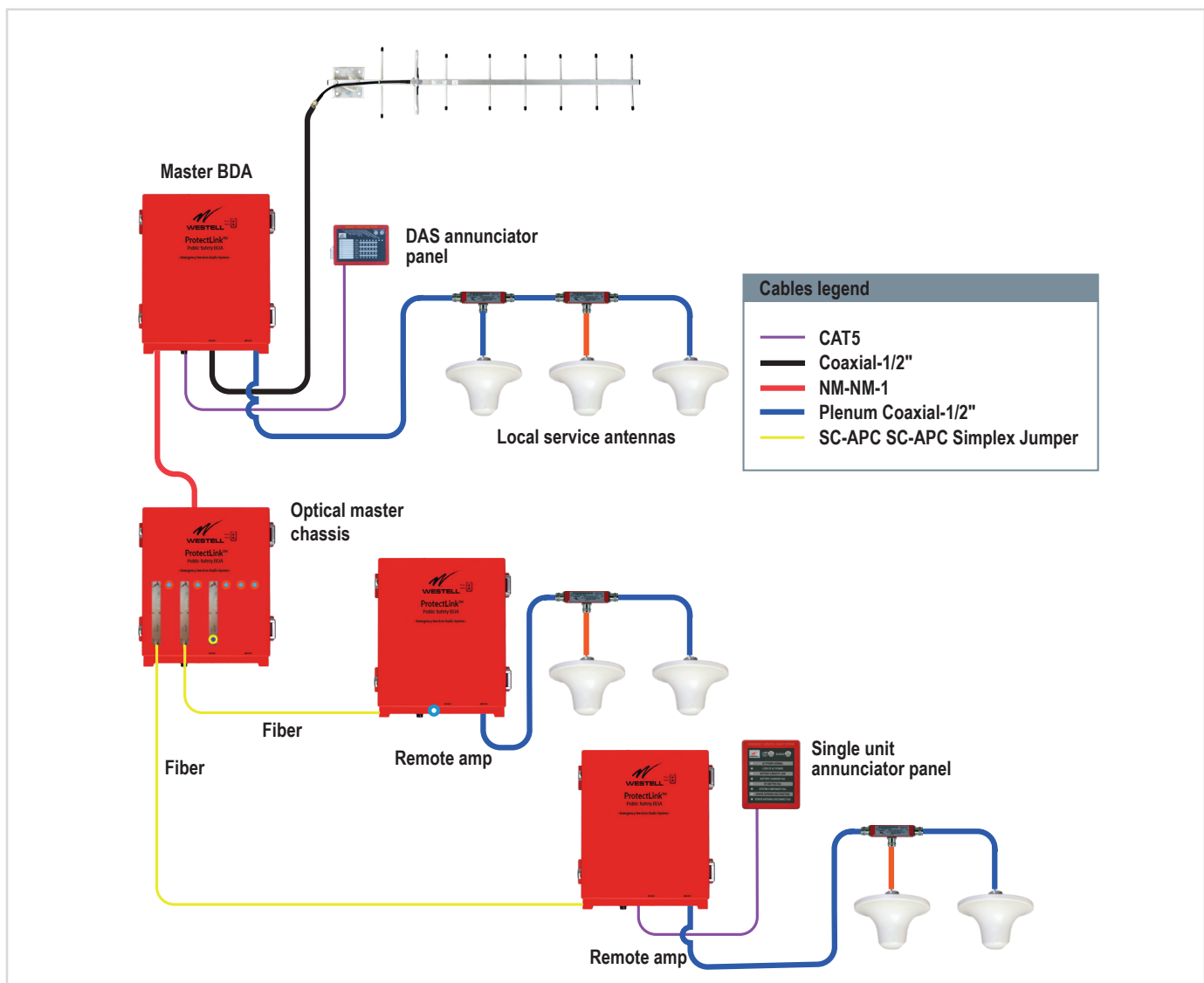
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DAS Ready Design

Westell's innovative DAS ready BDA allows for the addition of up to 8 fiber remotes for expanded coverage. All models of CS40 BDA support the addition of an Optical Master Unit (OMU) mounted below or next to the master BDA. The DAS ready BDA includes all necessary connections to interface with the OMU while keeping a Service RF port to provide signal to the area around the master BDA. The OMU features individual Optical Radio Modules (ORMs), each connected to an Optical Remote Unit over a single strand of single-mode fiber; this allows integrators to purchase only the number of Optical Radio Modules needed to support the number of remotes installed, thereby reducing installation costs.

The master BDA as well as each remote optical unit, will support Ethernet connections for access to all devices in the entire network. An integrated 10/100 Ethernet network may also be used as a mission-critical hardened IP network to connect other monitoring equipment, Internet-connected devices or Band 14 (FirstNet) small cells.



Fiber DAS Layout



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Westell® | ProtectLink™ Accessories

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Remote Annunciator and Battery Backup

Alarm annunciation of each active element in the system can be monitored at the fire control room or wherever needed through a remote annunciator and via the alarm relay outputs on the BDA. Our remote annunciators are compact and can be housed in a typical 2 gang electrical box and interconnected with a single standard CAT5 cable up to 650 feet away, providing a compact and clean solution for monitoring the health of each active DAS element.

With both optical and audible annunciation of alarms, first responders will have a clear indication of the DAS system performance as they enter the building.

Product Highlights

- Provides remote annunciation of alarms
- Compact, unobtrusive design
- Operates up to 650 feet (200 meters) from BDA
- Includes audible annunciation
- Uses single CAT5 cable

Remote Annunciator Specifications

Dimensions (H x W x D)	6.1" x 5.1" x 1.1" in
Weight	1.5 lbs
Mounting	Standard 2 gang electrical box
Connector	RJ45 Jack
Maximum cable distance	650 feet (200 meters)



CS40-ANNUNC

Westell's CS19-BBC-003 battery cabinet is designed to house up to 160AH of battery capacity in a red NEMA3R cabinet. The battery cabinet comes complete with everything needed for install including conduit fittings, wire and terminals. Short circuit protection is provided by a circuit breaker inside the cabinet which also provides a convenient way to test for charger fail alarm.

BBC-003 Cabinet and Battery Specifications

Dimensions (W x H x D)	26" x 15.6" x 14" in
Weight	35 lbs
Mounting	Wall mount
Cable feedthroughs	Flex Conduit Fittings included
Battery Specifications	
CS19-PYL12V160FT (dims)	21.9" x 11" x 4.9" (2 required)
CS19-PYL12V160FT (wt)	116 lbs
CS19-PYL12V100FT (dims)	20" x 9.3" x 4.2" (2 required)
CS19-PYL12V100FT (wt)	76.9 lbs
CS19-PYL12V45FS (dims)	11" x 7.8" x 4" (2 required)
CS19-PYL12V45FS (wt)	33 lbs



CS19-BBC-003 Battery Cabinet



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