

# Westell® | ProtectLink™ CS45-734-834-A0 BDA

UL2524 and NFPA Public Safety, Class A & B BDAs

## General Information

The Westell ProtectLink Public Safety Next Generation 2.5W BDA is Westell's newest Fiber DAS ready bi-directional amplifier. The Class A or Class B BDA includes 700/800 MHz dual-band support, 2.5W output power, and built-in annunciator with additional auxiliary alarms. Westell's ProtectLink public safety BDAs are an integral part of any NFPA complaint ERCES (Emergency Responder Communication Enhancement System).

ProtectLink includes a full-featured, easy to use web GUI. The product also includes adjustable bandwidth filters, intelligent oscillation management, built-in isolation test, NFPA/UL2524 alarm capabilities, and an optional remote annunciator panel. The BDA supports 96 total enabled channels allocated across bands in blocks of 8. Individual filter bandwidths of 12.5 kHz, 25 kHz, 50 kHz, or 75 kHz are available for Class A operation. Class B filters support 150 kHz to 10 MHz.

### Frequency Range

- Uplink: 799-806 MHz, 806-824 MHz
- Downlink: 769-776 MHz, 851-869 MHz

### Product Highlights

- Class B and Class A operation
- 2.5W downlink RF power per band
- Intelligent oscillation management, self-healing
- 90 dB downlink gain, 80 dB uplink gain
- Built in front panel annunciator with additional custom LED's
- Fiber DAS ready\* with SMA ports
- Built-in remote annunciator communications link
- Emergency Transmit Disable
- Supports SNMP
- Fast uplink squelch response per filter
- Independent gain control per filter
- Compact footprint
- NEMA 4 conduit glands included
- Supports both digital and analog modulation
- Supports P25 phase 1 & 2
- P25 phase 2 AGC (Automatic Gain Control) per time slot to address near/far users on the same channel
- 3-year warranty
- PSERN June 1 2025 compliant\*\*

### Product Certification

- UL-2524: In-building 2-Way Emergency Responder Communication Enhancement System (ERCES)
- NEMA 4 enclosure
- NFPA 1221 and NFPA 1225
- FCC ID: CH8734834

\* FiberDAS requires ProtectLinkV2 HE to support Fiber DAS expansion, available February 2026.

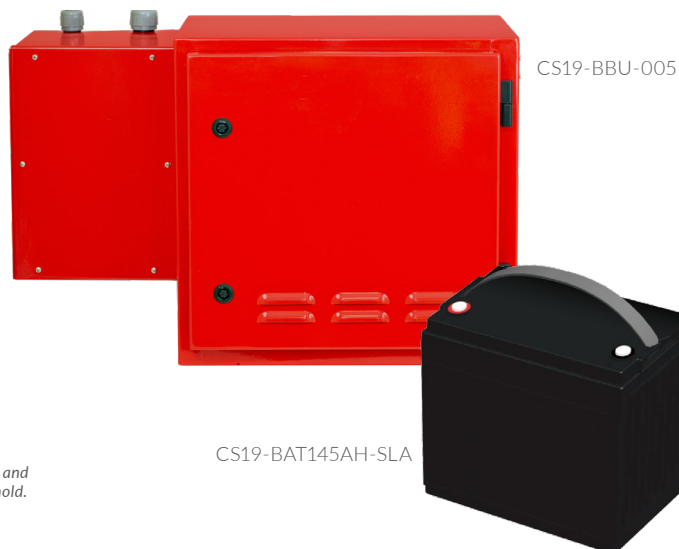
\*\* Compliant with PSERN June 1 requirement to automatically disable UL amplification after 60 minutes and re-enable UL amplification within 0.5 seconds of receiving signal higher than the uplink squelch threshold.



CS45-734-834-A0

### Ordering Information

Part Number	Description
<b>ProtectLink™ BDAs</b>	
CS45-734-834-A0	90DB GAIN, 2.5W, PS-700+800 BDA CL A/B
CS45-734-834-K1	PSKIT-700/800, 2.5W BDA, BBU W/145AH-12HR
CS45-734-834-K2	PSKIT-700/800, 2.5W BDA, BBU W/145AH-24HR
<b>ProtectLink™ BDA Accessories</b>	
CS19-BBU-005	WALL-MOUNTABLE BATTERY CABINET
CS19-BAT145AH-SLA	BATTERY 145 AH SLA 12V (12 HRS), 1 REQUIRED; (24 HRS), 2 REQUIRED



CS19-BBU-005

CS19-BAT145AH-SLA



Providing Public Safety Solutions for Over 20 Years



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UL2524 and NFPA Public Safety, Class A & B BDAs

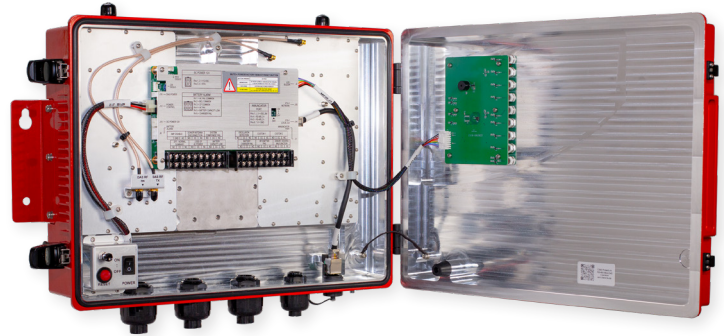


## BDA Electrical Specifications

Main power input	12 VDC nominal
DC power consumption (dual-band)	123W
DL output power	34 dBm/band
UL output power	27 dBm (1/2W) 700 MHz 27 dBm (1/2W) 800 MHz
DL gain	90 dB
UL gain	80 dB
Noise figure @ max gain	<7 dB
AGC dynamic range	60 dB
Gain adjustment range	30 dB
Filter gain adjustment	30 dB
Squelch adjustment range	-70 to -100 dBm
VSWR	<1.5:1
Number of filters Class A/B BDA	96 total, increments of 8 per band
Class A BDA filter bandwidths	12.5 kHz, 25 kHz, 50 kHz, 75 kHz
Class B BDA filter bandwidths	150 kHz to 10 MHz
Propagation delay	12.5 kHz, 48 uS 25 kHz, 30 uS 50 kHz, 25 uS 75 kHz, 15 uS
55dB filter rejection, from band edge	12.5 kHz (30 kHz) 25 kHz (50 kHz) 50 kHz (105 kHz) 75 kHz (210 kHz) 150 kHz (210 kHz)
UL max input power	+10 dBm
DL max input power	0 dBm

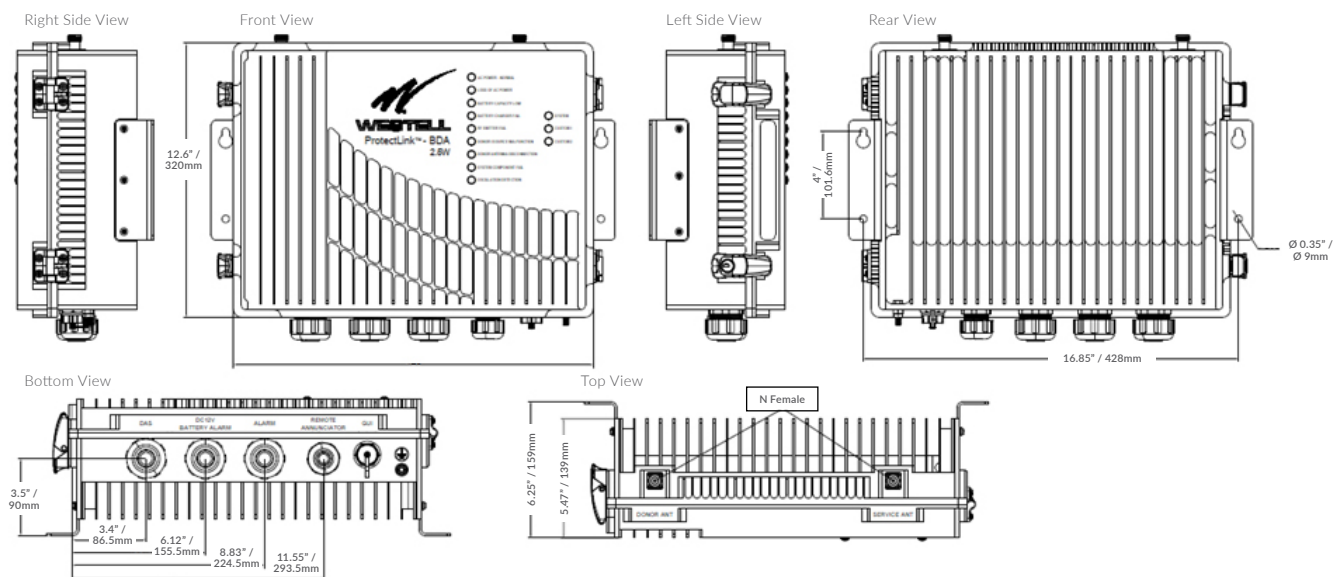
## BDA Mechanical Specifications

Dimensions (H x W x D)	12.6" x 16.54" x 5.47"
Approximate weight (lbs)	25.6
Mounting	Wall-mount
Weatherproofing	IP65/NEMA 4
Cable feedthroughs	Cordgrips and flex conduit fittings included
Connectors	
Antenna ports	N female
User interface: GUI & NMS	RJ45 jack, web browser based
Alarm connections	Compression screw terminals
Annunciator	RJ45 jack
DC power	Cable from BBC or compression screws
Operating temperature	-30° C to +50° C
Color	Red



CS45-734-834-A0, interior view

## CS45-734-834-A0 Diagram



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# Westell® ProtectLinkv2 Fiber DAS

UL2524 Public Safety 700/800 MHz Fiber DAS

## General Information

Westell's ProtectLinkv2 Fiber DAS HE (headend) and RE (remote end) allow for fiber connectivity with CS45 Series 2.5W 700/800 MHz public safety BDAs (bi-directional amplifier) and ORUs (optical remote unit), and they provide fiber to RF conversion and communication between the headend and remote units.

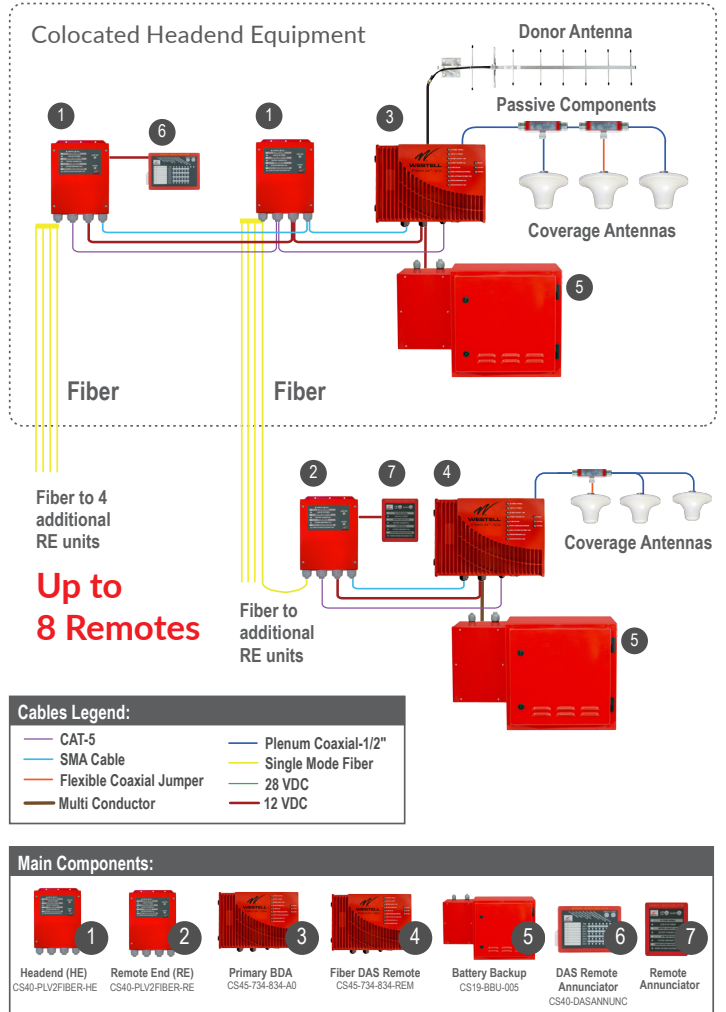
ProtectLinkv2 Fiber HE can support fiber connectivity for up to four remotes with single mode fiber connecting an existing BDA to the PLv2 HE.

The headend BDA is connected to the PLv2 HE via low level RF coax uplink and downlink feeds. Each HE can be daisy chained via one of the two RS485 ports expanding the remote count for each HE unit for support of additional remotes.

## Ordering Information

Part Number	Description
<b>ProtectLinkv2 Fiber DAS 700/800 MHz Components</b>	
CS45-734-834-A0	90DB GAIN, 2.5W, PS-700/800 BDA CL A/B
CS40-PLV2FIBER-HE	PROTECTLINKv2 FIBER HEADEND
CS40-PLV2FIBER-RE	PROTECTLINKv2 FIBER REMOTE END POINT
CS45-734-834-REM	90 DB GAIN , 2.5W, PS-700 + 800 REM CL A/B
<b>ProtectLinkv2 Fiber DAS 700/800 MHz Battery Backup</b>	
CS19-BBU-005	WALL-MOUNTABLE BATTERY CABINET
CS19-BAT145AH-SLA	BATTERY 145 AH SLA 12V (12 HRS), 1 REQUIRED; (24 HRS), 2 REQUIRED
<b>ProtectLinkv2 Fiber DAS 700/800 MHz Kits</b>	
CS45-734-834-REMK1	PSKIT-700/800 MHZ, 2.5W REM, BBU W/145AH-12HR
CS45-734-834-REMK2	PSKIT-700/800 MHZ, 2.5W REM, BBU W/145AH-24HR
<b>ProtectLink™ Accessories</b>	
CS40-ANNUNC	BDA REMOTE ANNUNCIATOR FOR MONITORING A SINGLE DEVICE
CS40-DASANNUNC	DAS REMOTE ANNUNCIATOR FOR MONITORING MULTIPLE DAS UNITS

## Supports 8 Remotes



Initial release will support 4 remotes.  
8 remote support expected by Q2 2026.



# Westell® ProtectLinkv2 Fiber DAS

UL2524 Public Safety 700/800 MHz Fiber DAS



## Product Highlights ProtectLinkv2 Fiber HE

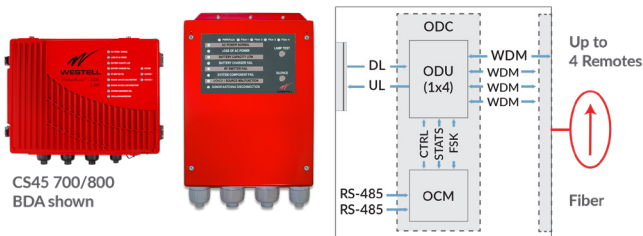
- Compatible with Westell CS40 UHF, VHF, and CS45 700/800 MHz headend BDAs and remotes
- Supports headend BDA via SMA connector(s) with one uplink and one downlink
- Allows expansion for up to four remotes
- Connects to headend BDA via SMA cables, one uplink and one downlink, 12 or 28 VDC power and RS485 cable
- One single mode fiber connection for each remote
- Bi-directional communication link for alarm aggregation of remotes
- Ability to daisy chain additional ProtectLinkV2 Fiber HE systems to support 8 remotes (practical limit of 16 remotes) via local RS485 and power cables
- Software upgradeable
- Max distance 5 km from HE to RE
- Status indicator for fiber 1 through 4
- PWR/Fault LED

## Applications

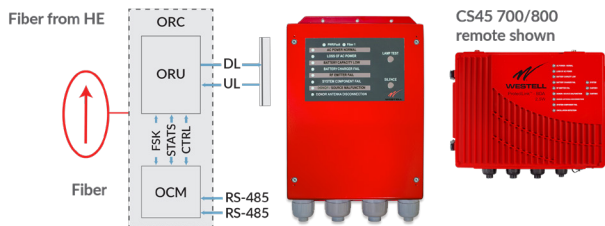
### Enabling 700/800 MHz Fiber DAS

ProtectLinkv2 Fiber HE can support fiber connectivity for up to four remotes with single mode fiber connecting an existing BDA to the PLv2 HE.

### ProtectLinkV2 Fiber-HE 700/800 MHz Functionality



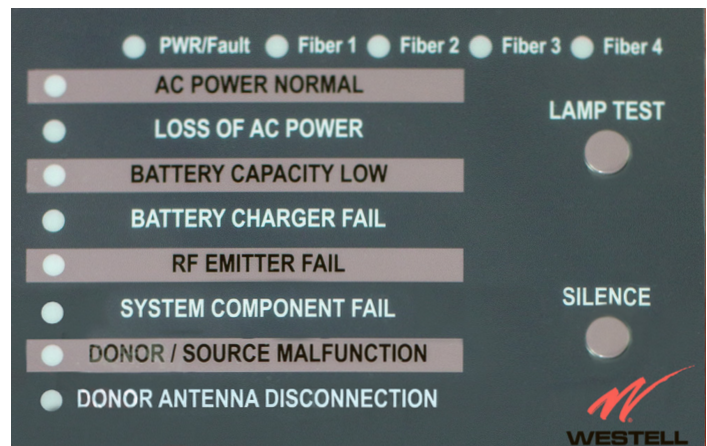
### ProtectLinkV2 Fiber-RE 700/800 MHz Functionality



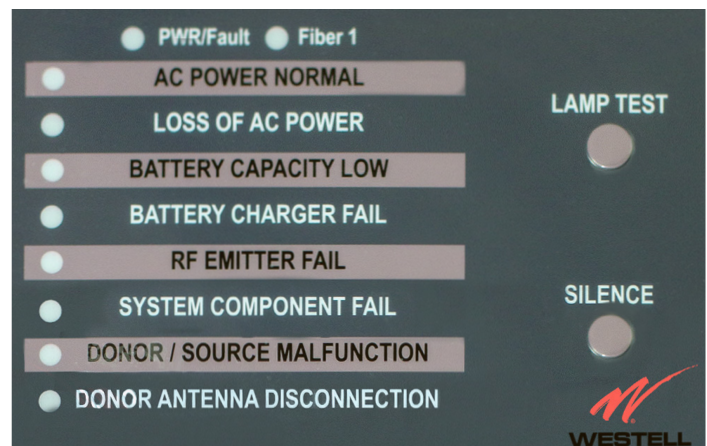
## Built in UL2524 NFPA 1225 Annunciator

- Annunciator LED's with lamp test and silence
- AC power normal
- Loss of AC power
- Battery capacity low
- Battery charger fail
- RF emitter fail
- System component fail
- Donor/source malfunction
- Donor antenna disconnection
- Battery charger fail

### ProtectLinkV2 Fiber-HE Annunciator Panel



### ProtectLinkV2 Fiber-RE Annunciator Panel



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# Westell® ProtectLink™ Accessories

UL2524 Public Safety 700/800 MHz Fiber DAS

## Remote Annunciators

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 mount to the front of a typical 2 or 3 gang electrical box and interconnected with a single standard CAT5 cable up to 3000 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. Select the single unit annunciator to monitor a single ORU or the DAS Annunciator to monitor all DAS devices from a single location.

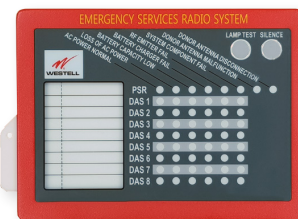
## Battery Backup

Westell's CS19-BBU-005 series of public safety battery backup units are designed to provide main power and uninterruptible backup power for the CS45-734-834-A0 BDA public safety bi-directional amplifier (BDA) system. The Westell CS19-BBU-005 series can maintain full continuous operation of a BDA for 24 hours or more depending on battery installed.

The CS19-BBU-005 series provides an integrated power, battery charger, and alarm monitor system. The power system provides up to 252W of power to the BDA. The alarm system



CS40-ANNUNC



CS40-DASANNUNC

## Remote Annunciator Specifications

Dimensions (H x W x D)	6.1" x 5.1" x 1.1" in (CS40-ANNUNC)
	5.1" x 7.1" x 1.1" in (CS40-DASANNUNC)
Weight	1.5 lbs
Mounting	2 gang electrical box (CS40-ANNUNC)
	3 gang electrical box (CS40-DASANNUNC)
Maximum cable distance	3000 feet (1000 meters)

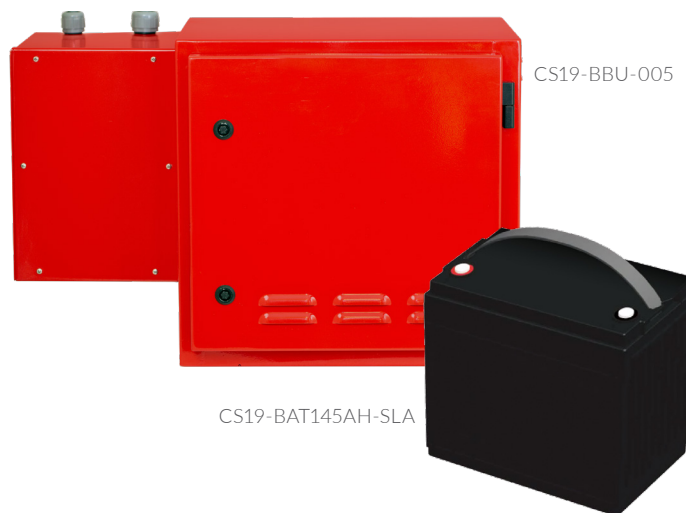
has auxiliary connections to the BDA for remote monitoring. Electronics are housed in a NEMA 4 enclosure, and batteries are housed in a NEMA 3R enclosure, manufacturer assembled.

The CS19-BBU-005 provides full NFPA 72/1221/1225/UL2524 indicator support with Westell 12 VDC BDAs.

Lead-acid batteries are ordered separately and will determine the length of battery backup time.

## Battery Cabinet and Battery Specifications

Input Voltage	85 - 125 VAC
Input Frequency	45 - 66 Hz
Typical Input Current	2.1/108 VAC
Output Voltage	12 VDC
Maximum Output Power	252W max
Environmental	-30°C to +50°C
Dimensions (H x W x D)	16.02" x 28" x 15.32"
Weather Resistance	NEMA 4/3R
UL	2524 (power supply UL 62368-1)
Mounting	Wall
Cable Entries	1 @ 3/4 ALM, DC; 1 @ 1/2 conduit



CS19-BAT145AH-SLA

CS19-BBU-005



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