

# Westell® | ProtectLink™ Fiber DAS

UL2524 & NFPA Public Safety Fiber DAS

## General Information

The Westell ProtectLink Public Safety Fiber DAS represents the next revolution in Public Safety DAS design, offering the most flexible platform available on the market. This innovative design allows a true pay-as-you-grow solution. Adding an Optical master to one of our ProtectLink BDAs provides expansion of up to eight 2.5 watt remote units for covering additional buildings or spaces while supporting local service antenna from the master BDA. This design reduces the number of remotes required with other platforms.

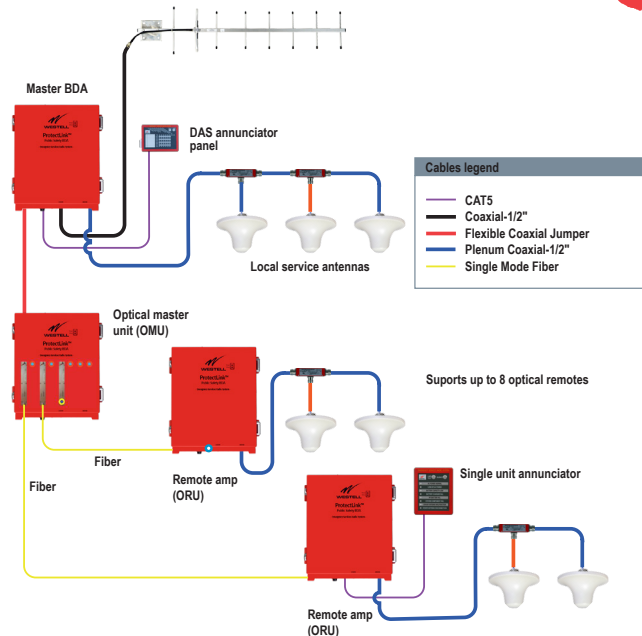
“Intelligence Built-In” has been a hallmark of Westell products, and nowhere else is that more evident than with ProtectLink DAS. With auto-discovery of new remotes, auto firmware upgrade across the entire network, auto compensation for fiber loss, we’ve made this product the easiest to install, most reliable PS fiber DAS available. And with a full 90dB of end-to-end gain and 2.5 Watts per band per remote, it’s sure to support a wide range of applications and building types.

### Frequency Range

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

### Product Highlights

- Expandable to support from 1 to 8 remotes
- Intelligent oscillation management and self-healing
- 90 dB system 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
- NEMA4 conduit glands included
- Supports both digital and analog modulation
- Supports P25 phase 1 & 2
- Supports SNMP
- 3-year warranty



### Ordering Information

Part Number	Description
CS40-OPTMASTER	Optical master chassis, supports up to 8 radio modules
CS40-OPTRADIOMOD	Optical radio module, Converts RF to fiber, one per remote
CS40-734834-00D-AR	Dual-band remote 700/800 MHz, 2.5 watt, class A/B.
CS40-734000-00D-AR	Single-band remote 700 MHz, 2.5 watt, class A/B.
CS40-000834-00D-AR	Single-band remote 800 MHz, 2.5 watt, class A/B.
CS40-734834-00D-BR	Dual-band remote 700/800 MHz, 2.5 watt wideband.
CS40-ANNUNC	BDA Remote annunciator, for monitoring a single device.
CS40-DASANNUNC	DAS Remote annunciator, for monitoring all DAS units
<b>Master BDAs</b>	
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.

### 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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## Electrical Specifications

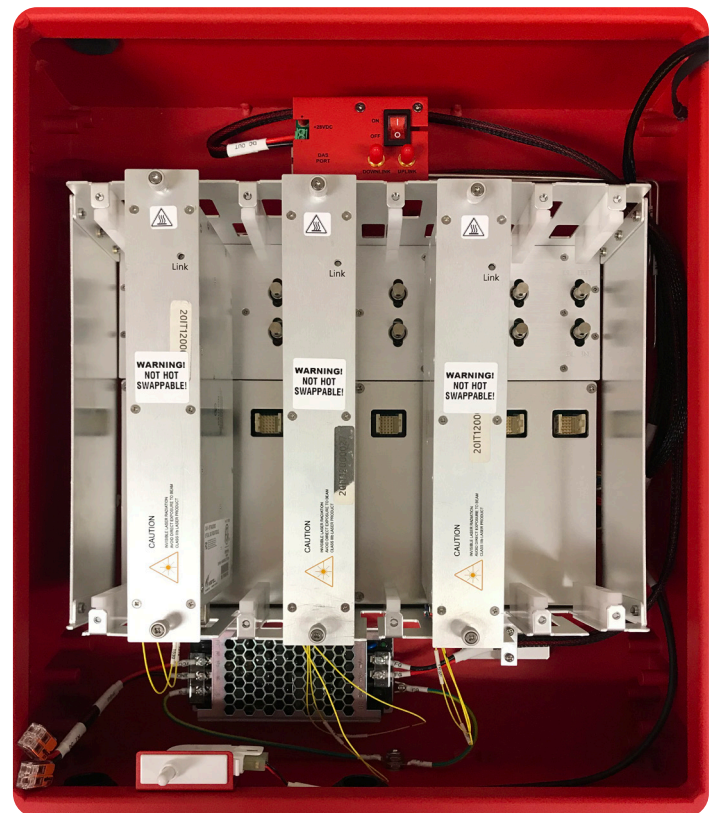
Main power input	110 VAC (88-264VAC)
AC power consumption	210W max. (1.9Amps @ 110VAC)
Battery charger output	28 VDC
DC input range	24 - 30 VDC
DC power consumption (dual-band)	130 watts (5.3 Amps)
DC power consumption (single-band)	90 watts (3.7 Amps)
DL output power	34dBm (2.5W)
UL output power	27dBm, ½ watt
DL gain	90dB +/- 3dB
UL gain	80dB
Noise figure @ max gain	<7dB (with one remote)
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 system	32 per band
Number of filters class B system	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
MTBF	161,000 hours (18.3 years)
Optical specifications	
Optical connector	SC/APC
Optical link budget	8dB
Fiber type	Single-mode
Fiber count	One

## OMU Mechanical Specifications

Dimensions (H x W x D)	18.6 x 14.9 x 7.3 in
Approximate weight (lbs)	TBD
Mounting	Wall-mount
Weatherproofing	IP65/NEMA Type 4
Cable feedthroughs	Flex Conduit Fittings included
Power	24VDC, supplied by BDA
RF connectors	SMA female
Operating temperature	-30° C - +50° C
Color	Red

## BDA & ORU 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
UL max input power	+10dBm



Optical Master Unit (OMU)



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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 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 devices from a single location

### Product Highlights

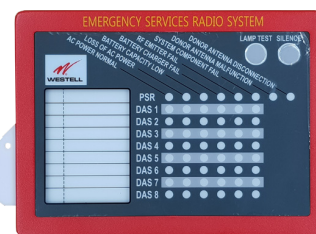
- Provides remote annunciation of alarms
- Compact, unobtrusive design
- Operates up to 3000 feet (1000 meters) from BDA
- Includes audible annunciation
- Uses single CAT5 cable

### Remote Annunciator Specifications

Dimensions (H x W x D)	6.1" x 5.1" x 1.1" in (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 (CS40-ANNUNC)
	2000 feet (CS40-DASANNUNC)



CS40-ANNUNC

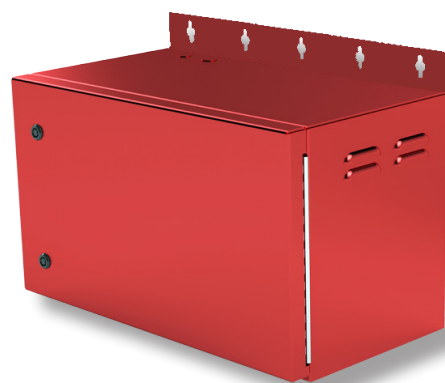


CS40-DASANNUNC

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
<b>Battery Specifications</b>	
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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