# 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.
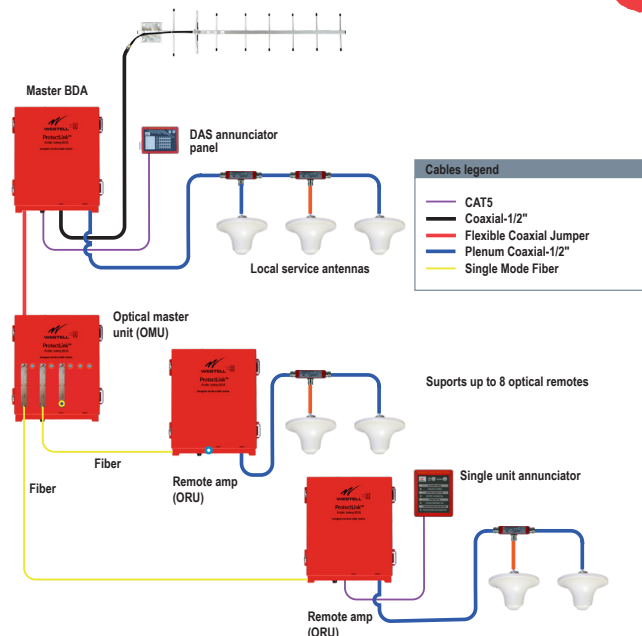
"Intelligence Built-In" has been a hallmark of Westell products, and nowhere else is that more evident than with ProtectLink DAS. With auto-discovery of new remotes, auto firmware upgrade across the entire network, auto compensation for fiber loss, we've made this product the easiest to install, most 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, class B. |
| CS40-ANNUNC | BDA Remote annunciator, for monitoring a single device. |
| CS40-DASANNUNC | DAS Remote annunciator, for monitoring all DAS units |
| **Master BDAs** | |
| 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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## BDA Electrial Specifications

| | |
|---|---|
| Main power input | 110 VAC (88-264VAC) |
| AC power consumption | OMU: xxxW max. (x.xAmps @ xxxVAC) ORMs: xxxW max. (x.xAmps @ xxxVAC) |
| 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 | <?dB |
| 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 offilters 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 |
| Optical specifications | |
|    Optical connector | SC/APC |
|    Optical link budget | 10dB |
|    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 | Cordgrips and Flex Conduit Fittings included |
| Power | -30° C - +50°24VDC, supplied by BDA |
| RF connectors | SMA female |
| Operating temperature | -30° C - +50° C |
| Color | Red |
| UL max input power | +10dBm |

## 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 |
| DL max input power | 0dBm |

**Picture of inside OMU to go here when available**

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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 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. Select the single unit annunciator to monitor a single ORU or the DAS Annunciator to monitor all devices from a single location
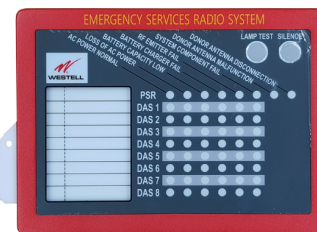
### Product Highlights

- Provides remote annunciation of alarms
- Compact, unobtrusive design
- Operates up to 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 (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 | 650 feet (200 meters) |

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 |
| 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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IBW-CS40-Series-PSDAS-DS-061621

DRAFT V.3 - 061621