

UHF Bi-Directional Amplifier (BDA)

380-520MHz

BD Series



RFI's UHF Bi-Directional Amplifier (BDA) is a compact IP-rated wall or pole mountable, RF-transparent repeater. The BDA is ideal for rebroadcasting RF coverage in confined areas such as in tunnels and mining sites as well as remote locations.

Depending on the model, it can either pass a 5MHz or 1.5MHz window in each direction in the selected frequency sub band. The BDA's RF-transparent operation is compatible with most analogue and digital technologies. Communications content is passed without demodulation and network protocol features such as encryption and over-the-air-rekeying are also passed securely.

The standard architecture of this BDA provides user-friendly, convenient and efficient in-field maintenance.

The BDA is available in standard and high power variants with optional RF over Fibre interface and multiple power supply and battery backup options.

Features:

- Analogue and Digital compatible – supports most network technologies
- Maximum +40dBm output power (1 carrier, high power model)
- Adjustable Gain of up to 84dB* (High power model)
- 5MHz or 1.5MHz Pass Bandwidth and 4MHz Minimum Tx/Rx Separation
- Compact IP-rated enclosure suits wall or pole mountable
- Multiple Power Supply Options (12 VDC, 24 VDC, 48 VDC and 90-264VAC)
- Optional RF over Fibre Interface
- Optional Battery Backup (Separate enclosure)
- Communications Port for Configuration and Monitoring



Technical Specifications

Model Number		BDxxxx-yyyy-zz						
Model Number Derivative - BDxxxx		3840	4043	4345	4547	4750	5052	UEXT
Frequency MHz		380-400	400-430	430-450	450-470	470-500	500-520	380-520**
Filtering		Internal (Duplexers)						External
Internal Duplexers	BDxxxx-yy0y-zz	5MHz passband (fixed), 4MHz guard band (min.)						N/A
	BDxxxx-yyNy-zz	1.5MHz passband (fixed), 4MHz to 5MHz guard band (fixed)						
Output Power dBm (maximum)	High Power	+40 (1 Carrier)						53-84
	Standard Power	+21 (1 Carrier)						
Gain Range dB	High Power	53-70						53-84
	Standard Power	38-67						
RF Connector Type		N(f)						
Optical Connector Type		FC / APC						
Operational Temperature Range C / F		-10° to +60° / 14° to 140°						
Power Supply Options		12VDC, 24VDC, 48VDC or 90-264VAC						
Alarm Interface		"Form C" Dry Relay Contacts Command Line Interface / Ethernet						
Finish		Powder Coated Aluminium, Stainless Steel						
Cooling		Passive (Convection)						
Environmental Protection Rating		IP65						
Chassis Earthing		Dual M6 studs						
Net Dimensions mm / in	H	620 / 24.40						
	W	450 / 17.71						
	D	270 / 10.62						
Weight Kg / lb		35 / 77.16						
Mounting		Wall Mount / Pole Mount						
RF over Fibre Options		Single Fibre (WDM), Dual Fibre (Simplex) or None						
Compliance		RoHS						

* External filtering is required for >70dB gains. Net gain is subject to the filtering loss. Please contact RFI to determine the filtering requirements.

**The operational frequency band depends on the selected external filters. The BDA supports 380-520MHz band.

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Ordering Information

Model Number	BDxxxx-yyyy-zz
Frequency	
BD3840-yyyy-zz	380-400MHz
BD4043-yyyy-zz	400-430MHz
BD4345-yyyy-zz	430-450MHz
BD4547-yyyy-zz	450-470MHz
BD4750-yyyy-zz	470-500MHz
BD5052-yyyy-zz	500-520MHz
BDUEXT-yyyy-zz	No Internal Duplexers. Requires External Filtering.
RF Power Options	
BDxxxx-0yyy-zz	Standard Power Downlink and Uplink
BDxxxx-1yyy-zz	High Power Downlink, Standard Power Uplink
BDxxxx-2yyy-zz	Standard Power Downlink, High Power Uplink
BDxxxx-3yyy-zz	High Power Downlink and Uplink
RF over Fibre	
BDxxxx-y0yy-zz	No RF over Fibre
BDxxxx-y1yy-zz	Single Fibre (WDM)
BDxxxx-y2yy-zz	Dual Fibre (Simplex)
Passband	
BDxxxx-yy0y-zz	5MHz
BDxxxx-yyNy-zz	1.5MHz
BDxxxx-yyEy-zz	Other (External Filtering)
Additional Options	
BDxxxx-yyy0-zz	No Additional Options
BDxxxx-yyyB-zz	Battery Backup
BDxxxx-yyyC-zz	Custom Specification
Power Supply	
BDxxxx-yyyy-12	12VDC
BDxxxx-yyyy-24	24VDC
BDxxxx-yyyy-48	48VDC
BDxxxx-yyyy-AC	90-264VAC