

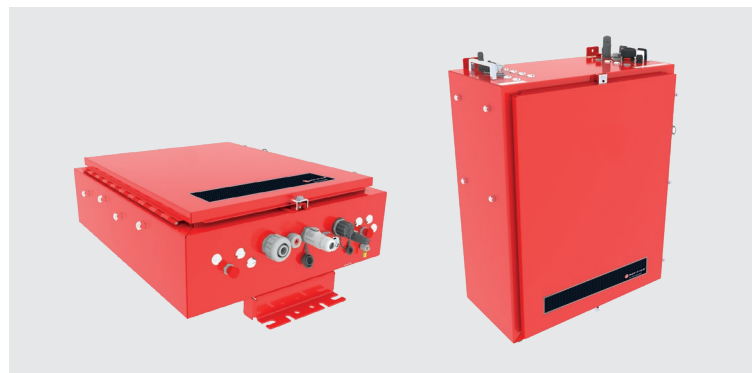
VHF & UHF DIGITAL SIGNAL BOOSTERS

136 - 174 MHz & 450 - 512 MHz

NFBDA-CA
NFBDA-EA

Product Features

- Single VHF or UHF and dual band options
- Simultaneous dual band 136 - 174 MHz & 450 - 512 MHz with multiple sub band options in UHF
- Channel Selective, software programmable, 32 channels per band and BW adjustable filters per band
- Fully digital signal boosters, FPGA based
- Auto diagnostic
- Downlink & Uplink squelch, per channel and per time slot
- User adjustable gain control, UL and DL independent, per channel
- Automatic Gain Control, per channel and per time slot
- Weatherproof enclosure, IP67/NEMA4X
- NFPA compliant
- Built in spectrum analyzer
- Preserves far-end communications
- Preserves BTS UL sensitivity
- Compatible with P25 Phase 1 and 2, TETRA, TETRAPOL, NXDN, DMR, Conventional, MPT1327, among others
- Country of Origin: USA
- 3-year warranty
- IFC & NFPA compliance; UL2524 2nd Edition Listing



Applications

- Indoor coverage: tunnels and mobile fast-deploy communication units
- Outdoor coverage: oil rigs, stadiums, dense urban areas, rural areas, cliffs

Specification	Value
Type	Digital Signal Boosters
Frequency range	VHF: 136-174 MHz / UHF: 450 - 512 MHz
Internal duplexer	Multiple bandwidth options available, see table
Number of Channels	32 per band
Channel Bandwidth	150 KHz, 100 KHz, 75 KHz, , 62.5 KHz, 50 KHz, 37.5 KHz, 25 KHz & 12.5 KHz
Number of BWA filters	2 per band
Gain, maximum*	85 dB +/- 2.0 dB
Passband ripple	+/- 3 dB
Gain, manual control	28dB range, digitally controlled in 1dB steps
Antenna isolation	Max Gain + 20dB
Composite output power, DL*	VHF: +24 dBm, UHF: +30 dBm
Composite output power, UL *	VHF & UHF: +24 dBm per band
IM and spurious generation	< -13 dBm
Simplex option	Configurable per channel
Noise figure	9.0 dB max at maximum gain
Impedance	50 Ω
Group delay	Channel Selective 150KHz, 11.5 μ S Channel Selective 100KHz, 13.5 μ S Channel Selective 75KHz, 16.0 μ S Channel Selective 62.5KHz, 18.0 μ S Channel Selective 50KHz, 21.0 μ S Channel Selective 37.5KHz, 25.5 μ S

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	Channel Selective 25KHz, 35.0μS Channel Selective 12.5KHz, 61.5μS or Band selective: 3.5 to 6.5μS, depending on BWA
Maximum input power, no damage	0 dBm (UL) -35dBm (DL)
RF Connectors	N(f) as standard
RF Input/Output impedance	50Ω
Uplink squelch function	Yes, user selectable, to avoid UL noise when no carriers present, by time slot and by channel
Self diagnostic platform	Microprocessor based
Alarms	Yes, amplifiers status, power amplifiers status, power supply failure, battery backup failure, temperature, AGC, RF overload, poor antenna isolation.
Local management and supervising	Local access via USB
RoHS compliance	Yes
Power Supply	110VAC 60Hz & +24/-48VDC
Power Consumption	100 W
Housing	IP67 / NEMA4X
Temperature range	-13° to 131° F • -25° to +55° C
Cooling	Natural convection
Dimensions	Cabinet Type "C": 27,2 x 20 x 9 in Cabinet Type "E": 30x 24 x 12 in
Mounting	Wall mounting
MTBF	<50.000 hours

* Value valid for non duplexed units. This value can change depending on the filtering insertion loss of the duplexer.

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NFBDA-	[CABINET] A	- A	[BAND]	- [FILTERING VHF]	[FILTERING UHF]	[PORT CONFIGURATION]
	Type C		V: 136-174	ND: NO DUPLEX	ND: NO DUPLEX	BLANK: BOTH ENDS
	Type E		U: 450-470	20: 2 MHz BW	07: 0.7MHz BW - Band U 450-470MHz	- DD: DONOR SIDE ONLY
			T: 470-512	35: 3.5 MHz BW	07: 0.7MHz BW - Band T 470-512MHz	- SD: SERVICE SIDE ONLY
			UT: 450-512		20: 2.0MHz BW - Band U 450-470MHz	
			VU: 136-174+450-470		20: 2.0MHz BW - Band T 470-512MHz	
			VT: 136-174+470-512		40: 4.0MHz BW - Band U 450-470MHz	
			VUT: 136-174+450-512		15: 1.5MHz BW - Band T 470-512MHz	
					50: 5.0MHz BW - Band U 450-470MHz	
					MDA: 453-454/458-459 & 460-462/465-467MHz	
					WMO: 489-491/492-494 & 496.3-497/499.3-500 MHz	
					RWC: 483.4-484.5/486.4-487.5 & 488.5-489/491.5-492 MHz	
					2020: Dual sub band 2.0MHz BW each - Band U 450-470MHz	
					0740: Dual sub band 0.7 and 4.0MHz BW each - Band U 450-470MHz	
					0707: Dual sub band 0.7MHz BW each - Band T 470-512MHz	
					1515: Dual sub band 1.5MHz BW each - Band T 470-512MHz	
					0715: Dual sub band 0.7 and 1.5MHz BW each - Band T 470-512MHz	
					2007: Dual sub band 2.0MHz BW in Band U 450-470MHz and 0.7MHz BW in Band T 470-512MHz	
					2015: Dual sub band 2.0MHz BW in Band U 450-470MHz and 1.5MHz BW in Band T 470-512MHz	
					2020: Dual sub band 2.0MHz BW in Band U 450-470MHz and 2.0MHz BW in Band T 470-512MHz	

* Cabinet type depends on band and filtering options selection

* Only one filter option per band

WARNING: This is NOT a CONSUMER device. It is designed for installation by FCC LICENSEES and QUALIFIED INSTALLERS. You MUST have an FCC LICENCE or express consent of an FCC Licensee to operate this device. Unauthorized use may result in significant forfeiture penalties, including penalties in excess of \$100,000 for each continuing violation.

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