

High Power VHF & UHF Digital Signal Boosters

136 - 174 MHz & 450 - 512 MHz

HONBDA Series

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-diagnosing
- 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, NEMA4
- 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
- IFC 2015, 2018, 2021 Edition
- NFPA 72, 2013 Edition, NFPA 1221, 2016, 2019 Edition
- UL 2524 2nd Edition Listing with SGS, Nationally Recognized Testing Laboratory (NRTL) approved by OSHA for UL2524
- Buy American Compliant: Meets the definition of Domestic Construction Material under the Buy American Act
- FCC (Federal Communications Commission)
- IC Compliant
- ISO 9001 Approved
- RoHS Compliant
- SGS-C-UL



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	100KHz, 75KHz, 62.5KHz, 50KHz, 37.5KHz, 25KHz & 12.5KHz
Number of BWA Filters	2 per band
Gain, maximum*	85 dB +/- 2.0 dB
Passband ripple	+/- 3 dB
Gain, Manual Control	30 dB range, digitally controlled in 1dB steps Antenna isolation
Antenna Isolation	Max Gain + 20dB
Composite Output Power, DL*	VHF: +30 dBm, UHF: +37 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

Specification**Value**

Group Delay	<ul style="list-style-type: none">• Channel Selective 100KHz, 12.6μS• Channel Selective 75KHz, 14.9μS• Channel Selective 62.5KHz, 16.8μS• Channel Selective 50KHz, 19.6μS• Channel Selective 37.5KHz, 24.1μS• Channel Selective 25KHz, 33.4μS• Channel Selective 12.5KHz, 62.1μS• 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	50 Ω
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 and Ethernet (web browser)
Remote Management and Supervising	Remote access via Ethernet.
RoHS Compliance	Yes
Power Supply	110VAC 60Hz or +24 VDC
Power Consumption	140W
Housing	NEMA4
Temperature Range	-13° to 131° F • -25° to +55° C
Cooling	Natural convection
Dimensions	30.0x 24.0 x 16.0 in (762.0 x 609.6 x 406.4 mm)
Mounting	Wall mounting
MTBF	<50.000 hours
FCC ID	P3TDH14-8A

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

The table below lists the labels assigned the Type, Power Supply, Frequency Band, VHF Filter BW, UHF Filter and Downlink RF Power. Each column includes the information assigned to each suffix label in the model name.

For example, in the model name, **HONBDA-A-VU22L**, the suffix label **A-VU22L** indicates the following:

- **A** = Power Supply: AC
- **VU** = Frequency Band: is 136-174 + 450-470 MHz
- **2** = VHF Filter BW is 2.0 MHz
- **2** = UHF Filter BW is 2.0 MHz
- **L** = Downlink RF Power L: VHF=+24dBm;UHF=+30dBm

HONBDA	[Power Supply]	[Frequency Band]	[VHF Filter BW] If apply	[UHF Filter] BW If apply	Duplexer Option	[Downlink RF Power]
	A: AC	V: 136-174MHz	N: Non Duplexed	N: Non Duplexed	Blank: Dual Duplex	L: VHF=+24dBm;UHF=+30dBm
	D: DC	U: 450-470MHz	2: 2.0 MHz	0: 0.7MHz	D: Donor Side Duplexed Only	H: VHF=+30dBm; UHF=+37dBm
		T: 470-512MHz	3: 3.5 MHz B	1: 1.5MHz	S: Service Side Duplexed Only	
		UT: 450-512MHz	TCY: Tracy	2: 2.0MHz		
		VU: 136-174 & 450-470MHz		4: 4.0MHz		
		VT: 136-174 & 470-512MHz		5: 5.0MHz		
		VUT: 136-174 & 450-512MHz		00: 0.7 + 0.7 MHz		
				01: 0.7 + 1.5 MHz		
				02: 0.7 + 2.0 MHz		
				04: 0.7 + 4.0 MHz		
				11: 1.5 + 1.5 MHz		
				12: 1.5 + 2.0 MHz		
				14: 1.5 + 4.0 MHz		
				22: 2.0 + 2.0 MHz		
				24: 2.0 + 4.0 MHz		
				000: 0.7+0.7+0.7 MHz		
				001: 0.7 + 0.7 + 1.5 MHz		
				011: 0.7 + 1.5+ 1.5 MHz		
				012: 0.7 + 1.5+ 2.0 MHz		
				111: 1.5 + 1.5 + 1.5 MHz		
				002: 0.7 + 0.7 + 2.0 MHz		
				112: 1.5 + 1.5 + 2.0 MHz		
				004: 0.7 + 0.7 + 4.0 MHz		
				ESG: El Segundo		
				MDA: Miami Dade		
				RWC: Redwood City		
				WMO: WMATA OTA		

NOTE: Refer to the Ordering Information Section for the model part numbers.

Table 1 - SKU Model Name Descriptions

WARNING: This is NOT a CONSUMER device. It is designed for installation by FCC LICENSEES and QUALIFIED INSTALLERS. You MUST have an FCC LICENSE 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.

Ordering Information

HONBDA-A-VNH: VHF BDA, 1W, ND, ACDC
HONBDA-A-V2H: VHF BDA, 1W, 2MHz, ACDC
HONBDA-A-V3H: VHF BDA, 1W, 3.5MHz, ACDC
HONBDA-A-VUN2H: VHF&UHF U BDA, 1W&5W, ND&2MHz, AC
HONBDA-A-VUN4H: VHF&UHF U BDA, 1W&5W, ND&4MHz, AC
HONBDA-A-VUN5H: VHF&UHF U BDA, 1W&5W, ND&5MHz, AC
HONBDA-A-VUN04H: VHF&UHF U BDA, 1W&5W, ND&0.7-4MHz, AC
HONBDA-A-VUN22N: VHF&UHF U BDA, 1W&5W, ND&2-2MHz, AC
HONBDA-A-VUNMDAH: VHF&UHF U BDA, 1W&5W, ND&MDAMHz, AC
HONBDA-A-VUT2NH: VHF&UHF BDA, 1W&5W, 2&NDMHz, AC
HONBDA-A-VU22H: VHF&UHF U BDA, 1W&5W, 2&2MHz, AC
HONBDA-A-VU24H: VHF&UHF U BDA, 1W&5W, 2&4MHz, AC
HONBDA-A-VU25H: VHF&UHF U BDA, 1W&5W, 2&5MHz, AC
HONBDA-A-VU204H: NVHF&UHF U BDA, 1W&5W, 2&0.7-4MHz, AC
HONBDA-A-VU222H: VHF&UHF U BDA, 1W&5W, 2&2-2MHz, AC
HONBDA-A-VU2MDAH: VHF&UHF U BDA, 1W&5W, 2&MDAMHz, AC
HONBDA-A-VUT3NH: VHF&UHF BDA, 1W&5W, 3&NDMHz, AC
HONBDA-A-VU32H: VHF&UHF U BDA, 1W&5W, 3&2MHz, AC
HONBDA-A-VU34H: VHF&UHF U BDA, 1W&5W, 3&4MHz, AC
HONBDA-A-VU35H: VHF&UHF U BDA, 1W&5W, 3&5MHz, AC
HONBDA-A-VU304H: VHF&UHF U BDA, 1W&5W, 3&0.7-4MHz, AC
HONBDA-A-VU322H: VHF&UHF U BDA, 1W&5W, 3&2-2MHz, AC
HONBDA-A-VU3MDAH: VHF&UHF U BDA, 1W&5W, 3&MDAMHz, AC
HONBDA-A-VUTNNH: VHF&UHF BDA, 1W&5W, ND&ND, AC
HONBDA-A-VTNOH: VHF&UHF T BDA, 1W&5W, ND&0.7MHz, AC
HONBDA-A-VTN1H: VHF&UHF T BDA, 1W&5W, ND&1.5MHz, AC
HONBDA-A-VTN2H: VHF&UHF T BDA, 1W&5W, ND&2MHz, AC
HONBDA-A-VTN00H: VHF&UHF T BDA, 1W&5W, ND&0.7-0.7MHz, AC
HONBDA-A-VTN11H: VHF&UHF T BDA, 1W&5W, ND&1.5-1.5MHz, AC
HONBDA-A-VTN02H: VHF&UHF T BDA, 1W&5W, ND&0.7-2MHz, AC
HONBDA-A-VTNRWCH: VHF&UHF T BDA, 1W&5W, ND&RWC, AC
HONBDA-A-VT20H: VHF&UHF T BDA, 1W&5W, 2&0.7MHz, AC
HONBDA-A-VT21H: VHF&UHF T BDA, 1W&5W, 2&1.5MHz, AC
HONBDA-A-VT22H: VHF&UHF T BDA, 1W&5W, 2&2MHz, AC
HONBDA-A-VT200H: VHF&UHF T BDA, 1W&5W, 2&0.7-0.7MHz, AC
HONBDA-A-VT211H: VHF&UHF T BDA, 1W&5W, 2&1.5-1.5MHz, AC
HONBDA-A-VT2RWCH: VHF&UHF T BDA, 1W&5W, 2&RWC, AC
HONBDA-A-VT30H: VHF&UHF T BDA, 1W&5W, 3&0.7MHz, AC
HONBDA-A-VT31H: VHF&UHF T BDA, 1W&5W, 3&1.5MHz, AC
HONBDA-A-VT32H: VHF&UHF T BDA, 1W&5W, 3&2MHz, AC
HONBDA-A-VT300H: VHF&UHF T BDA, 1W&5W, 3&0.7-0.7MHz, AC
HONBDA-A-VT311H: VHF&UHF T BDA, 1W&5W, 3&1.5-1.5MHz, AC
HONBDA-A-VT3RWCH: VHF&UHF T BDA, 1W&5W, 3&RWC, AC
HONBDA-A-U2H: UHF U BDA, 5W, 2MHz, AC
HONBDA-A-U4H: UHF U BDA, 5W, 4MHz, AC
HONBDA-A-U5H: UHF U BDA, 5W, 5MHz, AC
HONBDA-A-U24H: UHF U BDA, 5W, 2-4MHz, AC
HONBDA-A-UMDAH: UHF U BDA, 5W, MDAMHz, AC
HONBDA-A-U22H: UHF U BDA, 5W, 2-2MHz, AC
HONBDA-A-U04H: UHF U BDA, 5W, 0.7-4MHz, AC
HONBDA-A-UTNH: UHF BDA, 5W, ND, AC
HONBDA-A-UT02H: UHF BDA, 5W, 0.7-2MHz, AC
HONBDA-A-UT12H: UHF BDA, 5W, 1.5-2MHz, AC
HONBDA-A-UT22H: UHF BDA, 5W, 2-2MHz, AC
HONBDA-A-UT002H: UHF BDA, 5W, 0.7-0.7-2MHz, AC
HONBDA-A-UTMDA0H: UHF BDA, 5W, 0.7-MDAMHz, AC
HONBDA-A-T0H: UHF T BDA, 5W, 0.7MHz, AC
HONBDA-A-T1H: UHF T BDA, 5W, 1.5MHz, AC
HONBDA-A-T2H: UHF T BDA, 5W, 2MHz, AC
HONBDA-A-T00H: UHF T BDA, 5W, 0.7-0.7MHz, AC
HONBDA-A-T01H: UHF T BDA, 5W, 0.7-1.5MHz, AC
HONBDA-A-T11H: UHF T BDA, 5W, 1.5-1.5MHz, AC
HONBDA-A-T12H: UHF T BDA, 5W, 1.5-2MHz, AC

HONBDA-A-TRWCH: UHF T BDA, 5W, RWC, AC
HONBDA-A-TWMOH: UHF T BDA, 5W, WMO, AC
HONBDA-D-VNH: DIGITAL SIGNAL BOOSTER.VHF 136-174MHz, +30dBm, 32 filters +2 Adj sub bands, NFPA, class A, DC, No Internal Duplexer, UL2524 2nd Edition Listed HONEYWELL BDA
HONBDA-D-V2H: DIGITAL SIGNAL BOOSTER.VHF 136-174MHz, +30dBm, 32 filters +2 Adj sub bands, NFPA, class A, DC, 2MHz BW internal Duplexer, UL2524 2nd Edition Listed HONEYWELL BDA
HONBDA-D-V3H: DIGITAL SIGNAL BOOSTER.VHF 136-174MHz, +30dBm, 32 filters +2 Adj sub bands, NFPA, class A, DC, 3.5MHz BW internal Duplexer, UL2524 2nd Edition Listed HONEYWELL BDA
HONBDA-A-V2DH: DIGITAL SIGNAL BOOSTER.VHF 136-174MHz, +30dBm, 32 filters +2 Adj sub bands, NFPA, class A, AC & DC, 2MHz BW internal Duplexer Donor side only, UL2524 2nd Edition Listed HONEYWELL BDA
HONBDA-D-V2DH: DIGITAL SIGNAL BOOSTER.VHF 136-174MHz, +30dBm, 32 filters +2 Adj sub bands, NFPA, class A, DC, 2MHz BW internal Duplexer Donor side only, UL2524 2nd Edition Listed HONEYWELL BDA
HONBDA-A-V3DH: DIGITAL SIGNAL BOOSTER.VHF 136-174MHz, +30dBm, 32 filters +2 Adj sub bands, NFPA, class A, AC & DC, 3.5MHz BW internal Duplexer Donor side only, UL2524 2nd Edition Listed HONEYWELL BDA
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HONBDA-A-V2SH: DIGITAL SIGNAL BOOSTER.VHF 136-174MHz, +30dBm, 32 filters +2 Adj sub bands, NFPA, class A, AC & DC, 2MHz BW internal Duplexer Serving side only, UL2524 2nd Edition Listed HONEYWELL BDA
HONBDA-D-V2SH: DIGITAL SIGNAL BOOSTER.VHF 136-174MHz, +30dBm, 32 filters +2 Adj sub bands, NFPA, class A, DC, 2MHz BW internal Duplexer Service side only, UL2524 2nd Edition Listed HONEYWELL BDA
HONBDA-A-V3SH: DIGITAL SIGNAL BOOSTER.VHF 136-174MHz, +30dBm, 32 filters +2 Adj sub bands, NFPA, class A, AC & DC, 3.5MHz BW internal Duplexer Serving side only, UL2524 2nd Edition Listed HONEYWELL BDA
HONBDA-D-V3SH: DIGITAL SIGNAL BOOSTER.VHF 136-174MHz, +30dBm, 32 filters +2 Adj sub bands, NFPA, class A, DC, 3.5MHz BW internal Duplexer Service side only, UL2524 2nd Edition Listed HONEYWELL BDA
HONBDA-A-T0DH: DIGITAL SIGNAL BOOSTER.UHF 470-512 MHz, +37dBm, 32 filters +2 Adj sub bands, NFPA, class A, AC, 0.7MHz BW internal Duplexer Donor side only, UL2524 2nd Edition Listed HONEYWELL BDA
HONBDA-A-T1DH: DIGITAL SIGNAL BOOSTER.UHF 470-512 MHz, +37dBm, 32 filters +2 Adj sub bands, NFPA, class A, AC, 1.5MHz BW internal Duplexer Donor side only, UL2524 2nd Edition Listed HONEYWELL BDA
HONBDA-A-T2DH: DIGITAL SIGNAL BOOSTER.UHF 470-512 MHz, +37dBm, 32 filters +2 Adj sub bands, NFPA, class A, AC, 2MHz BW internal Duplexer Donor side only, UL2524 2nd Edition Listed HONEYWELL BDA
HONBDA-A-T0SH: DIGITAL SIGNAL BOOSTER.UHF 470-512 MHz, +37dBm, 32 filters +2 Adj sub bands, NFPA, class A, AC, 0.7MHz BW internal Duplexer Serving Side only, UL2524 2nd Edition Listed HONEYWELL BDA
HONBDA-A-T1SH: DIGITAL SIGNAL BOOSTER.UHF 470-512 MHz, +37dBm, 32 filters +2 Adj sub bands, NFPA, class A, AC, 1.5MHz BW internal Duplexer Serving side only, UL2524 2nd Edition Listed HONEYWELL BDA

High Power VHF & UHF Digital Signal Boosters

HONBDA Series

136 - 174 MHz & 450 - 512 MHz

HONBDA-D-VUN2SH: DIGITAL SIGNAL BOOSTER DUAL BAND. VHF 136-174MHz & UHF 450-470MHz. VHF: +30dBm, UHF: +37dBm, 32filters + 2 Adj sub band per Band, NFPA, DC, VHF: No Internal Duplexer, UHF: 2MHz BW Internal Duplexer, Serving Side only, UL2524 2nd Edition Listed HONEYWELL BDA

HONBDA-D-VUN4H: DIGITAL SIGNAL BOOSTER DUAL BAND. VHF 136-174MHz & UHF 450-470MHz. VHF: +30dBm, UHF: +37dBm, 32filters + 2 Adj sub band per Band, NFPA, DC, VHF: No Internal Duplexer, UHF: 4MHz BW Internal Duplexer, UL2524 2nd Edition Listed HONEYWELL BDA

HONBDA-D-VUN4DH: DIGITAL SIGNAL BOOSTER DUAL BAND. VHF 136-174MHz & UHF 450-470MHz. VHF: +30dBm, UHF: +37dBm, 32filters + 2 Adj sub band per Band, NFPA, DC, VHF: No Internal Duplexer, UHF: 4MHz BW Internal Duplexer, Donor Side only, UL2524 2nd Edition Listed HONEYWELL BDA

HONBDA-D-VUN4SH: DIGITAL SIGNAL BOOSTER DUAL BAND. VHF 136-174MHz & UHF 450-470MHz. VHF: +30dBm, UHF: +37dBm, 32filters + 2 Adj sub band per Band, NFPA, DC, VHF: No Internal Duplexer, UHF: 4MHz BW Internal Duplexer, Serving Side only, UL2524 2nd Edition Listed HONEYWELL BDA

HONBDA-D-VUN5H: DIGITAL SIGNAL BOOSTER DUAL BAND. VHF 136-174MHz & UHF 450-470MHz. VHF: +30dBm, UHF: +37dBm, 32filters + 2 Adj sub band per Band, NFPA, DC, VHF: No Internal Duplexer, UHF: 5MHz BW Internal Duplexer, UL2524 2nd Edition Listed HONEYWELL BDA

HONBDA-D-VUN5DH: DIGITAL SIGNAL BOOSTER DUAL BAND. VHF 136-174MHz & UHF 450-470MHz. VHF: +30dBm, UHF: +37dBm, 32filters + 2 Adj sub band per Band, NFPA, DC, VHF: No Internal Duplexer, UHF: 5MHz BW Internal Duplexer, Donor Side only, UL2524 2nd Edition Listed HONEYWELL BDA

HONBDA-D-VUN5SH: DIGITAL SIGNAL BOOSTER DUAL BAND. VHF 136-174MHz & UHF 450-470MHz. VHF: +30dBm, UHF: +37dBm, 32filters + 2 Adj sub band per Band, NFPA, DC, VHF: No Internal Duplexer, UHF: 5MHz BW Internal Duplexer, Serving Side only, UL2524 2nd Edition Listed HONEYWELL BDA

HONBDA-D-VUNMDAH: DIGITAL SIGNAL BOOSTER DUAL BAND. VHF 136-174MHz & UHF 450-470MHz. VHF: +30dBm, UHF: +37dBm, 32filters + 2 Adj sub band per Band, NFPA, DC, VHF: No Internal Duplexer, UHF: 453-454/458-459 & 460-462/465-467MHz internal Duplexer, UL2524 2nd Edition Listed HONEYWELL BDA

HONBDA-D-VUNMDADH: DIGITAL SIGNAL BOOSTER DUAL BAND. VHF 136-174MHz & UHF 450-470MHz. VHF: +30dBm, UHF: +37dBm, 32filters + 2 Adj sub band per Band, NFPA, DC, VHF: No Internal Duplexer, UHF: 453-454/458-459 & 460-462/465-467MHz internal Duplexer, Donor Side only, UL2524 2nd Edition Listed HONEYWELL BDA

HONBDA-D-VUNMDASH: DIGITAL SIGNAL BOOSTER DUAL BAND. VHF 136-174MHz & UHF 450-470MHz. VHF: +30dBm, UHF: +37dBm, 32filters + 2 Adj sub band per Band, NFPA, DC, VHF: No Internal Duplexer, UHF: 453-454/458-459 & 460-462/465-467MHz internal Duplexer, Serving Side only, UL2524 2nd Edition Listed HONEYWELL BDA

HONBDA-D-VUT2NH: DIGITAL SIGNAL BOOSTER DUAL BAND. VHF 136-174MHz & UHF 450-512MHz. VHF: +30dBm, UHF: +37dBm, 32filters + 2 Adj sub band per Band, NFPA, DC, VHF: 2MHz BW Internal Duplexer, UHF: No Internal Duplexer, UL2524 2nd Edition Listed HONEYWELL BDA

HONBDA-D-VUT3NH: DIGITAL SIGNAL BOOSTER DUAL BAND. VHF 136-174MHz & UHF 450-512MHz. VHF: +30dBm, UHF: +37dBm, 32filters + 2 Adj sub band per Band, NFPA, DC, VHF: 3.5MHz BW Internal Duplexer, UHF: No Internal Duplexer, UL2524 2nd Edition Listed HONEYWELL BDA

HONBDA-D-VUTNNH: DIGITAL SIGNAL BOOSTER DUAL BAND. VHF 136-174MHz & UHF 450-512MHz. VHF: +30dBm, UHF: +37dBm, 32filters + 2 Adj sub band per Band, NFPA, DC, VHF: No Internal Duplexer, UHF: No Internal Duplexer, UL2524 2nd Edition Listed HONEYWELL BDA

HONBDA-A-U5DH: DIGITAL SIGNAL BOOSTER. UHF 450-470 MHz, +37dBm, 32 filters +2 Adj sub bands, NFPA, class A, AC, 5MHz BW internal Duplexer Donor side only, UL2524 2nd Edition Listed HONEYWELL BDA

This document is not intended to be used for installation purposes.
We try to keep our product information up-to-date and accurate.
We cannot cover all specific applications or anticipate all requirements.
All specifications are subject to change without notice.

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Fiplex

2101 NW 79th Avenue
Miami, FL 33122
305 884-8991
www.fiplex.com

