HIGH POWER VHF & UHF DIGITAL SIGNAL BOOSTERS
136 - 174 MHz & 450 - 512 MHz

DH14 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 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
- 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
- UL2524 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

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	30 dB range, digitally controlled in 1dB steps
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
Group delay	Channel Selective 150KHz, 11.5µS Channel Selective 100KHz, 13.5µS Channel Selective 75KHz, 16.0µS Channel Selective 62.5KHz, 18.0µS Channel Selective 50KHz, 21.0µS Channel Selective 37.5KHz, 25.5µS Channel Selective 25KHz, 35.0µS Channel Selective 12.5KHz, 61.5µS or Band selective: 3.5 to 6.5µS, depending on BWA

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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 and Ethernet (web browser)
Remote management and supervising	Remote access via Ethernet.
RoHS compliance	Yes
Power Supply	110VAC 60Hz or +24/-48VDC
Power Consumption	130 W
Housing	IP67 / NEMA4X
Temperature range	-13º to 131º F • -25º to +55º C
Cooling	Natural convection
Dimensions	30x 24 x 16 in
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.

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DH14 E [PWR]	- A [BAND]	- [FILTERING VHF]	[FILTERING UHF]	-3037
A: AC	**V:** 136-174	**ND:** NO DUPLEX	**ND**: NO DUPLEX	
D: DC	**U:** 450-470	**20:** 2 MHz BW	**07**: 0.7MHz BW - Band U 450-470MHz	
	T: 470-512	**35:** 3.5 MHz BW	**07**: 0.7MHz BW - Band T 470-512MHz	
	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 L 380-430MHz	
			50: 5.0MHz BW - Band U 450-470MHz	
			MDA: 453-454/458-459 & 460-462/465-467MHz	
			WMO: 489.5-491/492.5-494 & 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.