

OVER THE AIR PUBLIC SAFETY CENTRIC DAS 136 - 512 MHz

DH14 Series

Product Features

- Specifically designed for LMR and Public Safety Applications
- Redundancy features
- Field expandable
- No need of "Front End BDA" or "POI", reduced infrastructure cost
- Channelized
- Programmable uplink squelch (per channel and time slot) for reduced UL noise contribution
- Software programmable channel selective or band selective operation, suitable for highly congested RF environments
- Centralized operation, single point of access
- AGC per channel and time slot
- Supports Over The Air (OTA) operation
- NFPA Compliant
- Preserves the far end communications and protects BTS Rx sensitivity
- Works with Public Safety Centric DAS Remotes (DH Series)



Applications

- For P25 Ph1, P25 Ph2, DMR, TETRA, TETRAPOL, C2000, NXDN and Conventional Systems
- Indoor: tunnels, buildings, subways, airports, among others
- Outdoor: stadiums, canyons, dense urban areas, remote rural towns

Specifications

Specifications	Value
Fiber Optic	Single mode
WDM	Yes
Optical wavelengths	1310 / 1550 nM
Operational bands	136 - 174 MHz & 450 - 512 MHz
Number of channel filters	64 channels + 4 Bandwidth Adjustable per band
Available channel filter BW	150 KHz, 100 KHz, 75 KHz, , 62.5 KHz, 50 KHz, 37.5 KHz, 25 KHz & 12.5 KHz
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
Supported Fiber Loss	20dBo max
Optical connectors	LC /APC compatible with LC/UPC
Optical return loss	>45dB
RF Input/Output Impedance	50Ω
RF connectors	N(f)
Overall gain (Master + Remote) *	80dB regardless fiber lenght
Noise figure	<9dB

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Master Unit Electrical and Mechanical Specifications	Value
DL manual attenuator	20dB in 1dB steps
Maximum UL output power *	+24 dBm per band
UL IM and spurious generation	< -13dBm
UL manual attenuator	20dB in 1dB steps
Max Operational DL Input Power	-35dBm
Number of optical ports	8
Power Supply	110VAC 60Hz & +24/-48VDC
Power consumption	80W
Housing	IP67 / NEMA4X
Environmental	EN 300 019 4.1
Temperature range	-22° to +131° F • -30° to +55° C
Humidity	<95% non condensing
Dimensions	Cabinet Type "C": 27,2 x 20 x 9 in Cabinet Type "E": 30x 24 x 12 in
MTBF	>50,000 hours

Remote Unit Electrical and Mechanical Specifications	Value
Composite Output Power, DL *	VHF: 24 dBm UHF: 30 dBm
DL IMD and spurious generation	< -13 dBm
Number of optical ports	1 for MU redundancy FO ports available as optional
UL maximum input power	0dBm
UL noise reduction	UL squelch per channel, programmable
Manual attenuator	20dB in 1 dB steps +/- 0.5 dB
Power Supply	110VAC 60Hz & +24/-48VDC
Power Consumption	100W
Housing	IP67 / NEMA4X
Environmental	EN 300 019 4.1
Temperature range	-22° to +131° F • -30° to +55° C
Humidity	< 95% non condensing
Dimension and weight	Cabinet Type "C": 27,2 x 20 x 9 in Cabinet Type "E": 30x 24 x 12 in
MTBF	> 50.000 hours

Control and Alarms	Value
Alarms report	Via Master Unit Local: USB (POWER STATUS, MU STATUS, RM STATUS) Remote: SNMP (Ethernet)
Master Unit Configuration	Local: USB or Ethernet (Web browser) Remote: Via SNMP or Web browser

Normative	Value
Standards	ITU T G 652 EN60825-1
FCC	FCC, CFR 47, Part 15, Subpart B, Class A digital devices
ETSI	EN301489-1; EN301489-18 EN60950-1; TS 101 789-1

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

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DH14 [CABINET]	A	- [TYPE]	- A [BAND]	- [FILTERING VHF]	[FILTERING UHF]
Type C		M: Master	V: 136-174	ND: NO DUPLEX	ND: NO DUPLEX
Type E		R1: Remote 1 FO	L: 380-430	20: 2 MHz BW	07: 0.7MHz BW - Band U 450-470MHz
		R2: Remote 2 FO	U: 450-470	35: 3.5 MHz BW	07: 0.7MHz BW - Band T 470-512MHz
			T: 470-512	1A: 1 x ACF	20: 2.0MHz BW - Band U 450-470MHz
			UT: 450-512	2A: 2 x ACF	20: 2.0MHz BW - Band T 470-512MHz
			VU: 136-174+450-470		40: 4.0MHz BW - Band U 450-470MHz
			VT: 136-174+470-512		15: 1.5MHz BW - Band T 470-512MHz
			VUT: 136-174+450-512		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: 489-491/492-494 & 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
					1A: 1 x ACF
					2A: 2 x ACF

* Cabinet type depends on band and filtering options selection

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* Only one filter option per band