

VHF DIGITAL SIGNAL BOOSTERS

137 - 174 MHz

DH124

Product Features

- Channel Selective, software programmable
- Fully digital signal boosters, FPGA based
- Auto diagnostic
- 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



Digital Signal Boosters



Applications

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

Specification

Value

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Type	Digital Signal Boosters (without Antenna Feedback Cancellation)
Frequency range	136 - 174 MHz
Passband BW. min	Channel Selective (90KHz, 45KHz, 30KHz, 20KHz, and 15KHz BW)
Number of Passband	Channel Selective (90KHz, 45KHz, 30KHz, 20KHz, and 15KHz BW), 1 to 32
Gain, maximum	80 dB
Passband ripple	+/- 2.0 dB
Gain, manual control	28dB range, digitally controlled in 1dB steps
Antenna isolation	Max Gain + 15 dB
Composite output power, DL	+24 dBm composite
Composite output power, UL	+24 dBm composite
IM and spurious generation	< -13 dBm
Simplex option	Configurable
Noise figure	7.0 dB max at maximum gain
Impedance	50 Ω
Group delay	Channel Selective 90KHz, 14μS Channel Selective 45KHz, 23μS Channel Selective 30KHz, 32μS Channel Selective 20KHz, 45μS Channel Selective 15KHz, 55μS
Maximum input power, no damage	0 dBm (UL) -35dBm (DL)
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 (Channel Selective model only)
Self diagnostic platform	Microprocessor based

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Specification	Value
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. Wireless modem, SNMP as optional.
RoHS compliance	Yes
AC Supply	110VAC, 50/60 Hz
Power Consumption	170 W
DC Supply	+24VDC & -48VDC
Housing	IP67 / NEMA4X
Temperature range	-13° to 131° F • -25° to +55° C
Cooling	Natural convection
Dimension	20.2 x 18.2 x 9 inches • 514 x 462 x 230 mm
Weight	55 lbs • 25 kg
Mounting	Wall mounting
MTBF	<50,000 hours

MODEL	NFPA	RCG	110-220VAC	+24VDC & -48VDC	INTERNAL DPX, 2MHz BW, 3MHz min BANDGUARD	4 PORTS	137 - 164 MHz	155 - 174 MHz
DH124-004	X		X		X		X	
DH124-005	X			X	X		X	
DH124-010	X	X	X		X		X	
DH124-011	X	X		X	X		X	
DH124-015	X		X			X	X	
DH124-017	X			X		X	X	
DH124-022	X	X	X			X	X	
DH124-023	X	X		X		X	X	
DH124-028	X		X		X			X
DH124-029	X			X	X			X
DH124-034	X	X	X		X			X
DH124-035	X	X		X	X			X
DH124-040	X		X			X		X
DH124-041	X			X		X		X
DH124-046	X	X	X			X		X
DH124-047	X	X		X		X		X

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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.

