

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

| Specification | Value |
|--------------------------------|---|
| 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.

