

# VHF DIGITAL SIGNAL BOOSTERS

## 155 - 174 MHz

**DH124-040**  
**DH124-041**

### 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



### 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 (without Antenna Feedback Cancellation)
Frequency range	155 - 174 MHz
Passband BW	2MHz max
Internal Duplexer	No
Number of Channels	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	9.0 dB max at maximum gain
Impedance	50 $\Omega$
Group delay	Channel Selective 90KHz, 14 $\mu$ S Channel Selective 45KHz, 23 $\mu$ S Channel Selective 30KHz, 32 $\mu$ S Channel Selective 20KHz, 45 $\mu$ S Channel Selective 15KHz, 55 $\mu$ S
Maximum input power, no damage	0 dBm (UL) -35dBm (DL)
Connectors	N(f) as standard
RF Input/Output impedance	50 $\Omega$
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

# VHF DIGITAL SIGNAL BOOSTERS

## 155 - 174 MHz

**DH124-040**  
**DH124-041**

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
Power Supply	see table
Power Consumption	170 W
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

Product Code	Class	Config.	Composite Output Power	Power Supply Option
DH124-040	A - 32 channels UL 32 channels DL	01	+ 24dBm per band	AC
DH124-041	A - 32 channels UL 32 channels DL	01	+ 24dBm per band	DC