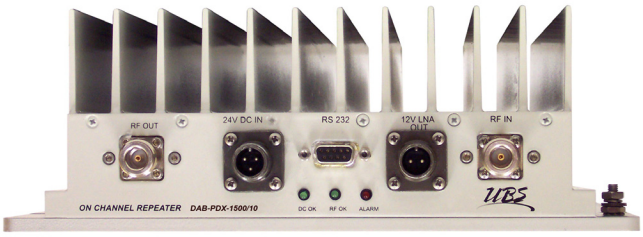
Unique Broadband Systems Ltd.

DAB L-Band Gap Filler *(On-Channel Repeater)*

Models: DAB-PDX-1500/10
DAB-PDX-1500/50
DAB-PDX-1500/100

Product Features

- ***Frequency Range: 1452 MHz - 1492 MHz***
- ***Available Output Power: 1 Watt, 4 Watts and 10 Watts RMS***



Description and Application

The innovative DAB L-Band Gap Filler (On Channel Repeater) is the latest in the new product range being released by UBS to serve the DAB L-Band transmission market. This outdoor unit is completely self contained and only requires connections to receive and transmit antennas as well as the main power supply.

The primary application of the DAB L-Band Gap Filler is the propagation of a seamless DAB COFDM signal, where geographical and physical impediments have affected network coverage, creating poor or non-existent signal reception ("gaps"). The Gap Filler is engineered to eliminate network coverage deficiencies by delivering the expected quality of signal to DAB receivers. Whether the unit is employed to increase coverage in an urban environment or provide coverage in a geographically challenged area, its performance is truly stunning.

DAB L-Band signals received by this wide bandwidth unit are filtered and amplified to an output power level of 1 Watt, 4 Watts or 10 Watts RMS with minimal distortion. This is achieved by using an LDMOS transistor operating in Class A/B mode. The output power is monitored closely and is maintained at the set level, as long as the received signal is within the specified range.

The DAB L-Band Gap Filler comes pre-configured and should require no further adjustment for most installations. Via the RS232 serial port, the user can monitor the output power, internal temperature, received and transmitted signal levels and gain control values through a GUI application installed on a PC or laptop computer.

At it is designed for outdoor, unattended operation, the unit is easily installed in a variety of locations (e.g. roof tops, utility poles, etc.), keeping the cost of ownership to an absolute minimum. The Gap Filler enclosure is constructed out of high quality aluminum casing, providing reliable operation within a temperature range of -20°C to +55°C and relative humidity up to 100%.

The DAB L-Band Gap Filler covers the full range of DAB channels from LA to LW and from L1 to L23. The user must specify the required frequency range or the DAB channel/group of channels when ordering the Gap Fillers.

As our world becomes more mobile, additional services come on line and greater coverage is required. This product will allow you to serve your customers in the most cost effective manner, while keeping your capital costs to a minimum, therefore offering the best possible opportunity for strong revenue growth.

Optional Remote Control

The DAB L-Band Gap Filler includes an optional SNMP remote control feature, supported by an additional integrated processor and a GPRS/GSM cellular modem. This version includes battery back-up for the processor and modem.

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Product Specifications (specifications are subject to change without notice)

Parameters	*DAB-PDX-1500/10*	*DAB-PDX-1500/50*	*DAB-PDX-1500/100*
Digital Output Power	1 Watt (+30 dBm) typ.	4 Watts (+36 dBm) typ.	10 Watts (+40 dBm) typ.
Small Signal Gain	85 dB min.	91 dB min.	95 dB min.
Power Input	20 - 60 VDC (30 VA)	20 - 60 VDC (60 VA)	20 - 60 VDC (75 VA)

RF Input

Connector	N-type (F), 50 Ω
Frequency Range	1452 MHz - 1492 MHz
Level	-55 dBm to -10 dBm
AGC Range	45 dB
Noise Figure	3 dB

RF Output

Connector	N-type (F), 50 Ω
Frequency Range	1452 MHz - 1492 MHz
PA Gain Flatness	±1 dB max.
RF Output Power Stability within Input Power Range	±0.5 dB max.
Spectral Regrowth at Channel Edge	-35 dBc typ. (at rated output power)
Spectral Regrowth Degradation at Rated Maximum Power (1474 MHz, ACG ON)	3 dB typ. (Pin = -30 dBm @ -35 dBc) 2 dB typ. (Pin = -30 dBm @ -33 dBc) 1 dB typ. (Pin = -30 dBm @ -31 dBc)
In-Band Spurious Products	-60 dBc max.
SSB Phase Noise @ 10 kHz offset	-100 dBc/Hz min.

Interfaces

Control Interface	RS232: DB9 (F) - Gap Filler GUI
DC In	ITT Cannon MS3106E10SL-3P
LNA Out	ITT Cannon MS3102R10SL-4P

Environmental

Operating Temperature	-20°C to +55°C (-4°F to +131°F)
Relative Humidity	100%

Mechanical

Enclosure Construction	High quality aluminum casing
Dimensions (W x H x D)	270mm x 330mm x 90mm (10.6" x 13" x 3.5")
Weight	7 kg (15.4 lbs.)

Optional Features

DAB Channel Bandpass Filter	Can be installed in the unit for a specific DAB channel or group of channels
SNMP Remote Control	Internal processor offering full control and remote monitoring using SNMP
SNMP Control Features	•MIBs supplied for customers to integrate into their own control and monitoring system •Traps are generated for each alarm •Traps could be masked and/or delayed (user configurable) •Capability to download event/alarm log •Capability to upload/download system configuration
SNMP Interface	GPRS / GSM Modem
Battery Back-up	Powers processor and modem to allow reporting of a power failure
Pole Mount	Pole mount kit is available upon request

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