

Features:

- Two slots per channel card standard
- Optional four, eight, sixteen slot per channel available
- Downward compatible to legacy analog channels
- Frequency configuration is independent of channel card location
- For trunked systems second channel can be programmed for control channel
- P25 Phase 2 compatible



Totally redundant therefore a channel card failure does not affect the other channels

LED front panel annunciation enables the user to see keying activity for UL and DL

AGC guarantees constant output for all channels

Programmable filter parameters enable the reduction of TD

User selectable keying protocol for CD, PL or DPL codes

One 3U rack enables modular solution for Public Safety spectrum

GUI enables the setting for all parameters of the DSP



The Model 1465DSP Channel Card is the latest in a line of In-Building Wireless solutions that has evolved over the last forty years.

The Channel Card is a Software Defined Radio (SDR) that can process up to sixteen channels.

The filter parameters of each channel can be independently selected to optimize the Adjacent Channel Time Delay Interference (TDI).

The FPGA-based design allows for the implementation of a number of Finite Impulse Response (FIR) and Infinite Impulse Response (IIR) filters, including Cauer, Butterworth, and Tchbecheff. All filters can be configured with the number of poles required to provide optimum rejection, within the constraints of bandwidth and filter roll-off, to reduce or eliminate TDI.

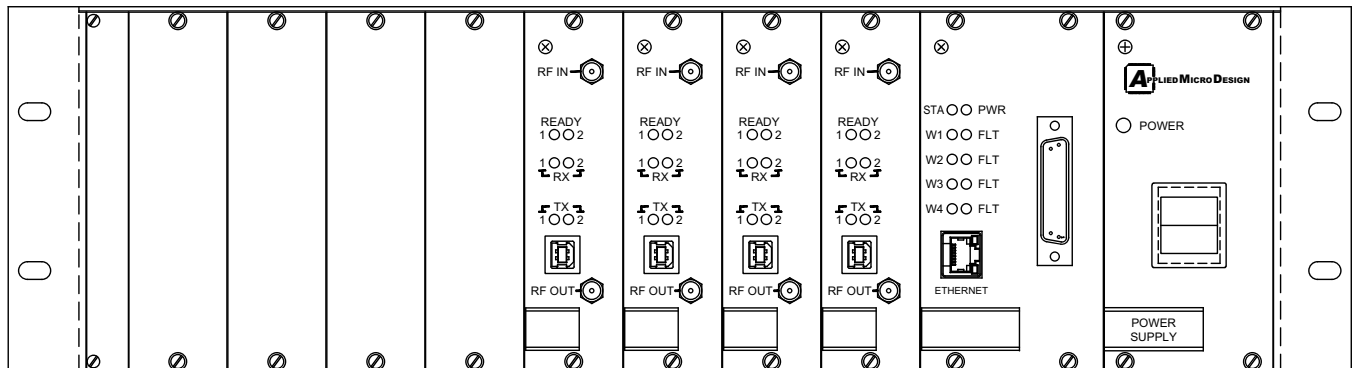
Model 1465DSP is a two slot solution to channelized filtering for DAS systems. Two slot receptions enable the filtering, AGC and Key Line control in two 12.5 kHz channels on one channel card. TDMA and FDMA formats can be supported.

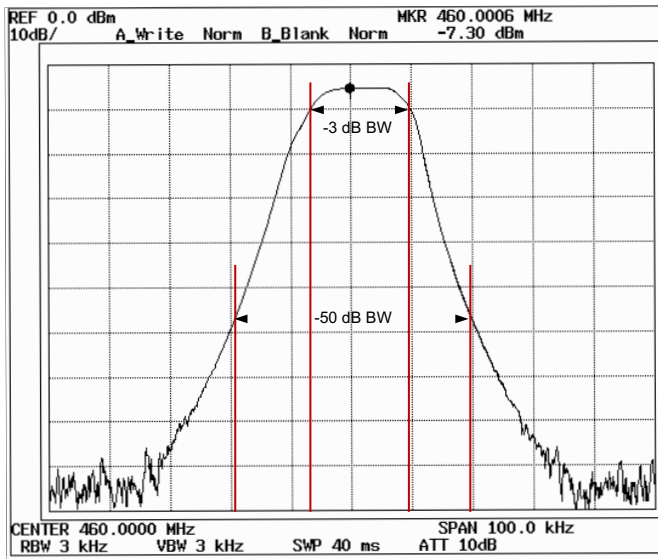
Parameters are adjustable using a Graphical User Interface (GUI) that runs on a laptop tied to the USB front panel connector. The GUI enables the setting of center frequency, bandwidth, threshold of operation, and Keying (CD, PL, or DPL). All channel parameters are stored in non-volatile memory and the board will power up in the last programmed configuration. The GUI will run on any laptop under Windows XP or later versions.

Designers can configure the 19" rack with any mix of VHF or UHF frequencies. Channels can be selected to provide redundancy, so the failure of one card does not cause the loss of all channels.



rev 3 2015





The Model Number has the format outlined below.

1465DSP-C-S-P

where C is the number of Channel Cards (1 to 6)
 S is the number of Power Supplies (1 or 2)
 P indicates Processor Card (P or blank)

For example, Model 1465DSP-4-2-P has four channel cards, two power supply cards, and a Processor Card installed in the chassis.

Specifications (all parameters are software defined)

Frequency Range **

Downlink	Uplink
453 - 454 MHz	458 - 459 MHz
460 - 461 MHz	455 - 456 MHz
464 - 465 MHz	469 - 470 MHz
470 - 471 MHz	473 - 474 MHz

Number of Channels

2 (standard); optional 4, 8, 16 available

Channel Bandwidth

12.5 kHz or 25 kHz

Channel Spacing

12.5 kHz or 25 kHz

RF Frequency Accuracy

tracks input signal exactly

Adjacent Channel Selectivity

50 dB @ +/- 17.5 kHz

Time Delay

< 60 microseconds

Variation of Output Power with Input Level

+0, -1.0 dB in either direction

AGC Time Constant

< 100 microseconds

AGC Control Range

+ 80 dB

Maximum passband Ripple (Full Band)

2 dB (across full band)

Maximum Passband Ripple (Segment)

0.1 dB (across any 100 kHz segment)

IP3

+20 dBm

Keying

PL, DPL, Carrier-Detect (computer control)

Duty Cycle

Continuous

Operating Temperature Range

-20 °C to +60 °C

Input / Output Impedance

50 Ohms

Input / Output VSWR

1.35:1, worst-case

Input / Output Connectors

SMA

Input Power

95 - 132 VAC, 45 - 64 Hz

** - VHF, 800 MHz, and 900 MHz also available

