

### Features:

- Same physical design for all 5 bands
- alarm and control via contact closure or Ethernet
- Modern design using digital technology for alarm and control
- DSP processing enables channel dynamics of threshold, channel frequency, and bandwidth.
- Synergistic design with tunnel processing
- VHF tunnel design provides a Dynamic Range > 100 dB
- Low power consumption



Thirty years of custom designed In-Building Wireless products is reflected in this high linearity, power efficient RF power amplifier. Merging of micro controller to the latest in RF products produces the AMDI's 1465PA. The 1465PA channel amplifier is a high-linearity, multi-carrier amplifier for DAS (Distributed Antenna System) applications. The unit is available in single and dual-amplifier configurations. Each amplifier has its own processor board, alarms, panel indicators and power supply. The processor board controls the enable signal to the amplifier and monitors forward power, reverse power, current, fan status and heat sink temperature.

At the Head End the UL design receives the signals from remote locations. Each location houses five spectrum bands covering VHF to 800 MHz. A unique limiter design for the VHF processing produces the wide dynamic range for any of the five VHF bands in the system.

DSP HE UL enables the user to adjust, add and change channel bands in all of the five bands in the system.

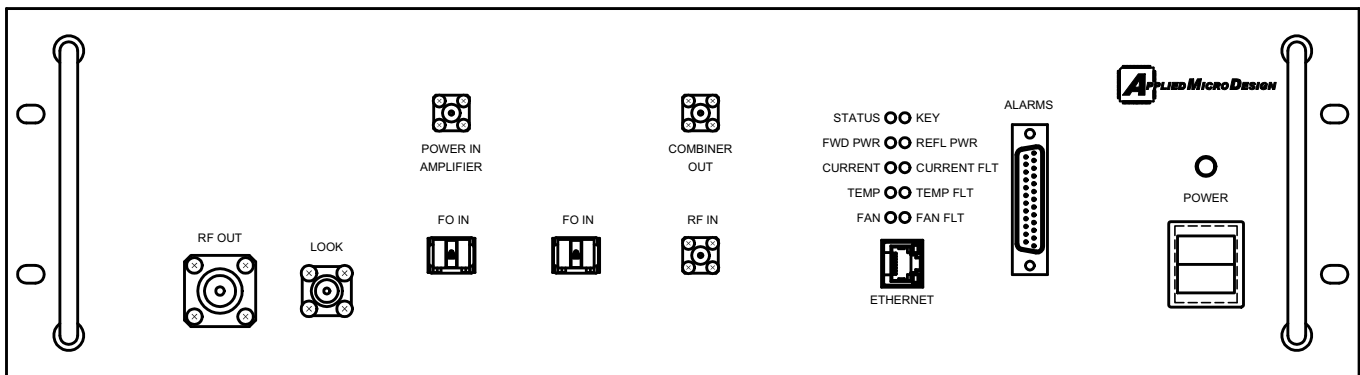
To achieve a wide dynamic amplitude range AMDI adds a limiter to the DSP modules. For channels that provide for portables and high power mobile units the cascade of the limiter and DSP produces an amplitude Dynamic Range that exceeds 100 dB. All thresholds are digitally controlled locally or remotely.

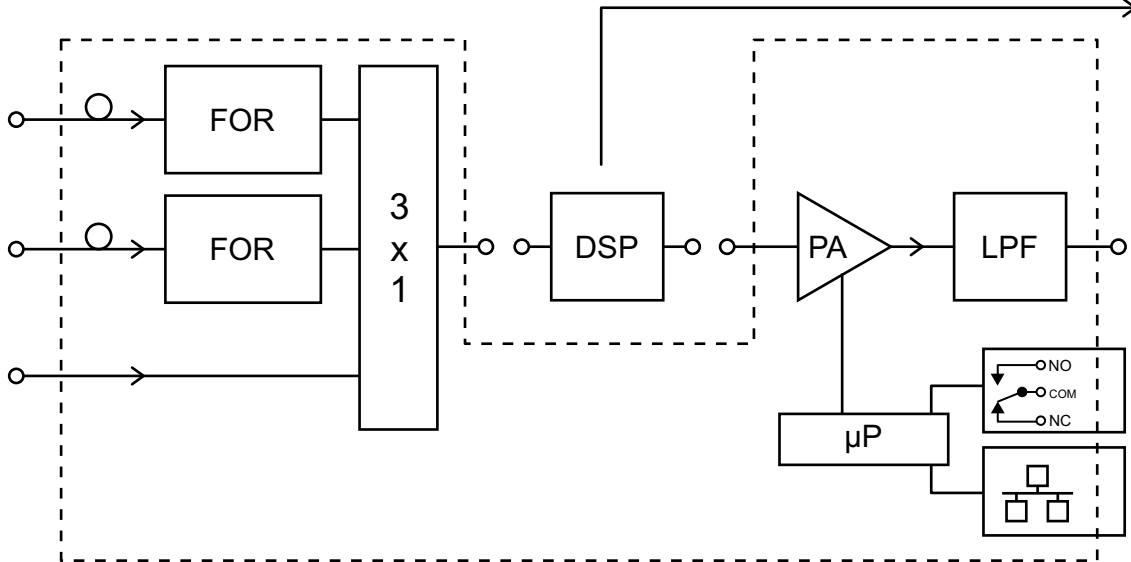
The processor board features remote monitoring capability via Ethernet. A computer running the Graphical User Interface (GUI) can display the status of the amplifier and provide control.

The processor board contains six NO/NC relay lines that interface to any alarm system and control.



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Model 1476HEUL Product Block Diagram



Model 1465DSP datasheet

		Fcenter	BW	Shape	NF	Sensitivity	# channels	Dynamic	Max Power	Power	Alarms	FCC
			1 dB	Factor			per window	Range	per Channel	28V		
Model	Base Model	(MHz)	(MHz)			(dBm)		(dB)	(dBm)	(A)		
No.												
	Head End UL											
1476HEUL-1	Band 1-VHF	159.47	9	5	< 3 dB	-100	5	110	37-FCC	0.6		TBP
1476HEUL-2	Band 2-	460.41	2	5	< 3 dB		3	70	37-FCC	0.1	see cut	TBP
1476HEUL-3	Band 3	483.31	3	5	< 3 dB		5	70	37-FCC	0.1	sheet	TBP
1476HEUL-4	Band 4	507.02	2	5	< 3 dB		4	70	37-FCC	0.1		TBP
1476HEUL-5	Band 5	859.03	4	5	< 3 dB		8	70	37-FCC	0.1		TBP

Configuration Chart

**Specifications**

Frequency: Bands 1, 2,3,4,5  
 Type: Linear Class A  
 Channels: 10 maximum  
 Power Output: 10 W (+40 dBm) Composite  
 Power Output: + 30 dBm / carrier  
 Gain: 35 - 45 dB  
 Gain Adjust: 10 dB, Digitally controlled via GUI or locally  
 ALC: 10 Watts  
 OIP3: +55 dBm  
 Impedance: 50 Ohms  
 Load VSWR: Infinite, no damage  
 N.F.: < 3 dB  
 Power Supply: 115 V AC  
 Current: < 2A  
 Operating Temp: -30° to +60° C  
 Size: 19" x 5.22" x 16"

Band 1: UL channelized  
 Sensitivity: -100 dBm  
 Gain: 40 dB adjustable  
 Maximum Input: +10 dBm  
 Max. Input no damage: +20 dBm  
 Bandwidth: adjustable from 6.5 kHz to 25 kHz set at factory

see datasheet 1465DSP for more

**Fiber Optic Specifications**

Frequency Range: 50 kHz - 3 GHz  
 Operating Mode: Supports Full-Duplex and simplex communications  
 Channel Capacity: Base Unit (BU) 8 Full-Duplex or 8 Simplex Channels  
 Gain: 17 dB typical  
 Transmitter Output Power: > 1 mW optical  
 Receiver Sensitivity: -21 dBm optical  
 VSWR I/O: 2:1 maximum  
 Output Noise Floor: -129 dBm (with 1 meter fiber, 2.5 GHz)  
 Spur-Free Dynamic Range: > 102 dB  
 Input 3rd Order Intercept: > 24 dBm  
 RF Input to Xmt: + 10 dBm maximum  
 Max. Optical Input to Rcvr: < 4 mW  
 Power Requirement (module): TX ± 12 V @ <50 mA ; RX +12 V @ <150 mA  
 Connectors: RF: SMA Female  
 Optical: SC/APC  
 Operating Temperature: -20 °C to +60 °C  
 Storage Temperature: -50 °C to +85 °C  
 Humidity: 90% non-condensing  
 Weight: < 1 lb.  
 Enclosure Size: 3/4" W x 3" L x 7/8" H  
 Fiber Optic Cable Type: 9/125 µm Single-Mode  
 Wavelength: 1310 / 1550 nm

