

### Features:

- Modular design
- Small size for in building and tunnels
- Micro processor control and alarm
- Ethernet interface to NMS
- Design blocks are universal to all of the family of tunnel amplifiers
- Amplifiers are broadband



This product builds on thirty years of experience in the custom design and build of products for In-Building Wireless applications. The 1456FFDPA is based on a high linearity, power efficient RF Power Amplifier design. It is a dual-redundant unit, consisting of two each Power Amplifiers, power supplies, processor boards, and Fiber Optic receivers, along with support hardware needed to implement the redundancy and switching.

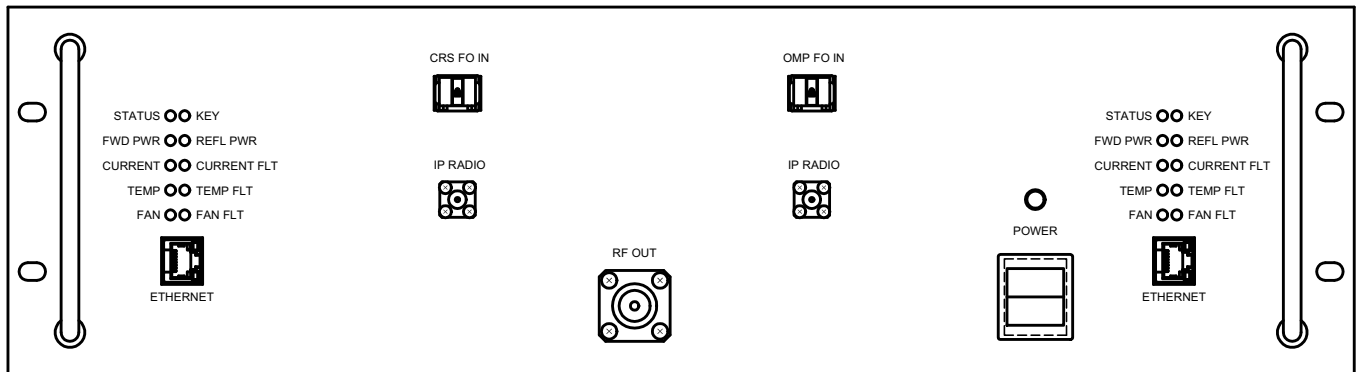
The two identical high linearity multi-carrier amplifiers are designed specifically for Distributed Antenna System (DAS) applications. Each amplifier has a dedicated processor board that allows for the control of amplifier functions and for monitoring status and faults.

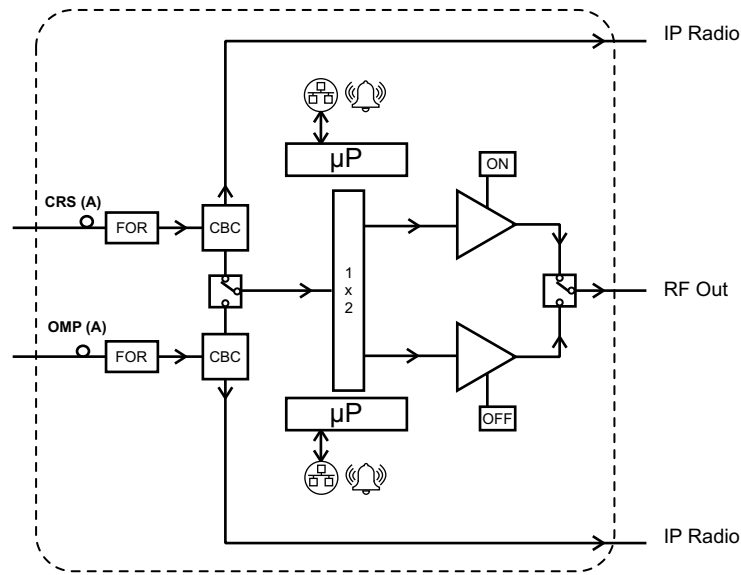
The processor board controls the amplifier enable line and the Automatic Level Control (ALC) function. It monitors amplifier forward and reverse power, current, heat sink temperature, and fan status.

Each processor board has an Ethernet interface and a unique IP Address. A Graphical User Interface is provided that displays status and allows for remote control of the amplifier. Status is also displayed on LED's mounted on the front panel of the chassis.



rev 1 2015





Model 1456FFDPA Product Block Diagram

**Specifications**

Frequency:	851 - 859 MHz 769 - 775 MHz
Type:	Linear Class A
Channels:	10 maximum
Power Output:	40 W (+46 dBm) Composite
Power Output:	+ 20 dBm / carrier
Gain:	35 - 45 dB
Gain Adjust:	10 dB, Digitally controlled via GUI or locally
ALC:	5 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"

**Fiber Optic Specifications**

Frequency Range:	50 kHz - 3 GHz
Operating Mode:	Supports Full-Duplex & simplex communications
Channel Capacity: Base Unit (BU)	8 Full-Duplex or 8 Simplex Channels
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
Max. Optical Input to Rcvr:	< 4 mW
Power Requirement (module):	+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

