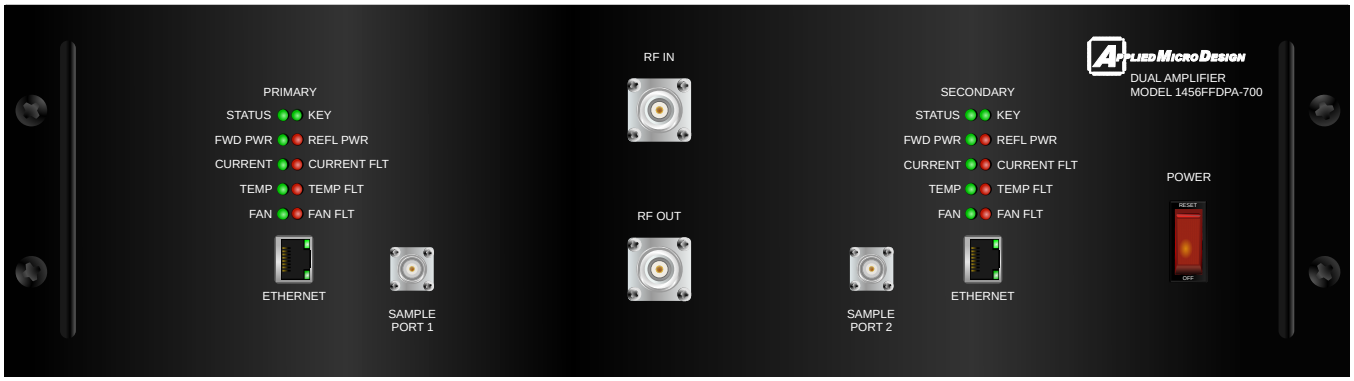
City and County of San Francisco (CCSF) Underground RF Systems Replacement Project

Contract No. 1240



Fiber-Fed Dual Power Amplifier (FFDPA) User's Manual

Model 1456FFDPA

UM01456-2201

rev 3

HARRIS

CELL GAIN

AMDI
Applied Micro Design Inc.

Masoian Associates, Inc.

P R O P R I E T A R Y

Table of Contents

Notes, Cautions, and Warnings

This is a Class B Booster.

Part 90 (Class B) Signal Boosters

WARNING. This is NOT a CONSUMER device. It is designed for installation by FCC LICENSEES and QUALIFIED INSTALLERS. You MUST have an FCC LICENSE or express consent of an FCC Licensee to operate this device. You MUST register Class B signal boosters (as defined in 47 CFR 90.219) online at www.fcc.gov/signal-boosters/registration. Unauthorized use may result in significant forfiture penalties, including penalties in excess of $100,000 for each continuing violation.

Connect RF Output to existing Distributed Antenna System (DAS) cable only.

DO NOT operate equipment with unauthorized antennas, cables, and/or coupling devices.

DO NOT operate equipment unless all RF connectors are secure.

DO NOT operate equipment unless it has been installed and inspected by a qualified radio technician.

Contact Information

For more information contact the FCC at:

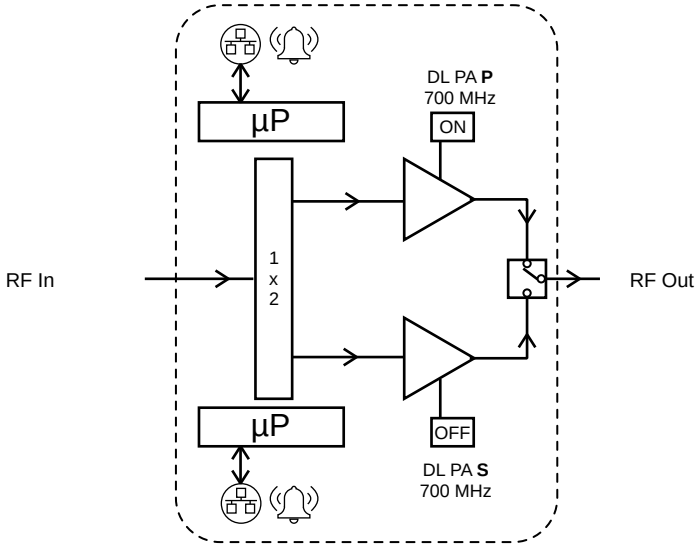
https://signalboosters.fcc.gov/signal-boosters/

F.2 PART 90 CLASS B SIGNAL BOOSTERS Licensees and signal booster operators are required to register existing Class B signal booster installations with the FCC by November 1, 2014. After November 1, 2014, operation of an existing, unregistered Class B signal booster will be unauthorized and subject to enforcement action. Any new Class B signal booster installed after November 1, 2014 must be registered prior to operation. To encourage compliance with this new requirement, registration will be free of cost to the operator and/or licensee.[R11], [R9]

FCC Part 90 Class B Signal Booster Registration & Discovery website:

https://signalboosters.fcc.gov/signal-boosters/

System Specifications & Block Diagram



Model 1456FFDPA Product Block Diagram

Specifications	
Frequency:	769 - 775 MHz, 851 - 860 MHz
Type:	Class AB
Channels:	50 maximum
Power Output:	5 W (+37 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:	+58 dBm
Impedance:	50 Ohms
Load VSWR:	Infinite, no damage
N.F.:	7 dB nominal
Power Supply:	115 V AC
Current:	< 2A
Operating Temp:	-30° to +60° C
Size:	19” x 5.22” x 16”
Weight:	22 lbs.

Introduction & Description

The 1456DPA channel amplifier is a high-linearity, multi-carrier amplifier for DAS Distributed Antenna System applications.

The unit is dual-amplifier configuration. Each amplifier has its own processor board, alarms, panel indicators and power supply. An RF Switch and Switch Interface Board allow for routing either amplifier output to the common RF Output connector.

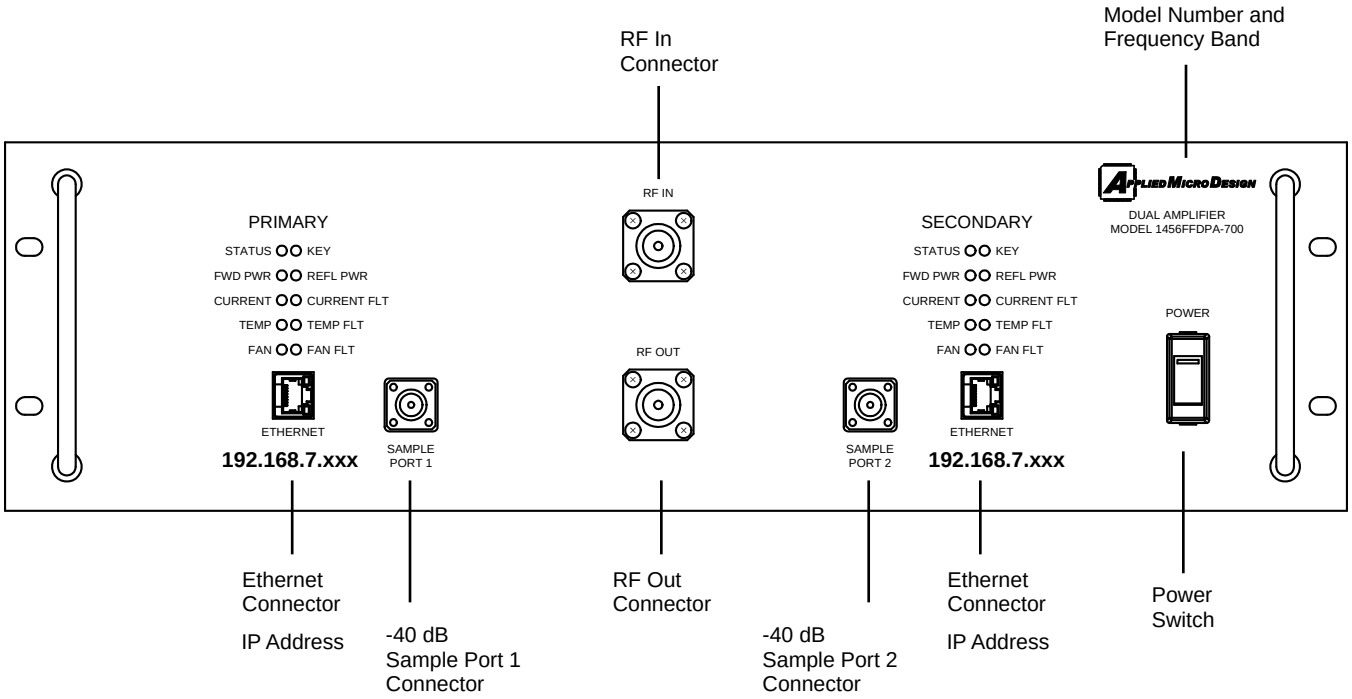
The processor board controls the enable signal (Mute) to the amplifier module and monitors forward power, reverse power, current, fan status and heat sink temperature.

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.

A front panel Look Port for each amplifier allows the user to sample each of the two signals at the front panel. The look port enables measurement without interrupting main line communications. The Look Port sample is 40 dB below the main RF output port.

FFDPA - Front Panel and Indicators

Model No. 1456FFDPA



steady: amplifer is operating

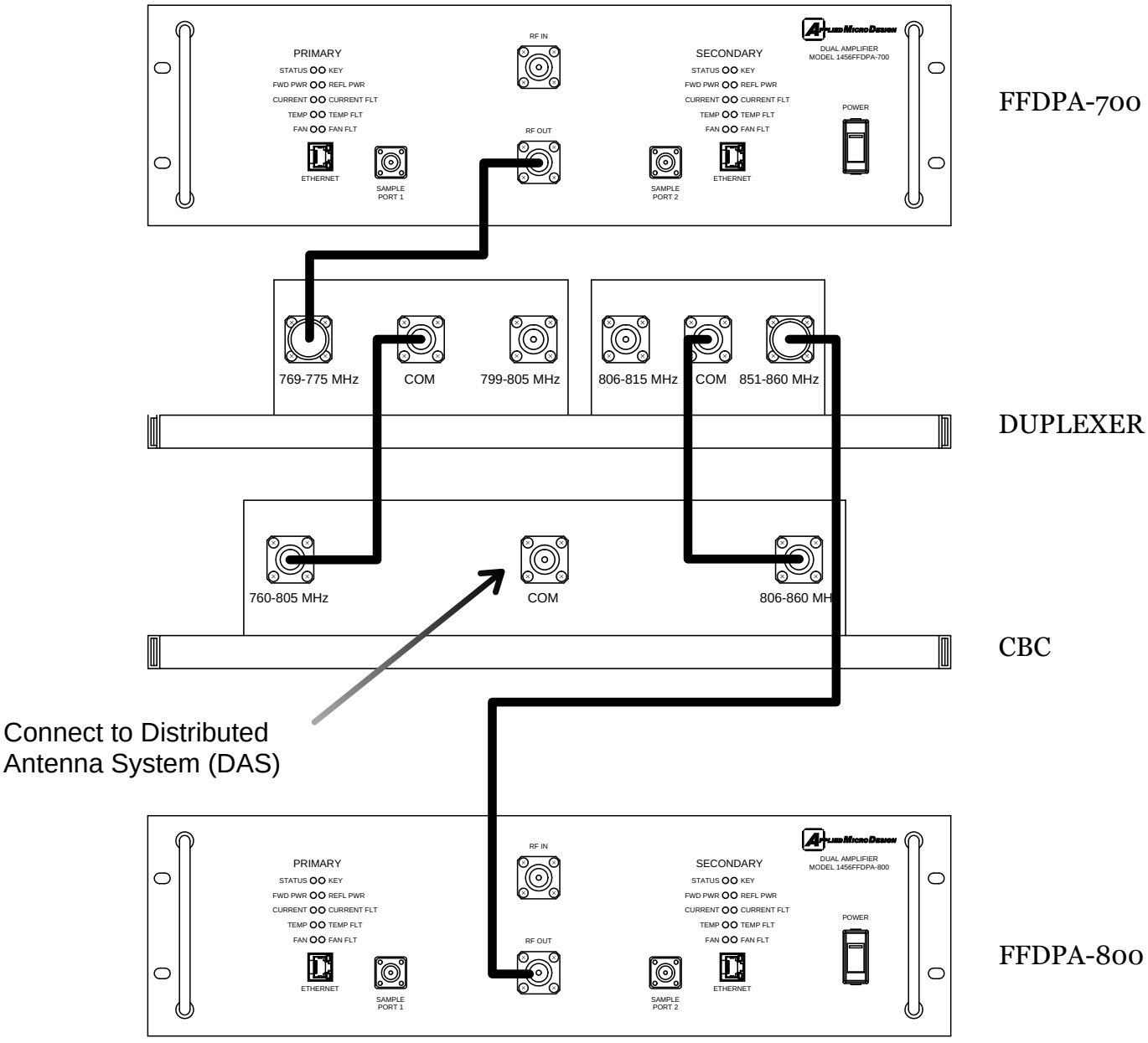
steady: amplifier is operating normally

STATUS	●	●	KEY
FWD PWR	●	●	REFL PWR
CURRENT	●	●	CURRENT FLT
TEMP	●	●	TEMP FLT
FAN	●	●	FAN FLT

steady: amplifier is enabled

steady: amplifier has either current, reverse power or temperature fault

Power Amplifier Installation



FFDPA-700

DUPLEXER

CBC

FFDPA-800

Cables shown above are shipped with the units.