

FDA-160i

Advanced Distribution Amplifier



Features

- **Network Enabled Analog Frequency Distribution Amplifier**
- **Dual Frequency Inputs with Auto Failover**
- **Any Frequency from 1-20MHz**
- **Programmable per channel amplitude**
- **1U 19" rack mount**
- **Redundant Hot Swap Power Supplies**

The FDA-160i is a general-purpose frequency distribution amplifier designed for use with Brandywine high precision time and frequency sources.

The FDA-160i is contained in a compact 1U rack-mount chassis. The FDA accepts two sets of inputs, comprising the reference frequency (typically 1-20MHz) and status from the source. The FDA provides automatic changeover should one of the on-line source inputs fail. Manual source select override is available on the front panel, or through the Ethernet interface.

A variety of status indicators are located on the front panel for instant visual feedback, together with manual controls for source selection.

A 10/100 base T Ethernet interface provides full control over the functionality of the system, including reference selection and output amplitude (on a per channel basis).

User control of the unit is via a built-in Web Browser with user-friendly graphical interface, or via SNMP for system applications.

Applications for the FDA-160i include secure communications systems, manufacturing facilities, digital television broadcasting and any system requiring highly reliable frequency outputs.

FDA-160i Specifications

Frequency Inputs

Frequency 1 – 20 MHz
 Amplitude & Impedance 0.5-1Vrms, 50 Ω
 Isolation Transformer coupled

Number of Inputs 2
 Connector Type BNC
 Input Selection Manual, Auto

Fault Inputs

Number of Inputs 2
 Signal Type TTL
 Active Level Selectable for active high or low
 Action Forces on-line changeover

Frequency Outputs

Number of Outputs 16
 Frequency Same as Input
 1-20 MHz
 Output Level 5dBm to +13dBm, short-circuit proof

Connector Type BNC
 Harmonic Distortion -40 dBc
 Cross Talk -80 dBc
 Spurious -80 dBc
 Additive Phase Noise@10MHz TBD.

Network Interface

Interface Type 10/100 base T
 Protocols HTTP, DHCP, SNMP
 V2c, IPV4
 Connector RJ45

Console Port

Interface Type RS232
 Parameters 115200, N, 8, 1
 Connector DB9

Display

Display Type 16 bicolor LED
 Functions Output status, Ethernet settings

Status Output (Alarm)

Type Dry relay form C contacts
 Ethernet SNMP trap
 Alarm Function Summary of all input/output alarms (relay)
 Individual input, output, power (Ethernet)

Power

Redundancy Dual redundant
 Single supply maintains complete unit
 Voltage 90-240 VAC 50/60Hz (std)
 18-36V DC Optional
 36-72VDC Optional
 Power Consumption <15W

Environmental and Safety

Temperature
 Operating -10 to +55°C non condensing
 Storage -40 to +85°C
 Product Safety EN60950-1: 2006 +
 A11:2009 +A1:2010 A12:2011
 EMC EN55022 Class A
 EN50082-2
 FCC Chapter 15 Class A

Ordering Information

Basic Unit Includes Dual AC Power Supplies
 022050005 2 input, 16 output 1-20 MHz**
 Power Options (order separately)
 022060001 Substitute 18-36 DC power for AC
 022060002 Substitute 36-72 DC power for AC

Related Product: FDU-160i:

022050001 2 i/p 10MHz, 16 output 10MHz
 022050002 2 i/p 5MHz, 16 output 5MHz
 022050003 2 i/p 1MHz, 16 output 1MHz
 022050004 1ea i/p 5MHz, 10MHz, 8 ea. o/p 5, 10 MHz*

The FDA-160i may be used with many of Brandywine's precision frequency sources such as the RG 2111 for distribution of precision frequency outputs.
 RG 2111 part number 001-0230

* No Auto-switch applicable to 022050004