

IBU-160i

Intelligent Time Code Distribution Amplifier



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

The IBU-160i is contained in a compact 1U rack-mount chassis. The IBU accepts two sets of inputs, comprising the reference input (100 Hz – 100 KHz) and status from the source. The IBU 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 IBU-160i include test ranges, satellite control centers, shipboard time distribution, airports, rail terminals, and any system requiring highly reliable time code distribution.

FEATURES

- **Network Enabled Time Code Distribution Amplifier**
- **Dual Time Code Inputs with Auto Failover**
- **Support for Analog Time Codes between 100Hz and 100KHz**
- **Programmable per channel amplitude**
- **1U 19" rack mount**
- **Redundant Hot Swappable Power Supplies**

Specifications

Time Code Inputs

Frequency Range	Analog Time Code 100 Hz – 100 KHz
Typical Time Codes	IRIG A, B, E, G, NASA 36, XR3, AFNOR
Amplitude & Impedance	0.5-10Vp-p, 600 Ω
Input 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

Time Code Outputs

Number of Outputs	16
Format	Same as Input 100 Hz – 100 KHz
Output Level	1V _{p-p} to +5V _{p-p} , short-circuit proof
Connector Type	BNC
Output Isolation	Transformer Isolated

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

Operating Temperature	-10 to +55°C non condensing
Storage Temperature	-40 to +85°C
Product Safety	EN60950-1: 2006 + A11-2009 +A1:2010 A12:2011 AS/NZS 60950-1:2011
EMC	EN55022 Class A EN50082-2 FCC Chapter 15 Class A

Physical

Size	19" Rack Mount 1U high (1.75") 12" depth
Weight	15 lbs. nominal

Ordering Information

Basic Unit Includes Dual AC Power Supplies
019001001

Power Options (order separately)
019001002
019001003

Related Products:
FDU-160i:
022050001
FDA-160i:
022050005

2 input, 16 output IBU-160i

Substitute 18-36 DC power for AC
Substitute 36-72 DC power for AC

2 i/p 10MHz, 16 output 10MHz Low Noise

2 i/p , 16 output 1-20MHz wideband

The IBU-160i may be used with many of Brandywine's precision time code sources such as the NFS220, or RTG-510 for distribution of precision time code outputs.