

## IBU-160i

### Intelligent Time Code Distribution Amplifier



#### 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**

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.

## IBU-160i 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	1Vp-p to +5Vp-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 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 AS/NZS 60950-1:2011
EMC	EN55022 Class A EN55082-2 FCC Chapter 15 Class A

### Ordering Information

Basic Unit Includes Dual AC Power Supplies

019001001 2 input, 16 output IBU-160i

Power Options (order separately)

019001002 Substitute 18-36 DC power for AC

019001003 Substitute 36-72 DC power for AC

Related Products:

FDU-160i:

022050001 2 i/p 10MHz, 16 output 10MHz Low Noise

FDA-160i:

022050005 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.