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OPERATIONS MANUAL

DATA BROADCAST UNIT

DBU-HSSI

December 18, 2002

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East Coast Datacom, Inc.

PT # 153010-A

SAFETY WARNING

Always observe standard safety precautions during installation, operation and maintenance of this product. To avoid the possibility of electrical shock, be sure to disconnect the power cord from the power source before you remove the IEC power fuses or perform any repairs.

PROPRIETARY NOTICE

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PUBLICATION NOTICE

This manual has been compiled and checked for accuracy. The information in this manual does not constitute a warranty of performance. E.C.D. reserves the right to revise this publication and make changes from time to time in the content thereof. E.C.D. assumes no liability for losses incurred as a result of out-of-date or incorrect information contained in this manual.

EMISSIONS REQUIREMENTS

FCC CLASS A

NOTE: This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of FCC rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

WARNING: Charges of modifications to this unit not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

CANADIAN EMISSIONS

This digital apparatus does not exceed the Class A limits for noise emissions from a digital apparatus set out in the Radio Interference Regulations of the Canadian Department of Communications.

Le present appareil numerique n'emet pas de bruits radioelectriques depassant les limites applicables aux appareils numeriques de la Class A prescrites dans le Reglement sur le brouillage radioelectrique edicte par le ministere des Communications du Canada.

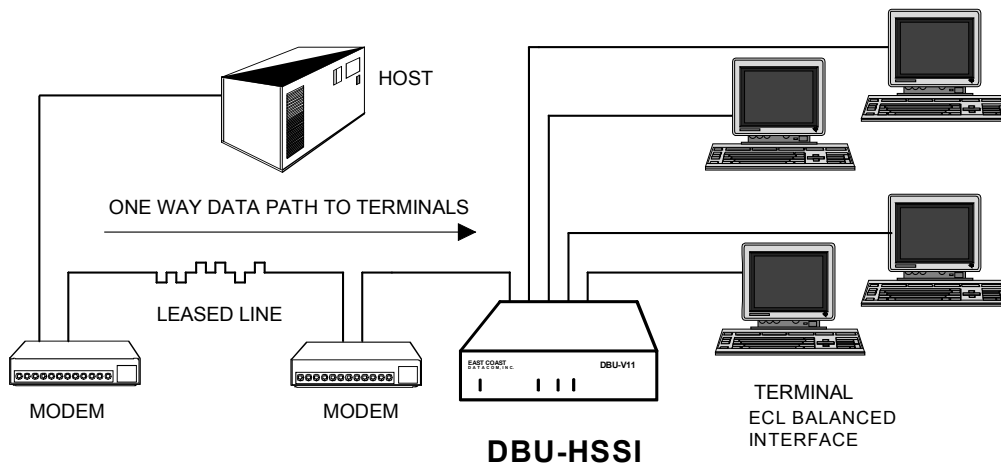
CHAPTER 1 - DESCRIPTION

The DBU-HSSI is designed for use in receive only data broadcast applications. Examples of typical data broadcast applications are; continuously updated private or public data displays and distribution of continuous data to PC's or Routers. The expanding role of VSAT systems in receive only applications for real time data distribution is expected to increase dramatically over the next few years. The DBU-HSSI is an excellent choice for applications of this type.

The DBU-HSSI utilizes an ECL balanced interface with a maximum data rate of up to 52Mbps. Additionally, the unit has HSSI compliant voltage levels pinned to standard female EIA DB-25 connectors.

The DBU-HSSI continuously broadcasts receive data and receive timing. The DBU-HSSI's master port should be connected to the HSSI transmitter(DCE device). The input signals are split with the internal circuitry and rebroadcast out on the four output ports. All output ports should be connected to DTE devices.

The DBU-HSSI is housed in a sturdy aluminum enclosure and is supplied with an internal linear power supply. The unit has a 110/220 VAC rotary select switch located on the rear of the housing. The unit can operate on standard AC power found in all countries.



TYPICAL APPLICATION

CHAPTER 2 - BASIC OPERATION

Operation of the DBU-HSSI is as simple as plugging a male DB-25 cable into the female DB-25 *MASTER* port on the back panel and plugging up to four male DB-25 connectors into *Ports 1 - 4*. Data and Clock are received on the Master Port and are broadcast out simultaneously on ports 1 - 4. The following table shows the pin-out for the Master and sub-channel ports.

DB-25, HSSI(ECL) PORT PIN OUTS

ALL DB-25 FEMALE CONNECTORS	
PIN NUMBER	PIN NAME
13	SHIELD/GND
10	DATA +
23	DATA -
5	CLOCK +
18	CLOCK -

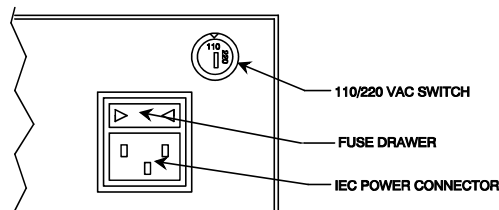
FRONT PANEL LED INDICATOR

Located on the front of the DBU-HSSI is a green LED. The Power indicator, marked **POWER** illuminates when AC voltage is applied to the box.

CHAPTER 3 - SETUP AND INSTALLATION

POWER CONNECTION

It is **very** important to check that the unit is set to the correct voltage setting for your application before applying AC power. Located on the rear of the unit you will find a rotary 110/220 VAC switch. Using a coin or small screwdriver, *gently* turn the switch to the appropriate power position as required for your installation (110 or 220 VAC).



INSTALLATION

Connect the main input data feed source into the **MASTER** port DB-25 female connector. The output ports are marked **PORT 1** through **PORT 4**. Connect from one to four DTE HSSI (ECL) compliant devices into the sub-channels ports on the back of the unit.

CABLING REQUIREMENTS

High quality shielded cables are recommended. It is very important to use the correct cable types. The following is recommended (or equivalent).

Cable type: multi-conductor cable, consisting of 25 twisted pairs cabled together with an overall double shield and PVC jacket

Gauge: 28 AWG, 7 strands of 36 AWG, tinned annealed copper, nominal 0.015 in. diameter

Insulation: polyethylene or polypropylene; 0.24 mm, .0095 in. nominal wall thickness; 0.86 mm +/- 0.025 mm, .034 in. +/- 0.001 in. outside diameter

Foil Shield: 0.051 mm, 0.002 in. nominal aluminum/polyester/aluminum laminated tape spiral wrapped around the cable core with a 25% minimum overlap

Braid Shield: braided 36 AWG, tinned plated copper in accordance with 80% minimum coverage jacket: 75 degrees C flexible polyvinylchloride

Jacket Wall: 0.51 mm, 0.020 in. minimum thickness

Dielectric Strength: 1000 VAC for 1 minute

Outside Diameter: 10.41 mm +/- 0.18 mm, 0.405 in. +/- 0.015 in.

Agency Compliance: CL2, UL Subject 13, NEC 725-51(c) + 53(e)

Manufacturer P/N: QUINTEC (Madison Cable 4084) ICONTEC RTF-40-25P-2 (Berktek, C&M)

EQUIPMENT GROUNDING

A Jumper provides for grounding interconnection in those systems requiring a connection between *frame ground* and *signal ground*. Remove the DBU-HSSI rackmount cover to locate the jumpers on the printed circuit card. Move the jumper to the front two header positions to connect the grounds, if your system requires such a connection. The factory default is NO CONNECT, the back two header positions.

TECHNICAL SPECIFICATIONS

Applications

Multiple synchronous broadcasting of Data and Clock

Capacity

One to four sub-channels; standard DB-25 pin (female) interface connector for each sub-channel

Data Format

Data transparent at all data rates

Data Rates

Up to 52Mbps

Electrical Interface

HSSI compliant(ECL levels)

Sub-Channel Interfaces

HSSI, DB-25 female connector

Master Port

HSSI, Female DB-25 connectors

Enclosure

Metal: Aluminum

Altitude

9842 feet (3000 meters)

Front Panel

Indicator: Power

Power Requirement

100-120/200-220 VAC @ $\pm 10\%$, 47 to 63 Hz, 7 Watts
Switch selectable

ENVIRONMENTAL

Operating Temperature: 32° to 122 F (0° to 50° C)

Relative Humidity: 5 to 90% non-condensing

Altitude: 0 to 10,000 feet

Dimensions

Height: 1.75 inches (4.44 cm)

Width: 17.00 inches (43.18 cm)

Length: 9.00 inches (22.86 cm)

Weight

4.5 lbs (2.1 Kg)

Shock and Vibration

Withstands normal shipping

NOTES: