

**CHAPTER 1 - DESCRIPTION** .. Page 1

*GENERAL DESCRIPTION* ..... Page 1

*FRONT PANEL INDICATORS* ..... Page 2

*REAR PANEL CONNECTORS* ..... Page 2

*INVERTED SIGNALS* ..... Page 2

*DB-25 DATA CABLES* ..... Page 2

*STRAP CHART* ..... Page 2

**CHAPTER 2 - SETUP AND INSTALLATION** .. Page 3

*Installation* ..... Page 3

**TECHNICAL SPECIFICATIONS** .. Page 4

# OPERATIONS MANUAL

## TTL TO RS-530 (V.11) INTERFACE CONVERTER

**MODEL: TTL-530**

**January 12, 1998**

**FOR TECHNICAL SUPPORT CALL:**

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*Manufactured By:*

**East Coast Datacom, Inc.**

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U.S.A.

PT # 719011-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.

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## CHAPTER 1 - DESCRIPTION

### *GENERAL DESCRIPTION*

The TTL-530 Interface Converter is designed to provide signal level conversion between TTL Clock and Data signal levels (Telemetry Equipment) and RS-530 (V.11) DTE (Terminal) equipment.

The TTL-530 accepts TTL signal levels into the Input Ports via BNC connectors. The TTL signal levels are converted to ITU V.11 (Balanced) voltage levels and are then transmitted on the RS-530 Output Port. The Output Port is a DB-25-P (Female) connector with RS-530 pin assignments. The TTL-530 is capable of data and clock transmission at rates up to 10Mbps. A second set of BNC connectors is provided for remote DTE loop back testing.

The unit has two separate TTL to RS-530 converters designed in the same chassis. The chassis is made of sturdy aluminum and may be used as a table top or rackmount unit at 1U (1.75 inches) high. The device is shipped with rack mount ears for standard 19 inch cabinets.

The TTL-530 operates on 115/230VAC switch selectable power. A voltage selection switch is located on the rear of the device. An IEC power connector is provided for power cord connection. A standard three prong (grounded) continental US power cord is provided with the device. Two ten foot long DB-25 data cables are also included with the TTL-530 converter.

The unit has a three year, return to factory warranty. For safety reasons, in the event of operational failure, **Do Not Attempt** to repair the TTL-530 unit, contact East Coast Datacom technical support toll free at (800) 240-7948. Web Site: [www.ecdata.com](http://www.ecdata.com)

### ***FRONT PANEL INDICATORS***

The Power indicator, marked **POWER** on the front panel is green and illuminates when AC voltage is applied to the box. Two sets of adjacent Green LED indicators illuminate in conjunction with **Data** and **Clock** control signals.

### ***REAR PANEL CONNECTORS***

The rear panel of the TTL-530 has a 110/220VAC switch for selection of the linear power supply and an IEC connector for applying AC power. The unit has two converters designed on the printed circuit card, therefore you will find two sets of connectors marked **PORT 1** and **PORT 2**. Each port has input and output BNC connectors and a DB-25 female RS-530 port that is a DCE interface. The RS-530 port is designed for a RS-530 DTE device to connect into the port.

### ***INVERTED SIGNALS***

The TTL-530 has internal strap options for inverting Data and Clock signals. A *Strap Chart* is provided at the end of this manual for reference.

### ***DB-25 DATA CABLES***

The TTL-530 is shipped with 10 foot long male to male DB-25 shielded data cables. A cable drawing is attached at the end of this manual for reference.

### ***STRAP CHART***

A *Strap Chart* is provided at the end of this manual for reference.

## CHAPTER 2 - SETUP AND INSTALLATION

### *INSTALLATION*

Confirm that the 110/220VAC voltage selection switch is set to 110 or 220 for your AC power source. Select an appropriate location accessible to and within six feet of an AC power outlet. The outlet must have a ground pin receptacle for product warranty.

Operation of the TTL-530 is accomplished by first applying AC power to the device and confirming that the **POWER** indicator is illuminated. The unit has two separate converters on the Printed Circuit Card labeled **Port 1** and **Port 2**. Both TTL and RS-530 input and output signals pertain to either port independently.

Connect either end of the supplied DB-25 cable into the female DB-25 connector marked, **PORT 1, RS-530 PORT**. Connect the other end of the cable into the RS-530 Data Terminal Equipment (DTE).

You may now connect your TTL input and output signals into the **PORT 1** BNC connectors. Connection is as follows: **CLOCK IN** and **DATA IN** are the inputs from the device that are generating the TTL data and clock signal levels (Telemetry Equipment ect..). **DATA OUT** and **CLOCK OUT** are TTL data and clock signals that have been generated from the attached DTE via a loop back command and are connected back into the Telemetry equipment for testing purposes.

## TECHNICAL SPECIFICATIONS

### Application

TTL to RS-530 (V.11) Interface and Signal Level Conversion

### Capacity

Two (2) TTL independent Inputs and Two (2) RS-530 Output ports

### Interface

TTL and RS-530 (ITU V.11)

### Data Rates

Up to 10Mbps

### Data Format

Data transparent at all data rates

### Switches

Signal to Chassis GND option  
Clock and Data Inverted Straps

### TTL Physical Interface

Female BNC Connectors

### RS-530 Physical Interface

Female DB-25 Connector

### Power Source

90-120 to 200-240VAC @10%, 50/60Hz,  
0.32/0.16A, external 110/220 volt select switch,  
IEC Power Inlet, (2) 5mm Fuses

### Environmental

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

Relative Humidity.....5 to 95%  
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 pounds (2.1Kg)

### Warranty

Three Years, Return To Factory

### ORDERING INFORMATION

Model: TTL-530

Description: TTL to RS-530 Converter

### INCLUDED WITH EACH UNIT:

- 1) Installation Guide
- 2) Two(2) 10 foot DB-25 M/M Cables
- 3) Rackmount Kit

For further detailed technical information on this product, contact East Coast Datacom Technical Assistance at (407) 637-9922.