BLACK BOX®
NETWORK SERVICES

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IC301A

RS-232↔TDI Interface Converter

Specifications

Data Rate: Up to 38.4 kbps

Operation: Half-duplex; point-to-point or multipoint; transparent to data rate and word structure; DTE/DCE configurable on RS-232 port

Compliance: FCC Part B

Interface: (1) async RS-232 port (DTE/DCE selectable); (1) Burroughs® 2-wire direct connect

Connectors: (2) DB25 female

Pins Supported: RS-232 port: 1, 2, 3, 4, 5, 6, 7, 8, 20; TDI port: 1, 2, 7

Indicators: (2) LEDs: Data, Power

Enclosure: High-impact plastic

Operating Temperature: 32 to 140°F (0 to 60°C)

Storage Temperature: -4 to +158°F (-20 to +70°C)

Humidity: Up to 95% relative humidity, noncondensing

MTBF: >500,000 hours (ground-benign environment)

Power: Wall-mount transformer; 115 VAC @ 30 mA

Size: 1.8"H x 5.5"W x 8.5"D (4.6 x 14 x 21.6 cm)

Weight: 2 lb. (0.9 kg)

Description

The RS-232↔TDI Interface Converter converts Burroughs TDI Direct Connect to RS-232, allowing communication between equipment with the RS-232 interface and Burroughs TDI systems. The TDI Converter is designed for asynchronous operation with polled, addressable terminals.

Interface Specifications

The unit will operate over twisted-pair cable up to 1000 feet (304.8 m). A maximum of ten terminals may be connected to this TDI bus. Baud rates up to 38.4 kbps are supported. A DB25 connector for the TDI bus connections is located on the rear of the unit. The TDI signals are listed in Table 1 (on the back of this page).

The RS-232 interface uses a DB25 connector, also located on the rear of the unit. The Converter can be configured as a DTE or DCE device via an internal shunt jumper. The RS-232 signals supported are listed in Table 2 (on the back of this page).

A Data Activity indicator, located on the front of the unit, signals TDI data activity. If the TDI bus is in the idle state, this indicator won't be lit.

(More information on the back of this page)

CUSTOMER SUPPORT INFORMATION

Order **toll-free** in the U.S.: Call **877-877-BBOX** (outside U.S. call **724-746-5500**)
FREE technical support 24 hours a day, 7 days a week: Call **724-746-5500** or fax **724-746-0746**
Mailing address: **Black Box Corporation**, 1000 Park Drive, Lawrence, PA 15055-1018
Web site: **www.blackbox.com** • E-mail: **info@blackbox.com**

Setup and Operation

1. To connect the Converter to a TDI direct connect device, attach a cable with a DB25 male connector (pinned as shown in Table 1) to port J1 on the converter.

2. To connect the Converter to an RS-232 device, it must be set for the correct operating mode (DTE or DCE configuration).

- When connecting the Converter to a DTE device such as a terminal, set the shunt jumper on the converter for DCE.
- When connecting the Converter to a DCE device such as a modem, set the shunt jumper for DTE.

3. Connect the RS-232 device to Converter's port J2 using a straight-through cable. (Pinning shown in Table 2.)

4. Select jumper W1 of the Converter for the desired operating mode.

- When jumper W1 is set to the A-B position, data sent from the RS-232 device is simply passed through the unit and output on the TDI port (port J1).
- When W1 is set to the B-C position, the data sent from the RS-232 device is passed through the unit to the TDI device, as well as echoed back to the RS-232 device. This mode of operation is useful when the Converter is connected to a "dumb" RS-232 terminal that doesn't echo your typing to the screen.

In either mode, data received by the Converter on Port J1 is passed through the unit to the RS-232 device.

5. To operate the Converter once setup is complete, simply connect the wallmount transformer to a wall outlet with the appropriate voltage. The Power LED will light, indicating that the Converter is ready for data.

Table 1. TDI Interface (DB25 Connector)

Position	Signal
1	Frame Ground
2	TDI Bus
3	Signal Ground

Table 2. RS-232 Interface (DB25 Connector)

Position	Signal	DCE	DTE
1	Chassis Ground (FG)	FG	FG
2	Send Data (TD)	Input	Output
3	Receive Data (RD)	Output	Input
4	Request To Send (RTS)	Tied to Pin 5	Tied to Pin 5
5	Clear To Send (CTS)	Tied to Pin 4	Tied to Pin 4
6	Data Set Ready (DSR)	Tied to Pins 8 & 20	Tied to Pins 8 & 20
7	Signal Ground (SG)	SG	SG
8	Carrier Detect (DCD)	Tied to Pins 6 & 20	Not used
20	Data Terminal Ready (DTR)	Tied to Pins 6 & 8	Tied to Pin 6