

USER MANUAL

MODEL 2013
Asynchronous
RS-232 to TDI
Interface Converter



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WARRANTY

Patton Electronics warrants all Model 2013 components to be free from defects, and will—at our option—repair or replace the product should it fail within one year from the first date of shipment. This warranty is limited to defects in workmanship or materials, and does not cover customer damage, abuse or unauthorized modification. If this product fails or does not perform as warranted, your sole recourse shall be repair or replacement as described above. Under no condition shall **Patton Electronics** be liable for any damages incurred by the use of this product. These damages include, but are not limited to, the following: lost profits, lost savings and incidental or consequential damages arising from the use of or inability to use this product. **Patton Electronics** specifically disclaims all other warranties, expressed or implied, and the installation or use of this product shall be deemed an acceptance of these terms by the user.

SERVICE AND SUPPORT

All warranty and non-warranty repairs must be returned freight prepaid and insured to Patton Electronics. All returns must have a Return Materials Authorization number on the outside of the shipping container. This number may be obtained from Patton Electronics Technical Service at **(301) 975-1007**. *Packages received without an RMA number will not be accepted.* Patton Electronics' technical staff is also available to answer any questions that might arise concerning the installation or use of your Model 2013. Technical Service hours: **8AM to 5PM EST, Monday through Friday.**

PRODUCT DESCRIPTION

The Patton Model 2013 Asynchronous RS-232 to TDI Interface Converter lets you connect an RS-232 DTE device (PC, ATM terminal, teller terminal, etc.) to a Two-wire Direct Interface (TDI) Line Driver such as a Burroughs (Unisys) A,V or B Series Mainframe. Requiring no user configuration, the Model 2013 is also compatible with Unisys B20, B25 and B27 micros. The Model 2013 is transparent to baud rate and supports TDI distances to 1000 feet. Distances to 100' are possible on the RS-232 side of the unit.

The Model 2013 needs no AC power or batteries for operation, drawing necessary operating power from pin 20 of the RS-232 DTE interface. Full duplex emulation is accomplished using DTE pin 6 and 8, while pins 4 and 5 are looped back internally. The Model 2013 is equipped with a female DB-25 on the RS-232 side and a male DB-25 on the TDI side. One LED indicator on each side shows received data. The Model 2013 supports up to 10 terminal drops in a polling environment.

MODEL 2013 INSTALLATION

The Patton Model 2013 is easy to install and requires no user configuration. Simply plug the Model 2013's DB-25 female connector directly into the DB-25 serial port of your PC or other DTE device. Then connect the TDI device to the DB-25 male connector on the Model 2013 using a straight through serial cable. Below are the interface signal/pin requirements for the Model 2013:

<u>RS-232 DTE</u>	<u>2013 (RS-232)</u>	<u>2013 (TDI)</u>	<u>TDI Device</u>
1 -----1	FG	FG	1 -----1
2 -----2	TD	Data	2 -----2
3 -----3	RD	SG	7 -----7
4 -----4	RTS		
5 -----5	CTS		
6 -----6	DSR		
8 -----8	DCD		
20 -----20	DTR [\geq 6.2V DC (unloaded) required]*		

Please note the following requirements and/or limitations when installing the Model 2013:

1) Nearly all TDI equipment falls under the category of "line drivers" or "line receivers". The Model 2013 is a line *receiver*, and may only be connected to line *driver*, such as a Burroughs CPU line adapter. Connection of the Model 2013 to another line receiver, such as a modem or T27 terminal, is not possible.

*2) Successful operation of the Model 2013 requires that your RS-232 DTE device supply \geq 6.2V DC (unloaded) or \geq 6.8V DC (loaded) on pin 20. RS-232 TD/RD levels must be between \pm 15V DC and \pm 3V DC. The TDI line driver must also supply 0V (ground) and -12V (data) levels.

3) The Maximum loading for the Model 2013 is one RS-232 device. Up to 10 Model 2013's may be connected to one TDI line driver in a multi-point polling environment.

4) If you must connect the Model 2013 to your RS-232 device using a cable, the cable should be no longer than 100 ft. The distance between the Model 2013 and the TDI line driver should be no greater than 1000 ft.

PATTON MODEL 2013 SPECIFICATIONS

Transmission Format:	Asynchronous, full or half duplex
Interface Standards:	Unisys TDI, CCITT V.28.EIA/RS-232D
RS-232 Connection:	DB-25 female, configured as DCE
RS-232 (DTE) Pins Required:	2, 3, 4, 5, 6, 8 and 20
TDI Connection:	DB-25 male; TD/RD on pin 2, signal ground on pin 7, chassis ground on pin 1 (where needed)
Maximum RS-232 Distance:	100' over three twisted pairs
Maximum TDI Distance:	1000' over one twisted pair
Maximum Terminals Supported:	One RS-232 (DTE) terminal, 10 TDI terminals
LED Indicators:	RD on each side
Data Rates:	Transparent to data rate
Power Supply:	No AC power or batteries required; DC voltage of ≥ 6.2 V (unloaded) or ≥ 6.8 V (loaded) supplied to device via RS-232 (DTE) pin 20
Dimensions:	2.20"L x 1.75"W x 0.75"H

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