

PROTOCESSOR

ProtoCarrier-485

User Manual



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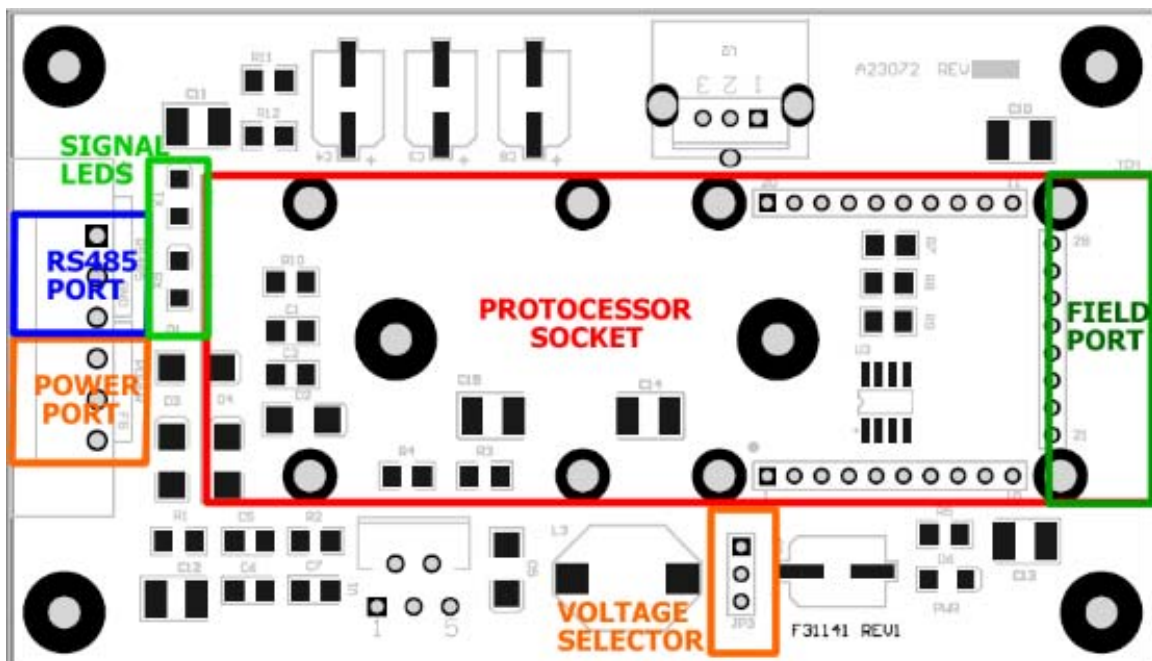
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1. Introduction

The ProtoCarrier-485 board is a carrier board for ProtoCessor devices which provides a RS-485 interface to the TTL socket serial port provided on the ProtoCessor. The board includes a non-isolated RS232 to RS485 converter which allows one to communicate over a RS-485 network even if the ProtoCessor on the board does not support RS-485.

The board can be powered from a fixed 5V DC supply or a 9V - 30V AC/DC supply at 1A. The input voltage is rectified and regulated to meet the requirements of the ProtoCessor devices.

2. Board Layout



Above is the board Layout of the ProtoCarrier-485 board with the most important ports and devices shown.

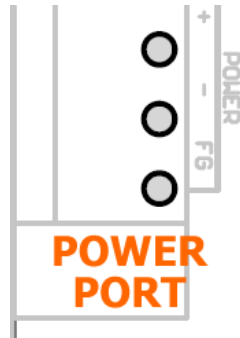
3. Port Assignments

3.1. ProtoCessor Socket

This is the Socket Connector for the ProtoCessor modules.

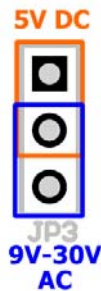
3.2. Power Connector

This is the Power Supply Port. Using three pins of the 6 pin plug connector one can supply fixed 5V DC or 9V – 30V AC/DC. A power LED is included to display whether the board has 5V power or not.



Pin No	Pin Assignment
Pin 4	V +
Pin 5	V -
Pin 6	FRAME GND

Voltage selection is done using a jumper on Header JP3. In order to use a fixed 5V DC input the Jumper should be in the position shown in orange below. For 9V-30V AC the Jumper JP3 needs to be in the position shown in blue below.



3.3. RS485 Port

This port provides access to the RS-485 port provided by the ProtoCessor module. On the ProtoCarrier-485 board this connector is a 6 pin pluggable connector, of which pins 1 to 2 form the RS485 port. The pin assignments are as follows:

Pin No	Pin Assignment
Pin 1	RS-485 +
Pin 2	RS-485 -
Pin 3	RS485 GND

3.4. The ProtoCessor Socket

The ProtoCessor Socket allows one to plug a ProtoCessor module onto the board. The pinouts for the ProtoCessor Socket are as follows.

Pin No	Pin Assignment	Data Direction
Pin 1	Frame Ground	
Pin 2	5V	

Pin 3	TxD	Out
Pin 4	RxD	In
Pin 5	CTS	In
Pin 6	RTS	Out
Pin 7	DSR	In
Pin 8	DTR	Out
Pin 9	DCD	In
Pin 10	Reserved	
Pin 11	GND	
Pin 12	I2C Clock line	
Pin 13	I2C Data Line	
Pin 14	RI	In
Pin 15	Reserved	
Pin 16	Reserved	
Pin 17	Reserved	
Pin 18	Reserved	
Pin 19	Reserved	
Pin 20	Reserved	

4. RS485 Signal LEDs

The RS485 Signal LEDs are each labeled and correspond to the respective data lines sent from the ProtoCessor. The following signals are provided. RS485 TX and RS485 RX.

5. Power Requirements

The power supply requirements of the ProtoConnect board are
9V – 30V AC/DC or fixed 5V DC input

The power supply must be able to supply 1A of current.

6. Revision History

Date	Resp	Comment
10/24/05	SSM	Created Document.
10/25/05	HLK	Reviewed and corrected.