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ProtoCarrier – 485 User Manual

APPLICABILITY & EFFECTIVITY

This manual provides instructions for the following FieldServer products:

Description

Explains the Functioning and Set-up of the ProtoCarrier.

The instructions are effective for the above as of September 2008

Instruction Manual Part Number: T17017
Rev.A1

TABLE OF CONTENTS

1. INTRODUCTION	3
2. BOARD LAYOUT	3
3. PORT ASSIGNMENTS	3
1.1. RS485 Port	3
1.2. RS485 Signal LEDs	4
1.3. Power Connector	4
1.4. The ProtoCessor Socket.....	4
1.5. Dip Switches	4
APPENDIX A. MOUNTING DRAWINGS	5
APPENDIX B. DISCLAIMER.....	8

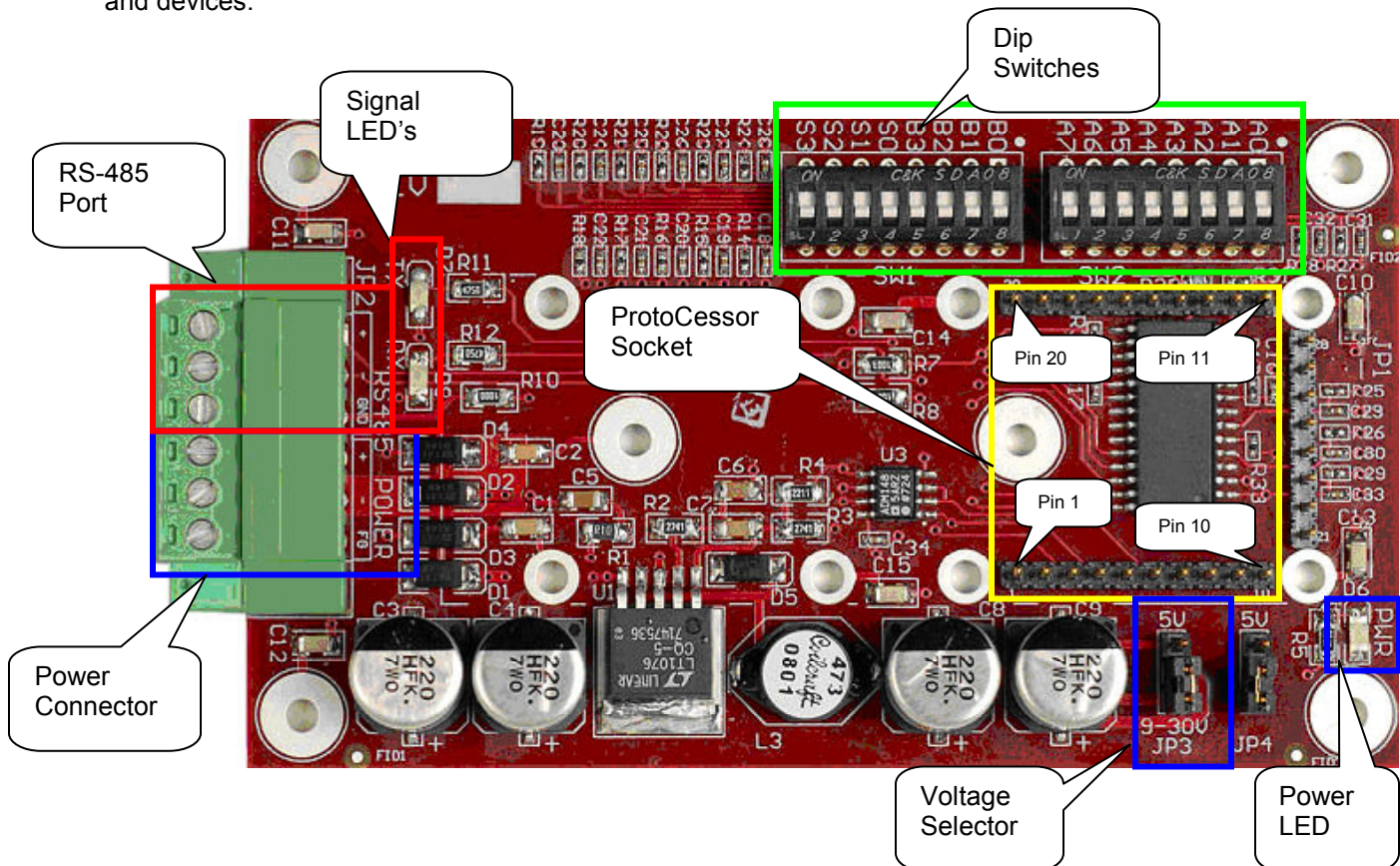
1. Introduction

The ProtoCarrier-485 board is a carrier board for ProtoCessor devices providing a RS-485 interface to the TTL socket serial port provided on the ProtoCessor. The board includes a non-isolated RS-232 to RS-485 converter which allows communication 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. The input voltage is rectified and regulated to meet the requirements of the ProtoCessor devices.

2. Board Layout

The following diagram shows the layout of the ProtoCarrier-485 board indicating the most important ports and devices.



3. Port Assignments

1.1. 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

1.2. RS485 Signal LEDs

The RS-485 Signal LEDs are each labeled and correspond to the respective data lines sent from the ProtoCessor. The following signals are provided. RS-485 TX and RS-485 RX.

1.3. Power Connector

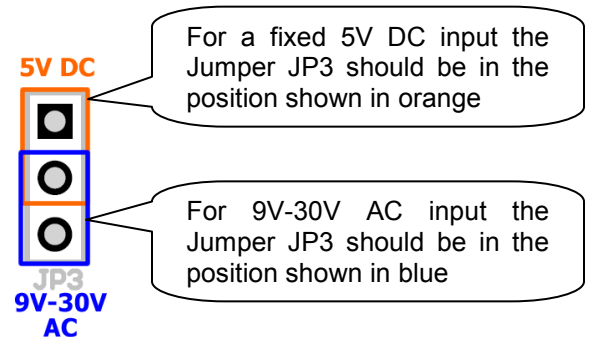
The Power Supply Port uses three pins of the 6 pin plug connector that can supply fixed 5V DC or 9V – 30V AC/DC. A power LED is included to display whether the board has 5V power or not.

The power supply requirements of the ProtoCarrier-485 board are

9V – 30V AC/DC or fixed 5V DC input

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

Voltage selection is done using a jumper on Header JP3



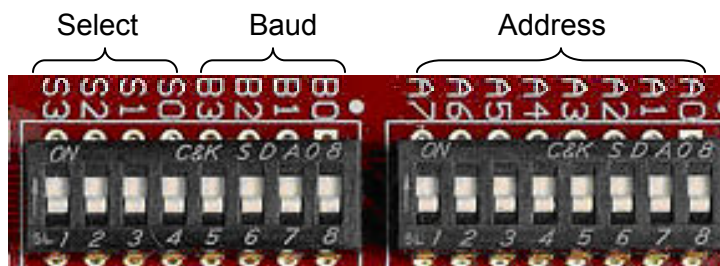
1.4. The ProtoCessor Socket

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	

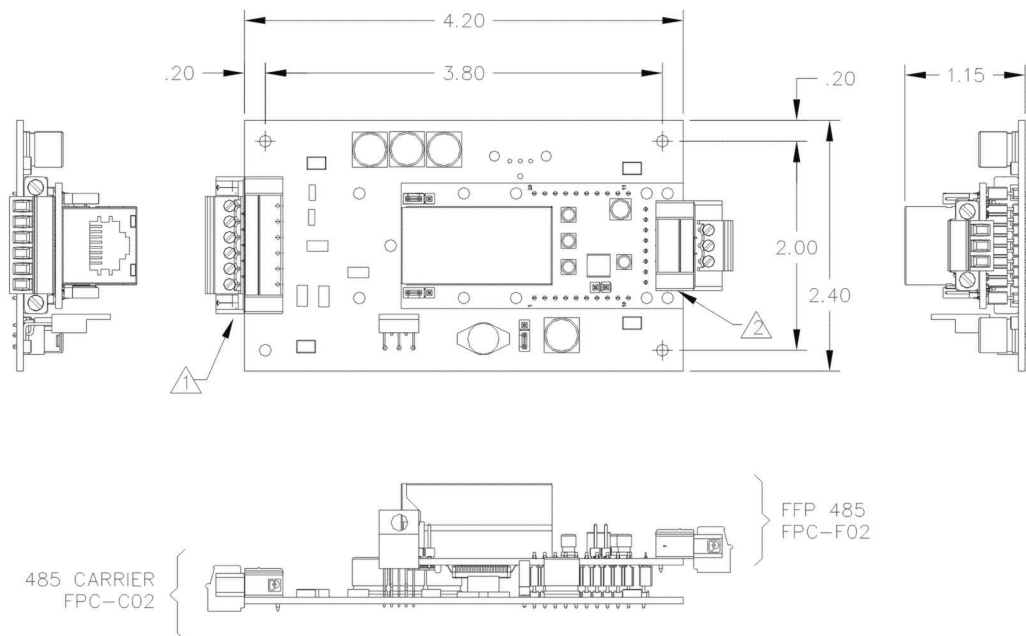
Pin No	Pin Assignment	Data Direction
Pin 11	GND	
Pin 12	I2C Clock line	
Pin 13	I2C Data Line	
Pin 14	RI	In
Pin 15	Reserved	
Pin 16	Reserved	
Pin 17	Reserved	
Pin 18	Reserved	
Pin 19	Reserved	
Pin 20	Reserved	

1.5. Dip Switches



Appendix A. Mounting Drawings

Mounting FFP-485 FPC-F02 on 485 ProtoCarrier C02

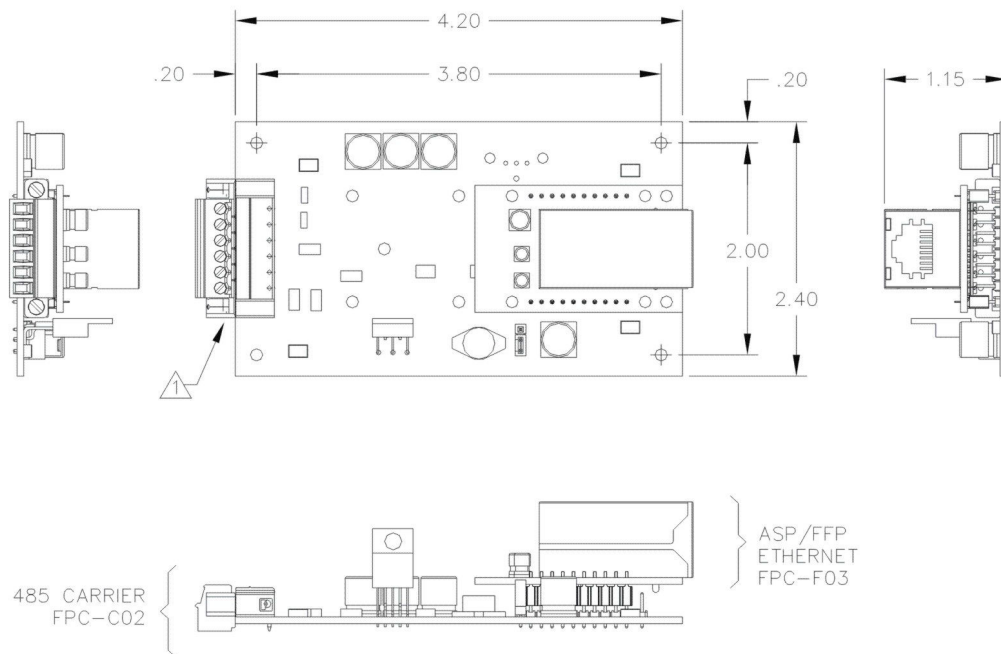


NOTES: UNLESS OTHERWISE SPECIFIED:

- ⚠ PROTOCARRIER: JP2
 JP2-1: RS485 +
 JP2-2: RS485 -
 JP2-3 RS485 GROUND
 JP2-4: POWER +
 JP2-5: POWER -
 JP2-6: POWER FG

- ⚠ FFP 485 FPC: J4
 J4-1: +
 J4-2: -
 J4_3: G

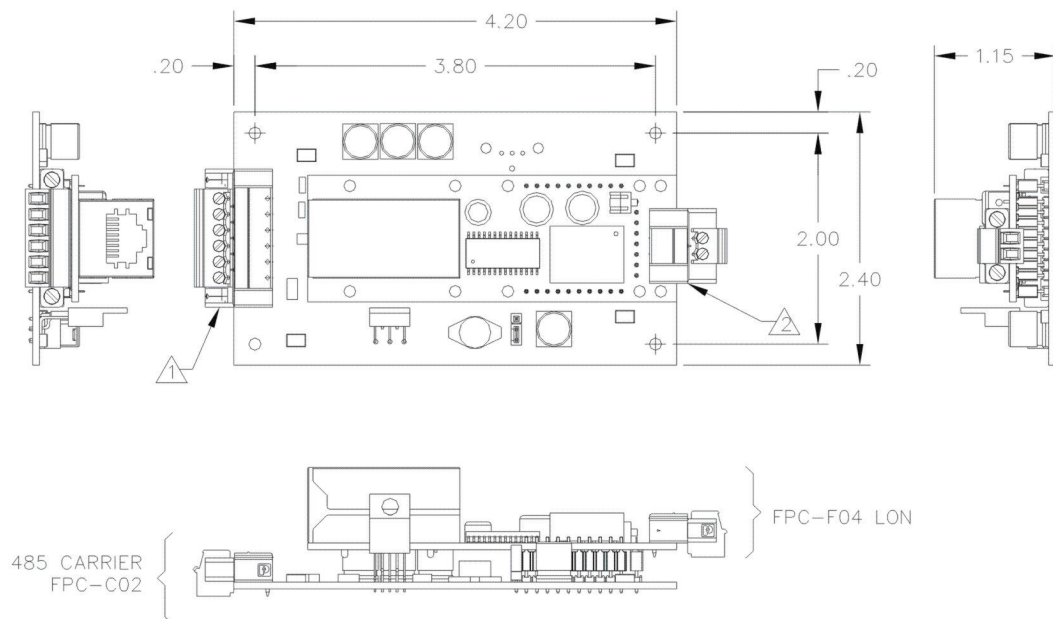
Mounting ASP/FFP ETH FPC-F03 on 485 ProtoCarrier FPC-C02



NOTES: UNLESS OTHERWISE SPECIFIED:

- 1 PROTOCARRIER: JP2
 JP2-1: RS485 +
 JP2-2: RS485 -
 JP2-3: RS485 GROUND
 JP2-4: POWER +
 JP2-5: POWER -
 JP2-6: POWER FG

Mounting FPC-F04 LON on 485 ProtoCarrier C02



NOTES: UNLESS OTHERWISE SPECIFIED

① PROTOCARRIER: JP2
 JP2-1: RS485 +
 JP2-2: RS485 -
 JP2-3: RS485 GROUND
 JP2-4: POWER +
 JP2-5: POWER -
 JP2-6: POWER FG

② FPC-F04: JP1
 JP1-1: LON NETWORK
 JP1-2: LON NETWORK

Appendix B. Disclaimer

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