

UNO-P166

6-port Isolated RS-232/422/485, 2-port IRIG-B, PCI-104 Card for UNO-4672

Packing List

Before installation, please make sure that you have:

- UNO-P166 plug in card
- Nameplate for integration
- Front and Rear brackets
- 11 x hex metal posts
- Driver CD

If anything is missing or damaged, contact your distributor or sales representative immediately

Overview

UNO-P166 can add 6 more isolated serial ports and 2 IRIG-B ports for UNO-4672, it supports the following specifications:

- 6-port RS-232/422/485
- Automatic RS-485 data flow control
- 2,500 VDC EFT Protection
- 2,500 VDC Isolation Protection
- IRQ: All use the same IRQ assigned by PCI Bus
- Data bits: 5, 6, 7, 8
- Stop bits: 1, 1.5, 2
- Parity: None, Even, Odd
- Baud-rate (bps): RS-232 : 50~115.2 k
RS-422/485 : 50~921.6 k
- Transmission Distance: 1000 m (RS-422/485)
- Data Signals:
 - TxD, RxD, RTS, CTS, GND for RS-232
 - Data+, Data-, GND for RS-485
 - Tx+, Tx-, Rx+, Rx- for RS-422

Notes

For more information on this and other Advantech products, please visit our websites at:

<http://www.advantech.com/eAutomation>

For technical support and service:

<http://www.advantech.com/support/>

This startup manual is for UNO-P166

Part No. 2003016600

1st Edition

April 2011

IRIG-B Information

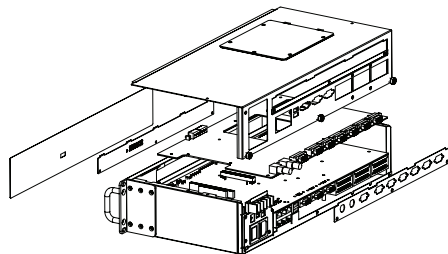
IRIG Time Code Input

- Connectors: Female BNC-connector, male 9-pole D-Sub connector
- Supported Formats: IRIG-B00X according to IRIG STANDARD 200-04, 200-98
- Input Signal: Unmodulated (DC level shift) IRIG-B, input insulated by photocoupler

IRIG Time Code Decoding

- Message syntax: QQQHMMSS (year, day, hour, minute & second)
- Resolution time: 1s
- Status info: 1 status LEDs for indicators

Diagram



Installation

Follow these steps to integrate into UNO-4672:

1. Please refer to the Chapter 3 of UNO-4672's user manual to remove the L-shaped cover.
2. Remove each pair of hex nuts of the 8xCOM port
3. Refer to the 'COM port Configuration' section on next page to set the configuration.
4. Refer to the screw hole of UNO-P166 to unscrew the related screws on UNO-4672 and build the provided 11x hex metal post on the same position.
5. Plug UNO-P166 into UNO-4672 and fix it by the screws you just get down on step 4.
6. Refer to the above diagram, replace the front/rear bracket and nameplate to fit the UNO-P166's I/O and LEDs
7. Put the L-shape cover back and fix it, then screw back the hex nuts you get down on step 2
8. As for the software driver, please refer to the companion driver CD.

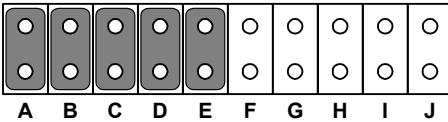
COM Port Configuration

Please follow the below description to set the COM ports and IRIG-B interface, please also refer to the UNO-4672's user manual and software manual in the IRIG-B driver for detailed function description:

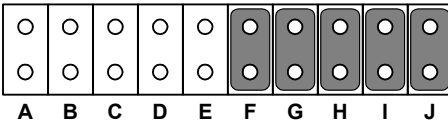
1. Selection of RS-232 or RS-422/485

COM port	Jumper
COM11	JP1
COM12	JP3
COM13	JP5
COM14	JP7
COM15	JP9
COM16	JP11

RS-232 Jumper Setting (Default)



RS-422/485 Jumper Setting



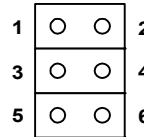
2. Switch the RS-485 auto-flow control or RS-422 Master/Slave mode (SW1)

COM port	DIP of SW1
COM11	DIP1
COM12	DIP2
COM13	DIP3
COM14	DIP4
COM15	DIP5
COM16	DIP6

SW1 Status	Description
ON	RS-422: Master mode RS-485: N/A
OFF(Default)	RS-422: Slave mode RS-485: Auto flow control

3. Setting the Terminal Resistor

COM port	Jumper
COM11	JP2
COM12	JP4
COM13	JP6
COM14	JP8
COM15	JP10
COM16	JP12
IRIG RS-485	JP13

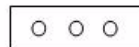


Short	Description
1-3	Add 120 Ohm terminal resistor on Tx+/Tx- of RS-422 or Data+/Data- of RS-485
3-5	Add 300 Ohm terminal resistor on Tx+/Tx- of RS-422 or Data+/Data- of RS-485
2-4	Add 120 Ohm terminal resistor on Rx+/Rx- of RS-422
4-6	Add 300 Ohm terminal resistor on Rx+/Rx- of RS-422

4. Setting the RS-422 for Multi-master application

COM port	Switches	Status
COM11	SW2	ON: Normal (default) OFF: RS-422 multi-master
COM12	SW3	
COM13	SW4	
COM14	SW5	
COM15	SW6	
COM16	SW7	

5. Selection of IRIG-B TTL Output



Short	Description
1-2	Output from Input
2-3	Output through Buffer