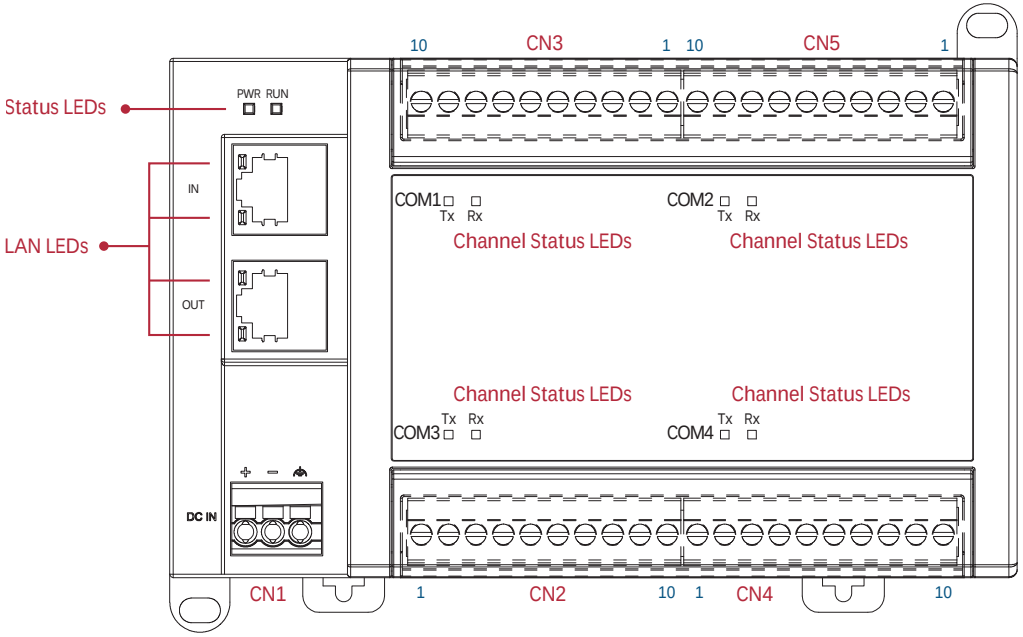
NEIO-B1603 Quick Reference Guide

Ver. B (P/N: 60177B0346X00)

Product Overview

NEIO-B1603 is an EtherCAT to serial conversion module which supports Half-Duplex and Full-Duplex communication mode. It offers one RS-232/422/485 and three RS-422/485 interfaces. The transmission speed on NEIO-B1603 module is up to 115.2 kbps. NEIO-B1603 can automatically detect the communication mode without setting any jumper and switch. Users can easily and quickly use this module to bridge their existing serial devices to the EtherCAT control network. All of the NEIO modules are provided with high isolation protection, and verified by the EtherCAT conformance test tool. Therefore NEIO is a reliable module to implement in your applications.

Product Appearance



Hardware Specifications

Power Input	
Power Input Range	24 V_{DC} (±20%)
Electrical Isolation	2.5 kV
Terminal Block	Spring type (3P, 5.00 mm)
Cross Sections	0.2 ~ 2.5 mm² / AWG 26 ~ 12
Communication	
Channels	4
Bus Interface	1 x RS-232/422/485 3 x RS-422/485
Data Bits	5, 6, 7, 8
Stop Bits	1, 1.5, 2
Parity	None, Even, Odd, Space, Mark
Flow Control	RTS/CTS and DTR/DSR (RS-232 only), XON/XOFF
Data Transfer Rates	300, 600, 1200, 2400, 4800, 9600, 19.2k, 38.4, 57.6k, 115.2k (bps)
Terminal Block	Detachable screw terminals (90°, 10P, 5.00 mm)
Cross Sections	Solid wire: 0.2 ~ 4 mm² / AWG 28 ~ 12 Stranded wire: 0.2 ~ 2.5 mm² / AWG 30 ~ 12
General Specifications	
Dimensions (W x H x D)	155 x 95 x 57.4 mm
Weight	324 g ±20%
Mounting	DIN-Rail (35 mm) / wall mount
Operating Temperature	0 ~ +55 °C

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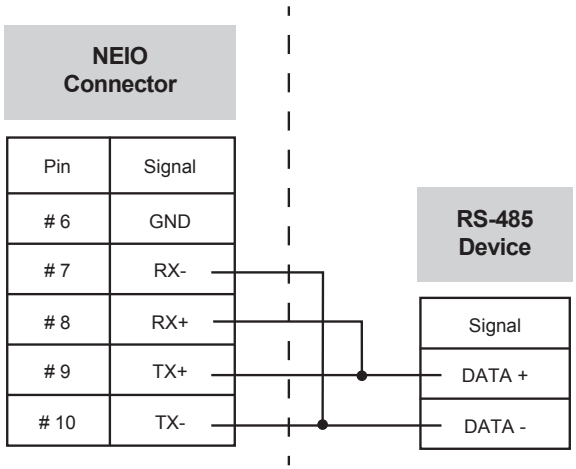
Wiring Diagram

Please refer to the wiring instructions below for RS-485 mode operation of COM 2, COM 3 and COM 4.



LED Indicators

Status LEDs

LED	Status	Color	Description
PWR	On	Green	Power on (power input range: 24 V_{DC}, ±20%)
	Off	-	Power off
RUN	On	Green	The module is in the Operational state
	Single Flash	Green	The module is in the Safe-operational state
	Blinking	Green	The module is in the Pre-operational state
	Off	-	The module is in the Initial state

LAN LEDs

LED	Communication Speed	Link	Act
	0	Off	Off
	10 Mbps	Off	Blinking (Yellow)
	100 Mbps	On (Green)	Blinking (Yellow)

Channel Status LEDs

LED	Status	Color	Description
Tx	On	Green	Data Transmitting
	Off	-	No Data Transmitting
Rx	On	Green	Data Receiving
	Off	-	No Data Receiving

Pin Assignments

CN1: Power

Pin	Description
1	V +
2	V -
3	GND

CN3: COM1

Pin	RS-232	RS-422	RS-485
1	-	-	-
2	RI	-	-
3	CTS	-	-
4	RTS	-	-
5	DSR	-	-
6	GND	GND	-
7	DTR	RX-	-
8	TXD	RX+	-
9	RXD	TX+	DATA+
10	DCD	TX-	DATA-

CN5: COM2

Pin	RS-422/485
1	-
2	-
3	-
4	-
5	-
6	GND
7	RX-
8	RX+
9	TX+
10	TX-

CN2: COM3

Pin	RS-422/485
1	-
2	-
3	-
4	-
5	-
6	GND
7	RX-
8	RX+
9	TX+
10	TX-

CN4: COM4

Pin	RS-422/485
1	-
2	-
3	-
4	-
5	-
6	GND
7	RX-
8	RX+
9	TX+
10	TX-