**CB34 EX**

2-Port CAN to Ethernet Server

100 Version

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**Key Points**

- Serial to Ethernet server
- CAN device support (programming required)
- DeviceNet compliant
- RS-232 and RS-422/485 serial device support
- Works out of the box - no programming is required
- Metal enclosure
- Rebrand with your custom product label
- Customize with development kit

**Note: Programming required for products which use CAN**

**Features**

- Power via two position terminal block, TSTRIP5, serial port, or barrel connector
- 10/100Mbps Ethernet
- TCP/UDP/Telnet modes
- DHCP/Static IP modes
- SSL/TLS 1.3
- Web Based Configuration
- 32-bit performance
- Industrial Temperature Range (-40°C to 85°C)

**Optional**

The following options are available with the optional development kit:

- Customize any aspect of operation including web pages, data filtering, or custom network applications
- Additional baud rates
- CAN device support
- eTPU coprocessor
- Two bi-color programmable LEDs

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Factory Application Specifications

Serial Port Baud Rate
Factory application supports up to 115,200 baud. Custom rates available with development kit.

Serial Protocols Supported
RS-232, RS-422, RS-485, DeviceNet compliant and CAN (programming required)

Serial Configurations
The two UARTs can be configured in the following ways:

- One RS-232 port, one RS-485 port
- One RS-485 port (full or half duplex on TSTRIP5), one RS-485 port (half-duplex on DB9)
- One RS-232 port, one CAN port (programming required)
- One RS-485 or RS-232 port, one CAN port (programming required)

Hardware Specifications

Processor & Memory
32-bit Freescale ColdFire 5234 running at 147.5MHz with 8MB SDRAM, and 2MB Flash.

Network Interface
10/100 BaseT with RJ-45 connector

Data I/O Interface
- Two UARTs
- CAN Interface

Storage
MicroSD/MMC Flash Card Interface (with SDHC support)

LEDs
Link, speed/data, power, and two bi-color general purpose programmable LEDs

Physical Characteristics
Dimensions (inches): 4.20” x 3.25” x 1.00”

Power
DC Input Voltage: 7V-24V

Environmental Operating Temperature
-40° to 85° C

RoHS Compliance
The Restriction of Hazardous Substances guidelines ensure that electronics are manufactured with fewer environment harming materials.

Agency Approvals
UL, C/UL, CE, FCC
Front and Back Panel

Connector Interface Description and Pinouts

The hardware has support for three serial interfaces: UART0 (RS-232), UART1 (RS-485/422) and CAN. Each serial interface can be configured via internal jumpers to appear on either the Terminal Strip 5 or DB9 connector.

Table 1: Connector Description

<table>
<thead>
<tr>
<th>Connector</th>
<th>Description</th>
<th>Default Setting</th>
</tr>
</thead>
<tbody>
<tr>
<td>Port 0</td>
<td>Terminal Strip 5 (TSTRIP5)</td>
<td>UART 1 RS-485 Half Duplex</td>
</tr>
<tr>
<td>Port 1</td>
<td>DB9 Connector</td>
<td>UART 0 RS-232</td>
</tr>
<tr>
<td>Power Input 1</td>
<td>Barrel connector</td>
<td>Default power source</td>
</tr>
</tbody>
</table>

Table 2: Serial Port Connector (Port 0 TSTRIP5) Pinout and Signal Description

<table>
<thead>
<tr>
<th>Pin</th>
<th>UART 0 RS-232</th>
<th>UART 1 RS-485</th>
<th>CAN</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>GND</td>
<td>GND</td>
<td>GND</td>
<td>Ground</td>
</tr>
<tr>
<td>2</td>
<td>RX</td>
<td>HD/FD TX-</td>
<td>CANL</td>
<td>Receive or Half Duplex or Full Duplex Transmit Negative or CAN Low</td>
</tr>
<tr>
<td>3</td>
<td>TX</td>
<td>HD/FD TX+</td>
<td>GND</td>
<td>Transmit or Half Duplex or Full Duplex Transmit Positive or Ground</td>
</tr>
<tr>
<td>4</td>
<td>RTS</td>
<td>FD RX-</td>
<td>CANH</td>
<td>Request To Send or Full Duplex Receive Negative or CAN High</td>
</tr>
<tr>
<td>5</td>
<td>CTS or PWRIN¹</td>
<td>FD RX+ or PWRIN¹</td>
<td>PWRIN¹</td>
<td>Clear To Send or Full Duplex Receive Positive or Raw DC Power Input</td>
</tr>
</tbody>
</table>

Note:

1. Optional power input
Table 3: Serial Port Connector (Port 1 DB9 Connector) Pinout and Signal Description

<table>
<thead>
<tr>
<th>Pin</th>
<th>UART 0 RS-232</th>
<th>UART 1 RS-485</th>
<th>CAN</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>CD</td>
<td>-</td>
<td>-</td>
<td>Carrier Detect</td>
</tr>
<tr>
<td>2</td>
<td>RX</td>
<td>HD/FD TX-</td>
<td>CANL</td>
<td>Receive or Half Duplex or Full Duplex Transmit Negative or CAN Low</td>
</tr>
<tr>
<td>3</td>
<td>TX</td>
<td>FD RX+</td>
<td>GND</td>
<td>Transmit or Full Duplex Receive Positive or Ground</td>
</tr>
<tr>
<td>4</td>
<td>DTR</td>
<td>-</td>
<td>-</td>
<td>Data Terminal Ready</td>
</tr>
<tr>
<td>5</td>
<td>GND</td>
<td>GND</td>
<td>GND</td>
<td>Ground</td>
</tr>
<tr>
<td>6</td>
<td>DSR</td>
<td>FD RX-</td>
<td>GND</td>
<td>Data Set Ready or Full Duplex Receive Negative or Ground</td>
</tr>
<tr>
<td>7</td>
<td>RTS</td>
<td>HD/FD TX+</td>
<td>CANH</td>
<td>Request To Send or Half Duplex or Full Duplex Transmit Positive or CAN High</td>
</tr>
<tr>
<td>8</td>
<td>CTS</td>
<td>-</td>
<td>-</td>
<td>Clear To Send</td>
</tr>
<tr>
<td>9</td>
<td>RI or PWRIN¹</td>
<td>PWRIN¹</td>
<td>PWRIN¹</td>
<td>Ring Indicator or Raw DC Power Input</td>
</tr>
</tbody>
</table>

Note:
1. Optional power input

Table 4: Power Connector (Power Input 1 Barrel Connector) Pinout and Signal Description

<table>
<thead>
<tr>
<th>Pin</th>
<th>Signal</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Outer Shell</td>
<td>Negative</td>
<td>Ground</td>
</tr>
<tr>
<td>Center Pin</td>
<td>Positive</td>
<td>Raw DC Power Input</td>
</tr>
</tbody>
</table>

Note:
1. Optional power input
Part Numbers

**CB34 EX 2-Port Serial to Ethernet Server**
Part Number: CB34-EX-100IR

**DIN Rail Mounting Kit (100 Version, double sided)**
Part Number: DIN-100

**DIN Rail Mounting Kit (200 Version, single sided)**
Part Number: DIN-200

**CB34 EX Development Kit**
Part Number: NNDK-CB34EX-KIT
Kit includes all the hardware and software you need to customize the included platform hardware. See NetBurner Store product page for package contents.

Ordering Information
E-mail: sales@netburner.com
Online Store: www.NetBurner.com
Telephone: 1-800-695-6828