Key Points

- Serial to Ethernet server
- TTL serial device support
- Works out of the box - no programming is required
- Board level product
- Customize with development kit
- Used with Basic Stamp

Features

- 10/100Mbps Ethernet
- TCP/UDP/Telnet modes
- DHCP/Static IP modes
- SSL/TLS 1.3
- Web based configuration
- 32-bit performance
- RS-232 and RS-422/485 ready (require external level shifter)

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
Factory Application Specifications

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

Serial Interface
2 TTL

Serial Configurations
The UARTs can be configured in the following way:
  • Two TTL ports
  • Add external level shifter for RS-232
  • Add external level shifter for RS-422/485 (up to two ports)
Note: UART 0/1 also provides RTS/CTS hardware handshaking signals.

Hardware Specifications

Processor and Memory
32-bit Freescale ColdFire 5270 running at 147.5MHz with 512K of flash and 8MB of SDRAM.

Network Interface
10/100 BaseT with RJ-45 connector

Data I/O Interface
  • Up to two TTL ports
  • Up to 8 digital I/O

LEDs
Link, speed/data, power

Physical Characteristics
Dimensions (inches): 3.25” x 2.00”
Weight: 1.1 oz.
Mounting Holes: 4

Power
DC Input Voltage: 5V @ 450mA max

Environmental Operating Temperature
Industrial temperature: 0° to 70° C

RoHS Compliance
The Restriction of Hazardous Substances guidelines ensure that electronics are manufactured with fewer environment-harming materials.
Table 1: Connector Description

<table>
<thead>
<tr>
<th>Connector</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>J5</td>
<td>TTL Serial Port Connector; 10-pin dual row header</td>
</tr>
<tr>
<td>J7</td>
<td>Ethernet RJ-45 connector</td>
</tr>
<tr>
<td>J8</td>
<td>Power Connector; 5V Power, 3-pin single row header</td>
</tr>
</tbody>
</table>

Table 2: Serial Port Connector (J5) Pinout and Signal Description

<table>
<thead>
<tr>
<th>Pin</th>
<th>CPU Pin</th>
<th>Function</th>
<th>General Purpose I/O</th>
<th>Description</th>
<th>Max Voltage</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td></td>
<td>GND</td>
<td>Ground</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>B8</td>
<td>UART1_CTS</td>
<td>UART1 TX</td>
<td>UART 1 Transmit</td>
<td>5 VDC</td>
</tr>
<tr>
<td>3</td>
<td>D9</td>
<td>UART1_RX</td>
<td>UART1 RX</td>
<td>UART 1 Receive</td>
<td>5 VDC</td>
</tr>
<tr>
<td>4</td>
<td>D8</td>
<td>UART1_RTS</td>
<td>UART1_STS</td>
<td>UART 1 Request to Send</td>
<td>5 VDC</td>
</tr>
<tr>
<td>5</td>
<td>C8</td>
<td>UART0_STS</td>
<td>UART0 RTS</td>
<td>UART 0 Request to Send</td>
<td>5 VDC</td>
</tr>
<tr>
<td>6</td>
<td>G3</td>
<td>UART0_STS</td>
<td>UART0_STS</td>
<td>UART 0 Request to Send</td>
<td>5 VDC</td>
</tr>
<tr>
<td>7</td>
<td>F3</td>
<td>UART0_STS</td>
<td>UART0_STS</td>
<td>UART 0 Transmit</td>
<td>5 VDC</td>
</tr>
<tr>
<td>8</td>
<td>F1</td>
<td>UART0_STS</td>
<td>UART0_STS</td>
<td>UART 0 Receive</td>
<td>5 VDC</td>
</tr>
<tr>
<td>9</td>
<td>F2</td>
<td>UART0_STS</td>
<td>UART0_STS</td>
<td>UART 0 Receive</td>
<td>5 VDC</td>
</tr>
</tbody>
</table>

Note:
Pin 9 is a 5V DC input, which allows for a single connector interface with TTL serial and power to the board.

Table 3: Power Connector (J8) Pinout and Signal Description

<table>
<thead>
<tr>
<th>Pin</th>
<th>Function</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>VCC5V</td>
<td>Input voltage 5VDC</td>
</tr>
<tr>
<td>2</td>
<td>GND</td>
<td>Ground</td>
</tr>
<tr>
<td>3</td>
<td>VCC5V</td>
<td>Input voltage 5VDC</td>
</tr>
</tbody>
</table>

SB70 Connector Diagram
Part Numbers

SB70 2-Port Serial to Ethernet Server
Part Number: SB70-100CR

SB70 Development Kit
Part Number: NNDK-SB70-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