SB70

2-Port Serial to Ethernet Server
100 Version

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
- Web based configuration
- 32-bit performance
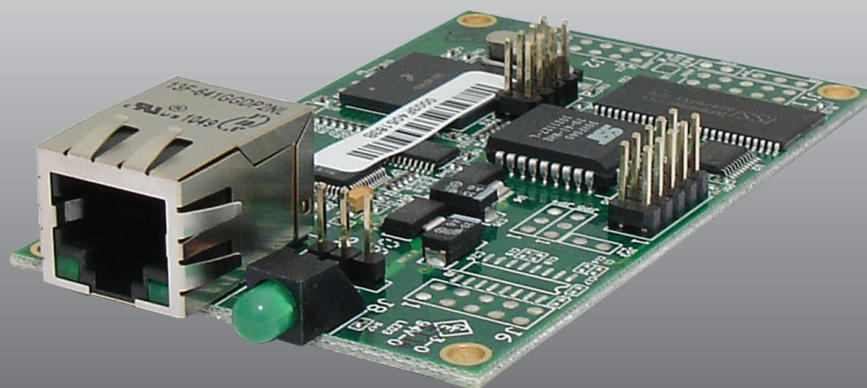- RS-232 and RS-422/485 ready (require external level shifter)

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

The following optional software modules are not included with kit and are sold separately:

- Embedded SSL & SSH Security Suite (Module License Version)
- SNMP

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.

Connector Interface Description and Pinouts

Table 1: **Connector Description**

Connector	Description
J5	TTL Serial Port Connector; 10-pin dual row header
J7	Ethernet RJ-45 connector
J8	Power Connector; 5V Power, 3-pin single row header

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

Pin	CPU Pin	Function	General Purpose I/O	Description	Max Voltage
1		GND		Ground	-
2	B8	$\overline{\text{UART1\_CTS}}$	PUARTL7	UART 1 Clear to Send	5 VDC
3	D9	UART1_TX	PUARTL5	UART 1 Transmit	5 VDC
4	D8	UART1_RX	PUARTL4	UART 1 Receive	5 VDC
5	C8	$\overline{\text{UART1\_RTS}}$	PUARTL6	UART 1 Request to Send	5 VDC
6	G3	$\overline{\text{UART0\_RTS}}$	PUARTL2	UART 0 Request to Send	5 VDC
7	F3	$\overline{\text{UART0\_CTS}}$	PUARTL3	UART 0 Clear to Send	5 VDC
8	F1	UART0_TX	PUARTL1	UART 0 Transmit	5 VDC
9		VCC5V		Input voltage 5VDC[1]	5 VDC
10	F2	UART0_RX	PUARTL0	UART 0 Receive	5 VDC

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**

Pin	Function	Description
1	VCC5V	Input voltage 5VDC
2	GND	Ground
3	VCC5V	Input voltage 5VDC

SB70 Connector Diagram