

SB800 EX

2-Port Serial to Ethernet Server with Optional Wifi



DATASHEET

Key Points

- Serial to Ethernet server
- Data encryption to protect from unauthorized monitoring
- RS-232 and RS-422/485 serial device support
- Optional 802.11 b/g/n wifi
- Jumperless configuration
- Works out of the box - no programming is required
- Metal enclosure
- Rebrand with your custom product label
- Create custom applications with optional development kit

Features

- SSL/TLS, HTTPS, and SSH certificate support
- 10/100Mbps Ethernet
- TCP/UDP/Telnet modes
- DHCP/Static IP modes
- Web server and serial AT Command configuration
- Standard and custom baud rates with factory application
- Create a serial tunnel with two devices

Customizations

Use the optional development kit to:

- Customize any aspect of operation including web pages, data filtering, or custom network applications
- MicroSD Card interface with included flash file system



Factory Application Specifications

Serial Port Baud Rate

Factory application supports up to 921,600 bps.

Serial Configurations

Each serial port can be configured as RS-232, RS-422, or RS-485.
Jumperless software configuration.

Hardware Specifications

Processor & Memory

32-bit Freescale ColdFire 54415 running at 250MHz with 8MB of on-chip flash, 64MB DDR2 RAM.

Storage

MicroSD/MMC Flash Card Interface

Ethernet Interface

10/100 BaseT with RJ-45 connector

Wifi Interface (optional)

IEEE 802.11 b/g/n

Security: WPA, WPA2

Modes: Infrastructure, Access Point with DHCP Server

Data I/O Interface

- Two UARTs
- Real-time clock

LEDs

Link, speed/data, power

Physical Characteristics

Dimensions (inches): 4.20" x 3.25" x 1.00"

Power

DC Input Voltage: 7V-24V DC; 12V @ 90mA

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



Front Panel



Back Panel

Connector Interface Description and Pinouts

The back panel has two DB9 ports which enable you to connect to a serial device. Table 1 provides descriptions of the function of each pin.

Table 1: **DB9 Serial Port Connector Pinout and Signal Description**¹

Pin	RS-232 Function	RS-485 Function	Description	Max Voltage
1	CD	FD TX- / HD-	Carrier Detect or Full Duplex Transmit- / Half Duplex-	RS-232 or RS-422/485
2	RX	FD TX+ / HD+	Receive or Full Duplex Transmit+ / Half Duplex+	RS-232 or RS-422/485
3	TX	RX+	Transmit or Full Duplex Receive+	RS-232 or RS-422/485
4	DTR	RX-	Data Terminal Ready or Full Duplex Receive-	RS-232
5	GND	GND	Ground	-
6	DSR	-	Data Set Ready	RS-232 or RS-422/485
7	RTS	-	Ready to Send	RS-232 or RS-422/485
8	CTS	-	Clear to Send	RS-232
9	RI	-	Ring Indicator	RS-232

Note:

1. For developers: Port 0 is connected to processor UART1. Port 1 is connected to processor UART2.

Table 2: **Terminal Block Serial Port Pinout and Signal Description**¹

Pin	RS-232 Function	RS-485 Function	Description	Max Voltage
1	GND	GND	Ground	-
2	CD	FD TX- / HD-	Carrier Detect or Full Duplex Transmit- / Half Duplex-	RS-232 or RS-422/485
3	RX	FD TX+ / HD+	Receive or Full Duplex Transmit+ / Half Duplex+	RS-232 or RS-422/485
4	DTR	RX-	Data Terminal Ready or Full Duplex Receive-	RS-232
5	TX	RX+	Transmit or Full Duplex Receive+	RS-232 or RS-422/485

Note:

1. For developers: Port 0 is connected to processor UART1. Port 1 is connected to processor UART2.

Part Numbers

SB800 EX Build Options

- Serial ports can be DB-9 or a 5-pin terminal strip
- The power input connector can be a barrel jack or a 2-pin terminal strip
- Wifi b/g/n option with external antenna
- RS-232, RS-422, RS-485

The part number will specify the options in the format: **SB800EX-(P, S2, S2, W)-IR**, where:

Connector Type	Values
P = Power Connector	J = Barrel Jack T = 2 Pin Terminal Plug
S1, S2 = Serial Connectors	D = DB-9 T = 5 Pin terminal strip N = No Connector
W = Wifi	W = Wifi Installed

Example: SB800EX-JDDW-IR = Barrel jack, both serial ports are DB9, Wifi installed.

Part Number	Description	Similar to
SB800EX-JDD-IR	Jack, DB9, DB9	SB72EX, SB700EX
SB800EX-JDT-IR	Jack, DB9, 5-Pin terminal	CB34EX
SB800EX-TDD-IR	2-pin terminal plug, DB9, DB9	SB72EX, SB700EX with 2 pin terminal input power instead of jack.
SB800EX-TDT-IR	2-pin terminal plug, DB9, 5-Pin terminal	CB34EX with 2 pin terminal power input instead of jack.
SB800EX-JDDW-IR	Jack, DB9, DB9, Wifi	SB72EX, SB700EX plus Wifi
SB800EX-JDTW-IR	Jack, DB9, 5-Pin terminal, Wifi	CB34EX plus Wifi

Mounting Kits

Part Number: DIN-100

Two side brackets, DIN rail mount on surface mount

Part Number: DIN-200

Single side DIN rail mount

SB800 EX Development Kit

Part Number: NNDK-SB800EX-KIT

Kit includes all the hardware and software you need to customize the included platform hardware. See NetBurner Store product page for package contents.

SB800 EXW Development Kit

Part Number: NNDK-SB800EXW-KIT

Kit includes all the hardware and software you need to customize the included platform hardware. See NetBurner Store product page for package contents.

Embedded SSL & SSH Security Suite (Module License Version)

Part Number: NBLIC-SSL-MODULE

Only required if you are using a development kit (SSH/SSL functionality is included in the pre-programmed application).

SNMP V1 (Module License Version)

Part Number: NBLIC-SNMP

Available as an option if you are using a development kit.

Ordering Information

E-mail: sales@netburner.com

Online Store: www.NetBurner.com

Telephone: 800-695-6828