BL2600 SBC

Ethernet-Enabled Single-Board Computer

The BL2600 SBC is best suited for industrial control applications and is a low-cost PLC alternative.

Overview

The BL2600 is an advanced single-board computer that incorporates the powerful Rabbit 3000 microprocessor, Flash memory and RS-232/RS-485 serial ports. Additional module variants enable datalogging of up to 1 GB in data storage. Functionality of the BL2600 can be expanded using optional RabbitNet™ expansion cards.

The BL2600 can be connected via two mechanisms: Dual-entry IDC through-hole sockets, which allow header mounting on either side of the board, and polarized locking industry-standard friction-lock connectors that enable rapid assembly with a wire harnesses. These connectors provide dependable cable harness connectivity to I/O. RabbitNet expansion boards are available (including A/D, D/A, digital I/O and keypad/display interface cards) to interface via the two multiplexed SPI RS-422 ports.

To evaluate and learn more about the BL2600 SBC, please visit www.rabbit.com/products/bl2600/.

Application Highlight
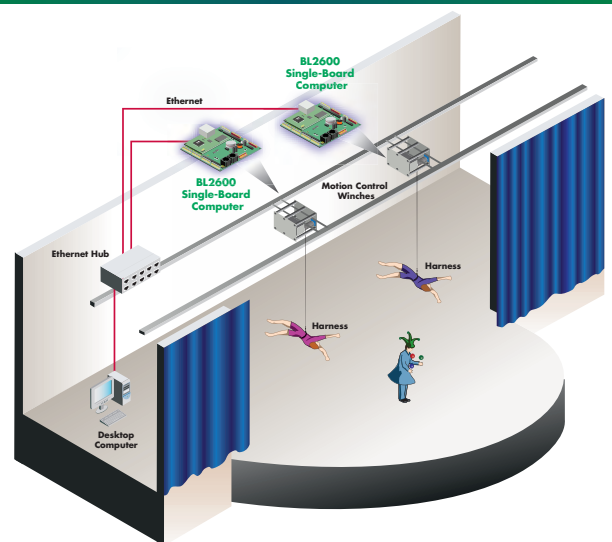
Potential Applications: Industrial control and automation, remote machine control, utilities, test and measurement, applications with high I/O requirement

Features and Benefits

- **Rabbit® 3000 microprocessor at 44 MHz**
- **10/100Base-T Ethernet, RJ-45**
- **512K Flash/512K SRAM**
- **36 digital I/O (configurations include protected digital inputs, sinking/sourcing outputs, high current outputs)**
- **12 analog channels: eight 11-bit A/D, four 12-bit D/A buffered outputs**
- **RabbitNet expansion ready**
- **Multiple "core module" options allow flexibility in functionality**

RABBIT™

BL2600 SBC Specifications

Feature	BL2600	BL2610
Microprocessor	Rabbit® 3000 at 44 MHz	Rabbit® 3000 at 29 MHz
Ethernet Port	10/100Base-T, 3 LEDs	None
Flash Memory	512K (standard)	
Program Execution SRAM	512K	None
Data SRAM	256K	512K
Backup Battery	Panasonic CR2477 or equivalent 3V lithium coin type, 950 mA·h standard, socket-mounted	
Configurable I/O	16 individually software-configurable I/O channels may be configured as digital inputs ±36V DC, switching threshold 1.5V typical, or as sinking digital outputs up to 40V, 200 mA each	
Digital Inputs	8 inputs hardware-configurable pull-up or pull-down, ±36V DC, switching threshold 1.4 V typical	
High-Current Digital Outputs	4 outputs individually software-configurable as sinking or sourcing, +40V DC, 2A max. per channel	
Analog Inputs	Eight 11-bit res. channels, software-selectable ranges unipolar: 1, 2, 2.5, 5, 10, 20V DC; bipolar ±1, ±2, ±5, ±10V DC: 4 channels can be hardware-configured for 4–20 mA; 1 MΩ input impedance, up to 4,100 samples/s	
Analog Outputs	Four 12-bit res. channels, buffered, 0–10V DC, ±10V DC, and 4–20 mA, update rate 12 kHz	
Serial Ports	5 serial ports: • 1 RS-485 or 1 RS-232 • 2 RS-232 or 1 RS-232 (with CTS/RTS) • 1 clocked serial port multiplexed to 2 RS-422 SPI master ports • 1 serial port dedicated for programming/debug	
Serial Rate	Max. asynchronous rate = CLK/8, Max. synchronous rate = CLK/2	
Connectors	• RJ-45 connectors: 1 Ethernet and 2 RabbitNet™ • Friction-lock connectors: 2 polarized 9-position terminals with 0.1" pitch; three 4-position power terminals with 0.156" pitch; two 20-position terminals with 0.1" pitch (2 × 20 IDC option); one 13-position terminal with 0.1" pitch (2 × 13 IDC option); one 10-position terminal with 0.1" pitch (2 × 7 IDC option) • Programming port: 2 × 5 IDC, 1.27 mm pitch (BL2600), 2 × 5 IDC, 2 mm pitch (BL2610)	
Real-Time Clock	Yes	
Timers	One 10-bit timer with 2 match registers	
Power	Yes	
Watchdog/Supervisor	9–36V DC, 12W max.	
Operating Temperature	–40° C to +70° C (–40° C to +85° C without battery)	
Humidity	5 to 95%, non-condensing	
Board Size	4.85" × 4.96" × 1.00" (123 mm × 126 mm × 25 mm)	
Pricing		
Price (qty. 1/100) Part Number	$289 / $272 20-101-0889	$269 / $253 20-101-0891
Starter Package Part Number	$488 20-101-0889, 101-0626	$468 20-101-0891, 101-0626

RABBIT™