Rabbit[®] SBC BL2100 Series

Single-Board Computer

A high-performance single-board computer designed for medium-scale industrial control and monitoring applications.

Overview

The BL2100 series is available in four flexible configurations, which feature 40 digital I/O, 3 RS-232/485 serial ports, and a battery-backup for the real-time clock and SRAM for protected data. In addition, the BL2100 and BL2120 models include 11 channels of 12-bit resolution A/D input and 4 channels of 12-bit D/A output. The BL2100's 16 digital outputs can sink/ source up to 200 mA and are configurable in Dynamic C, an easy-to-use C environment.

An optional 7-key 122 x 32 graphic display is available as a cost-effective user interface (a panel-mount, water-resistant NEMA 4 version is also available). The BL2100 boards come standard with screw terminals which, can support 14 AWG wiring or other options such as IDC or friction lock headers.



Application Highlight



Features/Benefits

- 40 sinking/sourcing digital I/O
- Up to 512K Flash for program and up to 512K SRAM for data
- 16 digital outputs which can sink/source 200 mA
- 11 A/D and 4 D/A with 12-bit resolution
- Up to 4 serial ports: two 3-wire (or one 5-wire)
 RS-232 and 1 RS-485
- Royalty-free TCP/IP stack



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| Specifications | BL2100 | BL2110 | BL2120 | BL2130 | |
|-------------------------------|---|--|---|----------------------|--|
| Features | | | | 558.87 | |
| Microprocessor | | Rabbit 2000 at 22.1 MHz | | | |
| Ethernet Port | 10Base-T, RJ-45, lir | 10Base-T, RJ-45, link and activity LEDs | | None | |
| Flash | 256K (s | 256K (standard) | | 256K | |
| SRAM | 128K (s | 128K (standard) | | 128K | |
| Backup Battery | | Socketed 3V lithium coin-type, 265 mA.h, supports RTC and SRAM | | | |
| Keypad/Display | See keypa | See keypad/display option (below) and our "OP" products (for serial display options) | | | |
| Digital Inputs | | 24: protected to ± 36VDC | | | |
| Digital Outputs | | 16: source/sink 200 mA each, 36VDC max. | | | |
| Analog Inputs | 11 at 1 M Ω , 12-bit resolution, ± 10VDC, up to 4,100 samples/sec. | None | 11 at 1 M Ω , 12-bit resolution, \pm 10VDC, up to 4,100 samples/sec. | None | |
| Analog Outputs | Four 12-bit resolution, 0-10VDC*, update rate 12 kHz | None | Four 12-bit resolution, 0-10VDC*, update rate 12 kHz | None | |
| Serial Ports | 4 total: two 3-w | 4 total: two 3-wire (or one 5-wire) RS-232, 1 RS-485, and one 5V CMOS-compatible (programming) | | | |
| Serial Rate | | Max. burst rate = CLK/32; Max. sustained rate = burst/2 | | | |
| Connectors | | Screw terminals support max. 14 AWG/1.5 mm2 (standard) | | | |
| Real-Time Clock | | Yes | | | |
| Timers | Five 8-bit tin | Five 8-bit timers (four cascadable from the first) and one 10-bit timer with 2 match registers | | | |
| Watchdog Timer/Supervisor | | Yes | | | |
| Power | | 9-36VDC, 1.5W max. (without display), 3W max. (with display) | | | |
| Operating Temperature | | -40° C to +70° C | | | |
| Humidity | | 5-95%, non-condensing | | | |
| Board Size | | 4.14" x 3.41" x 0.93"; (105 mm x 87 mm x 24 mm) | | | |
| Pricing | | | | | |
| Price (Qty. 1) Part Number | \$339 20-101-0461 | \$249 20-101-0462 | \$299 20-101-0463 | \$209 20-101-0464 | |

| | Keypad/Display Option | |
|-----------------------|---|--|
| Features | | |
| LCD Panel | 122 × 32 graphic LCD in two stacked sections (with programmable backlight); Relegendable keypad with 7-key/7-LED interfac | |
| LEDs | 7 user-programmable: 1 red, 4 green, 2 yellow | |
| Operating Temperature | 0° C to 50° C | |
| Board Size | 3.00" x 2.6" x 0.75"; (76 mm x 66 mm x 19 mm) | |
| Enclosure Size | 5.60" x 4.875" x 1.5"; (142 mm x 124 mm x 38 mm) | |
| Part Number | 101-0502 | |

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