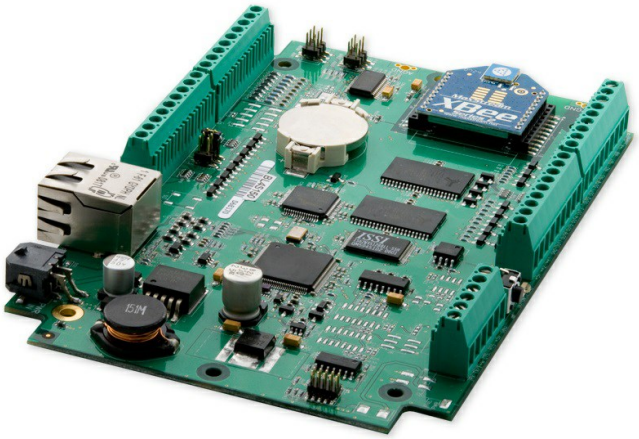
Rabbit® SBC BL4S100 Series

Single-Board Computer



- Rabbit 4000 running at 40 MHz
- On-board Rabbit RIO® device for exceptional I/O functionality and flexibility
- Web Server functionality
- Easy implementation of mesh networking with known good hardware
- Dynamic C® software environment to reduce development time

HOW TO BUY ▸

Rabbit's new BL4S100 single-board computers offer a cost-competitive solution for control and communication that dramatically reduces your time to market. The series is designed to support the rapidly-increasing use of ZigBee connectivity for companies looking to deploy wireless networking. Digi International's ZigBee RF modules are compatible with ZigBee PRO compliant devices from other manufacturers, providing great flexibility in choices of nodes to include in the network. Build feature-rich web pages that allow control and monitoring of ZigBee enabled networks by using ZigBee AT and API command libraries.

With two available RS-232 ports, eight analog inputs and 20 Digital I/O lines, the BL4S100 is well suited to handle a wide range of applications requiring ZigBee connectivity. The optional plastic enclosure and mesh networking add-on kit support further design requirements.

The BL4S100 is a low-cost Rabbit® 4000 microprocessor based single-board computer series that delivers ZigBee and Ethernet capability. On-board ZigBee RF modules offer mesh networking functionality to make networking easy to deploy and simple to maintain. With both Ethernet and ZigBee connectivity integrated onto the BL4S100, the series delivers a low-cost platform to design a ZigBee enabled Ethernet network.

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Features

- Rabbit 4000 microprocessor running at 40 MHz
- ZigBee enabled
- 10Base-T Ethernet connectivity
- 20 digital I/O

- 8 Analog inputs
- Battery-backed real-time clock
- Watchdog supervisor
- Screw-terminal connectors

Design Advantages

- Easily monitor and control ZigBee networks with feature-rich web applications using a Rabbit web server
- Dynamic C® libraries provide ready support for AT and API commands
- Full interoperability with other ZigBee PRO feature set based devices
- Integrated hardware and software solution reduces overall development time and costs
- ZigBee to Ethernet gateway functionality
- Optional Rabbit Embedded Security Module offers secure data transfer with AES encryption, and SSL/TLS for embedded web security

The Rabbit RIO® Advantage

The BL4S100 series uses our Rabbit RIO chip to add a powerful I/O subsystem. The on-board Rabbit RIO device adds software configurable counter/timer blocks that can perform a variety of useful I/O capability, including event capture/counting, quadrature decoding, PWM and PPM generation, and edge or level based interrupts. This subsystem capability delivered by the Rabbit RIO device frees the microprocessor for control, data processing and communications tasks. Each BL4S100 board has 8 counter/timer blocks available in the I/O subsystem.

Applications

- Monitoring and control for intelligent building automation
- Asset tracking and management for commercial and industrial applications
- Air quality monitoring
- Energy monitoring and management

Rabbit's BL4S100 single-board computers offer a low-cost solution for control and communication that gets you through the development process quickly. The BL4S100 series is designed to support the rapidly increasing use of ZigBee connectivity for companies looking to deploy wireless networking. Digi's XBee® ZB ZigBee PRO RF modules are compatible with other manufacturers' devices using the ZigBee PRO compliant feature set, providing great flexibility in choices of nodes to include on the network.

The BL4S100 series integrates on-board functionality to support a wide range of applications. Analog inputs, general purpose I/O as well as serial ports, along with 10Base-T Ethernet connectivity provide design resources for both commercial and industrial applications.

Develop and debug programs using Rabbit's industry-proven Dynamic C integrated development environment. The Dynamic C IDE includes the popular µC/OS-II Real-time Kernel operating system, point-to-point protocol (PPP), FAT file system, RabbitWeb, and other select libraries.

Connect the BL4S100 series board to the PC using a USB cable and then debug using breakpoints, watch expressions and other features oriented toward real-time embedded systems programming. An extensive library of drivers and sample programs is provided, including a royalty-free TCP/IP stack for network and Internet communications. Rabbit provides full source code for most of the library routines.

Development Tools

The BL4S100 Tool Kit contains the following essential hardware:

- Dynamic C CD-ROM, with complete product documentation on disk
- Demonstration Board with pushbutton switches and LEDs. The Demonstration Board can be hooked up to the BL4S100 to demonstrate the I/O and capabilities of the

BL4S100

- USB programming cable, used to connect your PC USB port to the BL4S100
- Universal AC adapter, 12 V DC, 1 A (includes Canada/Japan/U.S., Australia/N.Z., U.K., and European style plugs)
- CAT 5/6 Ethernet crossover cable

DYNAMIC C SOFTWARE DEVELOPMENT SYSTEM

Industry-proven Dynamic C® includes an editor, compiler, and in-circuit debugger. Programming is easy with hundreds of samples and libraries that can be used as building blocks to your code.

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Rabbit SBC BL2100 Series

ConnectCore 6UL SBC Pro

ConnectCore 6 SBC

Contact a Digi expert and get started today! CONTACT US ▸

Consider these four critical requirements for intelligent water management systems https://t.co/BNYWHL4mIc #IoT #4G… https://t.co/Wrb2nC4YQw

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