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Configurable Embedded Hardware

### RabbitFLEX - From click to ship.

RabbitFLEX is a new patent-pending manufacturing process that accelerates embedded development by giving you the power to seamlessly design, build, and integrate customconfigurable embedded controllers right into your embedded applications.

Until now, engineers have been forced to choose between off-the-shelf single board computers or custom-designed embedded hardware. Both choices result in high engineering costs and extended development times which can add to the design constraints. RabbitFLEX eliminates these problems by providing a rapid design and manufacturing platform with zero non-recurring

engineering costs. You pay only for what you need, and receive the finished product in days instead of months.



Large View

Get Started with RabbitFLEX

— View RabbitFLEX Introduction

- Launch the Online **Configurator** 

## Sales **Documentation**

## RabbitFLEX

PDF (1.5M)

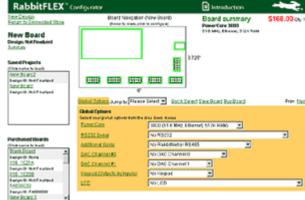
RabbitFLEX Data Sheet

- User's Manual HTML | PDF (3.2M)
- Dynamic C User's Manu HTML | PDF (4.7M)
- Dynamic C TCP/IP User's Manual Vol. 1 HTML | PDF (2.8M)
- Dynamic C TCP/IP User's Manual Vol. 2 HTML | PDF (3.7M)



### **Key Features:**

- Highly Configurable Platform
- Pre-engineered Circuit **Options**
- Fast Order Processing
- Supports Future **Design Changes**
- Accelerates Development Schedules
- Reduces Development Costs
- Lower Design Costs
- User-Friendly Web Interface



with the RabbitFLEX configurator. Custom boards priced from\$149-\$279 USD.

# Design your custom RabbitFLEX board

### Design Advantages:

- Ideal for customer-specific I/O configurations
- Pay for what your design really needs
- No NRE design model
- Web-based design tool

With the introduction of the RabbitFLEX platform, re-designs become a thing of the past. You can easily make custom-configured controller boards, all from the convenience of

### RabbitCore® Selector

• RabbitCore Selector (Beta

### Sample Programs

- Roadmap to Sample **Programs** HTML | PDF ( 687K )
- Roadmap to TCP/IP Sa Programs PDF (107K)

the web. RabbitFLEX capitalizes on a proprietary, fast-turn manufacturing process by providing an intuitive web interface for designing and configuring boards based on the precise needs of the project. Changes at any time in the future are easily addressed by simply modifying the original design and ordering the updated board configuration.

Whenever a RabbitFLEX order is placed, the real-time manufacturing line processes the board definition directly from the information associated with the web order. The board is then automatically built, tested, packaged, and shipped right to your door. All within a few days time – from click-to-ship. The RabbitFLEX process truly enables you to deliver custom embedded solutions in days instead of months. Only with RabbitFLEX does such an opportunity exist to sharply reduce development time and cost while bolstering efficiency and design quality. Powerful custom embedded solutions are now just a click away.

Boards developed in RabbitFLEX are programmed using our industry-proven Dynamic C ® development software. With hundreds of included sample programs, a royalty free TCP/IP stack, and optional software modules, complete embedded solutions can reach the market in no time.

### RabbitFlex

RabbitFlex offers a base level single-board computer with 40 configurable I/O, and is paired with either the PowerCore 3800 or the PowerCore 3810. For specifications please refer to the specification tables below. In the RabbitFLEX web interface the following options are available for placement.

- · Choice of a PowerCore
  - 0 3800
  - 0 3810
- Serial Communications
  - o (2) RS-232 (3-Wire)
  - o (1) RS-232 (5 Wire)
  - o (1) RS-485 (2-Wire)
  - (1) RS-422 ( RabbitNet Expansion Port )
- Up to 16 A/D channels
- Up to 2 D/A channels
- Up to 40 configurable I/O for many combinations of: digital inputs, sinking outputs, sourcing outputs, line drivers
- Supports matrix keypad
- Supports LCD's with or without backlight and/or contrast control
- Supports Power Routing of 5 V on all user-selectable connectors. 3.45 V on three connectors

### RabbiFLEX Specifications

Features	With PowerCore 3800	With PowerCore 3810
Microprocessor	Rabbit 3000 @ 51.6 MHz	Rabbit 3000 @ 25.8 MHz
EMI Reduction	Spectrum Spreader for reduced EMI (radiated emissions)	
Ethernet Port	10Base-T, RJ-45, 2 LEDs	None
SRAM	512K program (fast SRAM) +512K data	256K data
Flash Memory (program)	512K	
Serial Flash	1 MB	None
	3 V lithium coin type 2032, 220 mA•h	



**Backup Battery** (to support RTC and data SRAM) 40 individually configurable I/O: • All 40 configurable as digital inputs, sinking or sourcing digital outputs, line drivers, bidirectional logic, or as +5 V DC power points Configurable I/O • Up to 24 configurable as +3.45 V DC power points • Up to 16 configurable as analog voltage or current inputs Up to two analog outputs available, one of which can be **Analog Output** configured to drive an 8 Ω loudspeaker. 4 serial ports: • Two RS-232 or one RS-232 (with CTS/RTS) Serial Ports • One RS-485 (terminated or un-terminated) or one RS-422 RabbitNet TM SPI master port One serial port dedicated for programming/debug Max. asynchronous rate = CLK/8 Serial Rate Max. synchronous rate = CLK/2 RJ-45 Connectors: One Ethernet and one RabbitNet (if options selected) Friction-lock connectors: Connectors • Up to six polarized 2 × 5 terminals with 3 mm pitch, one 2 × 3 terminal with 3 mm pitch Programming Port: • 2 × 5 IDC, 1.27 mm pitch Real-Time Clock Yes Ten 8-bit timers (6 cascadable, 3 reserved for internal peripherals), Timers One 10-bit timer with 2 match registers Watchdog/Supervisor Yes Unregulated 8-43 V DC Unregulated 8-40 V DC (draws 13.3 W) (draws 6.7 W) DC 24-60 V AC with center-19-57 V AC with centertapped transformer (draws Input Power tapped transformer (draws **Options** 13.3 W) 6.7 W) 12-36 V AC with untapped 10-29 V AC with untapped standard transformer (draws standard transformer (draws 13.3 W) 6.7 W)

Operating Temp. -40°C to +70°C

Humidity 5-95%, noncondensing

Standoffs/Spacers Provision for 6

Board Size 3.725" × 6.000" × 1.22" (95 mm × 152 mm × 31 mm)



Ordering Info

Check Out 🛒



### Getting Started with RabbitFLEX is easy.

Start by visting our online introduction to RabbitFLEX. When you are ready to start building your boards, simply launch the RabbitFLEX configurator and complete your design. Be sure to include a RabbitFLEX Tool Kit with your order. This toolkit contains everything you need to complete your development package.

Get Started with RabbitFLEX

<u>— View RabbitFLEX Introduction</u> <u>— Launch the Online Configurator</u>

**Development Kits for New Users** 

Everything You Need to Begin Development! Start your evaluation and design efforts today with a RabbitFLEX tool kit. Includes our Dynamic C development system and complete documentation on CD-ROM, a demo board with 4 LED's, 4 switches and buzzer, serial cable for programming and debugging, Getting Started manual, and AC adapter (U.S./Canada only). Note: RabbitFLEX boards are configured and ordered separately from the

 Description
 Part Number
 U.S. Pricing

 RabbiFLEX Tool Kit
 U.S. - 101-1098 Int'l - 101-1099
 \$199 qty. 1
 Buy!

Complete your system with a custom RabbitFLEX Board

Launch

The displayed price is for U.S. purchases made directly from Rabbit. Non U.S. and Channel prices may vary. All prices are in U.S. Dollars.

**Product Options and Accessories** 

Description Part Number U.S. Pricing

**Programming/Development Tools** 

**Dynamic C 9.** Full-feature compiler, editor, and debugger (included in all development kits and tool kits).

Details

**Add-On Software Modules.** Source code and sample programs for SNMP, PPP, microC/OS-II, and more.

Details

**RS-232-to-USB Converter Cable.** Required for USB-only PCs.

20-151-0178 \$39 qty. 1

Details

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Reference Books

Description Part Number U.S. Pricing

Embedded Systems Design using the Rabbit 3000 Microprocessor - Interfacing, Networking, and Application Development by Kamal Hyder & Bob Perrin. Authors Kamal Hyder and Bob Perrin are embedded engineers with years of experience and they offer a wealth of design details, "insider" tips, and techniques. This a reference you can't be without.

040-0003 \$49 qty. 1

Details

Embedded Ethernet and Internet Complete, Designing and programming small devices for networking by Jan Axelson. Complete examples using RabbitCore modules (RCM3200) show how to implement 040-0002 \$49 qty. 1 Details networking applications.

MicroC/OS-II: The Real-Time Kernel by Jean

**J. Labrosse.** The Real-Time Kernel contains over 200 pages of new examples and explanations of MicroC/OS real-time kernel.

040-0001 \$65 qty. 1 Details

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