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**Understanding Embedded - Microcontroller, Microprocessor, FPGA Modules**

Embedded - Microcontroller, Microprocessor, and FPGA Modules are fundamental components in modern electronic systems, offering a wide range of functionalities and capabilities. Microcontrollers are compact integrated circuits designed to execute specific control tasks within an embedded system. They typically include a processor, memory, and input/output peripherals on a single chip. Microprocessors, on the other hand, are more powerful processing units used in complex computing tasks, often requiring external memory and peripherals. FPGAs (Field Programmable Gate Arrays) are highly flexible devices that can be configured by the user to perform specific logic functions, making them invaluable in applications requiring customization and adaptability.

Applications of Embedded - Microcontroller,

Details

Product Status	Obsolete
Module/Board Type	MPU Core
Core Processor	Rabbit 3000
Co-Processor	-
Speed	22.1MHz
Flash Size	256KB
RAM Size	128KB
Connector Type	IDC Header 2x20
Size / Dimension	1.23" x 2.11" (31mm x 54mm)
Operating Temperature	-40°C ~ 85°C
Purchase URL	https://www.e-xfl.com/product-detail/digi-international/20-101-0673

DIGI
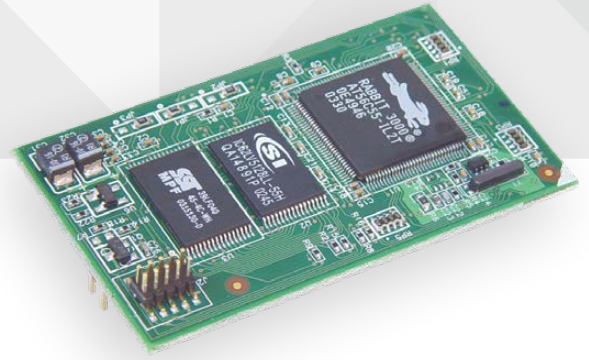
RABBITCORE®
RCM3600 SERIES

Extremely compact and low-cost Rabbit® 3000 microprocessor based core module designed for a wide variety of applications
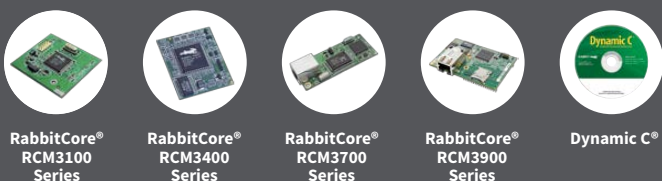
The RabbitCore RCM3600 series is a perfect introduction into embedded control and monitoring. Its small size and ease of integration when paired with Dynamic C® allow engineers to develop a control and monitoring solution for many of today's applications. The RCM3600 mounts directly onto a user-designed motherboard with a single 2x20 dual row IDC header, interfacing with all types of CMOS-compatible digital devices. Built-in low EMI features, including a clock spectrum spreader, practically eliminate EMI problems, which helps with passing CE and RF emissions tests.

Rabbit hardware and Dynamic C are designed in a complementary fashion for maximum performance and ease of use in embedded systems. The additional software components in Dynamic C allow you to add functionality for customized embedded applications.

BENEFITS

– Rabbit 3000 microprocessor at 22 MHz
– Up to 512K Flash/512K SRAM
– 33 parallel digital I/O with configurable options
– 4 serial ports (IrDA, HDLC, async, SPI)
– 5 VDC input, 3.3VDC interface
– Compact footprint: 2.11" x 1.23" x 0.62" (54 mm x 31 mm x 16 mm)
– Ready-made platform for fast time-to-market – save up to 3 months of design integration time
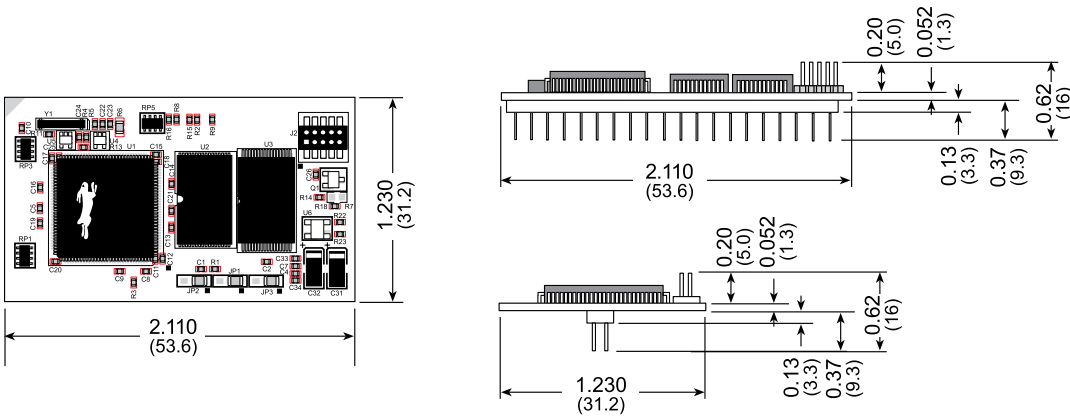– Low-cost embedded microprocessor module

RELATED PRODUCTS

RabbitCore®
RCM3100
Series

RabbitCore®
RCM3400
Series

RabbitCore®
RCM3700
Series

RabbitCore®
RCM3900
Series

Dynamic C®

APPLICATION EXAMPLE

WAREHOUSE OR
INDUSTRIAL BUILDING

Ethernet

RABBITCORE® RCM3600
Inside Message
Notification System

Fire
Detector

Ceiling
Speaker

Fire Pull
Handle

RS-232

Remote Intercom
Interface

Emergency
Strobe Light

SPECIFICATIONS	RCM3600	RCM3610
FEATURE		
MICROPROCESSOR	Rabbit® 3000 at 22 MHz	
FLASH MEMORY	512K	256K
SRAM	512K	128K
BACKUP BATTERY	Connection for user-supplied backup battery (to support RTC and SRAM)	
GENERAL-PURPOSE I/O	33 parallel digital I/0 lines: • 31 configurable I/O • 2 fixed outputs	
ADDITIONAL I/O	Reset	
AUXILIARY I/O BUS	Can be configured for 8 data lines and 5 address lines (shared with parallel I/O lines), plus I/O read/write	
SERIAL PORTS	Four 3.3V CMOS-compatible ports configurable as: • 4 asynchronous serial ports (with IrDA) or • 3 clocked serial ports (SPI) plus 1 HDLC (with IrDA) or • 1 clocked serial port (SPI) plus 2 HDLC serial ports (with IrDA)	
SERIAL RATE	Maximum asynchronous baud rate = CLK/8	
SLAVE INTERFACE	A slave port allows the RCM3600 to be used as an intelligent peripheral device slaved to a master processor, which may either be another Rabbit 3000 or any other type of processor	
REAL-TIME CLOCK	Yes	
TIMERS	Ten 8-bit timers (6 cascadable), one 10-bit timer with 2 match registers	
WATCHDOG/SUPERVISOR	Yes	
PULSE-WIDTH MODULATORS	4 PWM output channels with 10-bit free-running counter and priority interrupts	
INPUT CAPTURE/QUADATURE DECODER	2-channel input capture can be used to time input signals from various port pins • 1 quadrature decoder unit accepts inputs from external incremental encoder modules or • 1 quadrature decoder unit shared with 2 PWM channels	
POWER	5V ±0.25 VDC 60 mA @ 22.1 MHz, 5V; 38 mA @ 11.06 MHz, 5V	
OPERATING TEMPERATURE	-40° C to +85° C	
HUMIDITY	5% to 95%, non-condensing	
CONNECTORS	One 2 x 20, 0.1" pitch	
BOARD SIZE	1.23" × 2.11" × 0.62" (31 mm × 54 mm × 16 mm)	

PART NUMBERS	DESCRIPTION
20-101-0672	RCM3600
20-101-0673	RCM3610

91001599
C2/816

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