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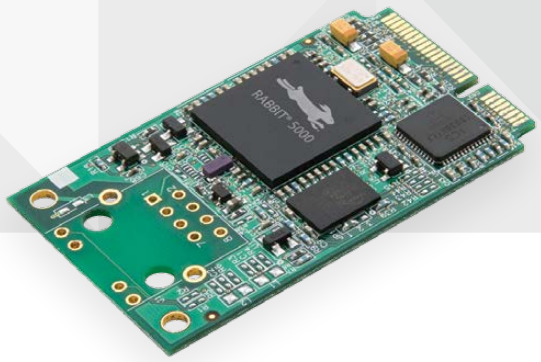
Understanding Embedded - Microcontroller, Microprocessor, FPGA Modules

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 5000
Co-Processor	-
Speed	50MHz
Flash Size	1MB (Internal), 2MB (External)
RAM Size	128KB (Internal), 512KB (External)
Connector Type	Edge Connector - 52
Size / Dimension	1.2" x 2" (30mm x 51mm)
Operating Temperature	-40°C ~ 85°C
Purchase URL	https://www.e-xfl.com/product-detail/digi-international/20-101-1307

ULTRA-COMPACT
WI-FI MODULE



MINICORE® RCM5700 SERIES

A low-cost, ultra-compact, pin-compatible Ethernet control and communications solution for your embedded design

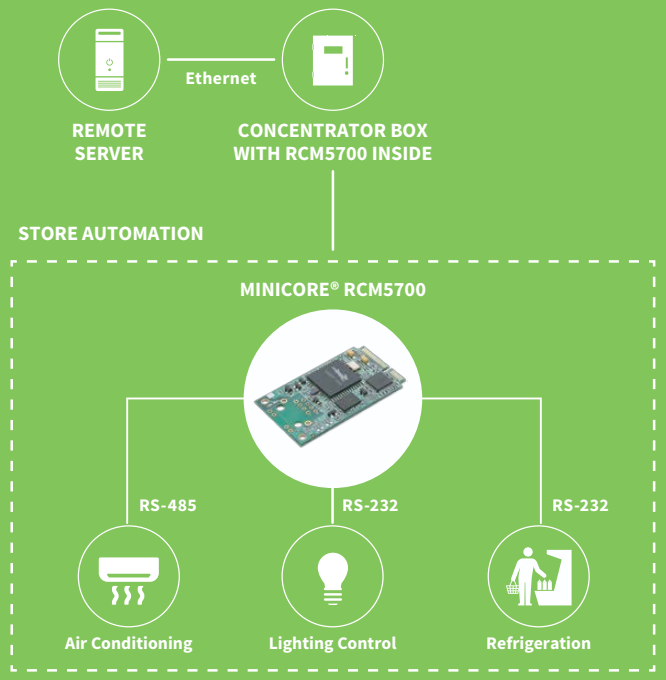
The MiniCore RCM5700 series offers an integrated software and hardware platform that can shorten your design cycle from years to months. RCM5750 and RCM5760 allow datalogging capabilites with increased memory options.

With six serial ports, four configurable as SPI, the RCM5700 series can easily embed into any existing or new design and is pin-compatible with current and future MiniCore products, such as MiniCores offering Wi-Fi 802.11b/g. The embedded web server offers an added level of control and monitoring for today's intensive applications.

BENEFITS

- 10/100Base-T Ethernet
- Up to 640 KB SRAM for data, 1 MB Flash memory for program storage, 2 MB serial Flash for mass storage
- Up to 32 GPIO lines and 6 serial ports
- Serial to Ethernet bridge
- Embedded web server, Remote Firmware Update, open source code and royalty-free
- Cost-competitive embedded solution
- Quick time-to-market

APPLICATION EXAMPLE



RELATED PRODUCTS


Rabbit MiniCore® RCM6700

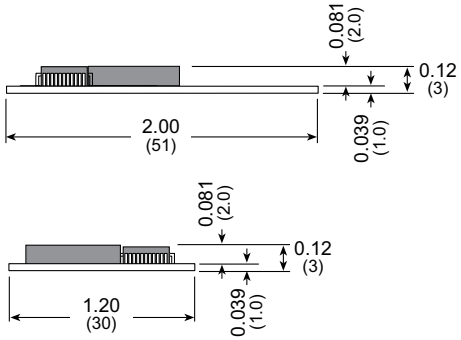

Rabbit MiniCore® RCM6600W

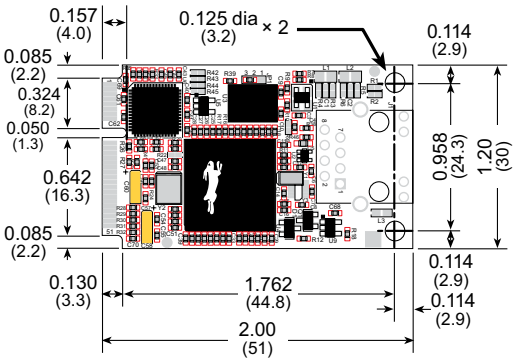

RabbitCore® RCM3000 Series

Dynamic C®


ConnectCard™ for i.MX28

SPECIFICATIONS	RCM5700	RCM5710	RCM5750	RCM5760
FEATURES				
MICROPROCESSOR	Rabbit® 5000 at 50 MHz			
EMI REDUCTION	10/100Base-T (Ethernet signals only)	10/100Base-T w/RJ-45 connector	10/100Base-T (Ethernet signals only)	10/100Base-T w/RJ-45 connector
FLASH MEMORY (CODE)	1 MB parallel Flash			
SRAM (DATA)	128K internal to Rabbit 5000		128K internal to Rabbit 5000; 512K external Fast SRAM	
BATTERY BACKABLE SRAM (DATA)	None			
MASS STORAGE OPTION	None		2 MB serial Flash	
BACKUP BATTERY	Connection for user-supplied backup battery (to be used for RTC)		None	
GENERAL PURPOSE I/O	Up to 32 parallel digital I/O			
SERIAL PORTS	6 high-speed, CMOS-compatible ports: • All 6 configurable as asynchronous (with IrDA), 4 as clocked serial (SPI), and 2 as SDLC/HDLC • 1 asynchronous clocked serial port shared with programming port			
SERIAL RATE	Max. async = CLK/8, Max. sync = CLK/2			
SLAVE INTERFACE	Slave port allows the RCM5700 to be used as an intelligent peripheral device slaved to a master processor			
REAL-TIME CLOCK	Yes		Yes (no battery backup)	
TIMERS	Ten 8-bit timers (6 cascadable from the first), one 10-bit timer with 2 match registers, and one 16-bit timer with 4 outputs and 8 set/reset registers			
WATCHDOG/SUPERVISOR	Yes			
PULSE-WIDTH MODULATORS	4 channels synchronized PWM with 10-bit counter 4 channels variable-phase or synchronized PWM with 16-bit counter			
POWER	3.15 - 3.45 VDC 70 mA @ 3.3V (typical — without Ethernet) 200 mA @ 3.3V (typical — with Ethernet)			
OPERATING TEMPERATURE	-40° C to +85° C			
HUMIDITY	5% to 95%, noncondensing			
CONNECTORS	Edge connectors for 52-pin Mini PCI Express socket	Edge connectors for 52-pin Mini PCI Express socket RJ-45 (Ethernet)	Edge connectors for 52-pin Mini PCI Express socket	Edge connectors for 52-pin Mini PCI Express socket, RJ-45 (Ethernet)
BOARD SIZE	1.20" × 2.00" × 0.12" (30 mm × 51 mm × 3mm)			





PART NUMBERS	DESCRIPTION
20-101-1235	RCM5700
20-101-1300	RCM5710
20-101-1306	RCM5750
20-101-1307	RCM5760

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