# Digi - 20-101-0508 Datasheet

**Welcome to E-XFL.COM**

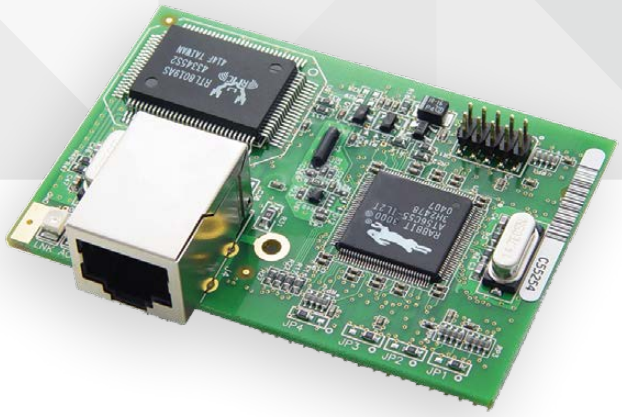
**Understanding Embedded - Microcontroller, Microprocessor, FPGA Modules**

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 | 30MHz |
| Flash Size | 256KB |
| RAM Size | 128KB |
| Connector Type | 2 IDC Headers 2x17 |
| Size / Dimension | 1.85" x 2.73" (47mm x 69mm) |
| Operating Temperature | 0°C ~ 70°C |
| Purchase URL | https://www.e-xfl.com/product-detail/digi-international/20-101-0508 |

MICROPROCESSOR
CORE MODULE



# RABBITCORE® RCM3000 SERIES

## Ideal for engineers who want to rapidly develop and implement embedded systems with fully integrated Ethernet connectivity

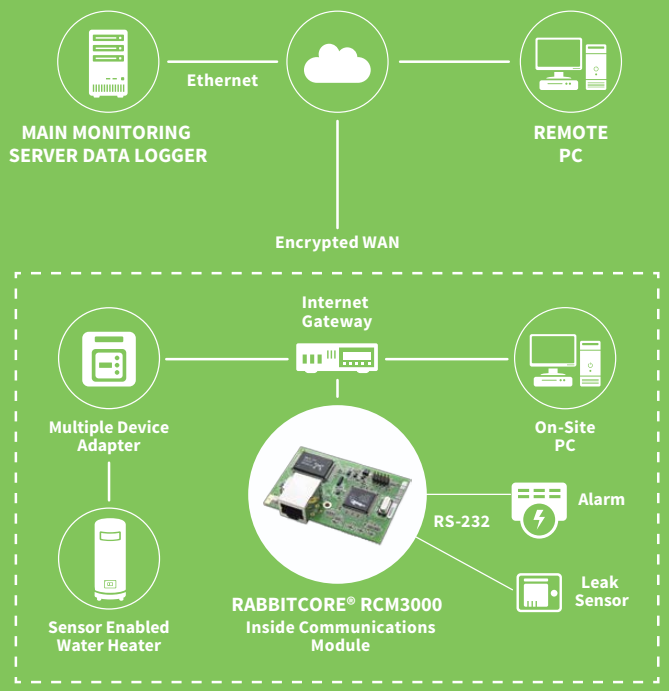
The RabbitCore RCM3000 series, featuring the Rabbit® 3000 microprocessor, boasts powerful features and integrated 10Base-T Ethernet to simplify integration. When paired with Dynamic C®, the RCM3000 series allows engineers to add device intelligence and I/O control for many of today's embedded designs. Its small form factor and low-power modes make the RCM3000 series perfect for remote device applications. The RCM3000 series is pin-compatible with the RCM3100 series, facilitating cost-effective implementation of both Ethernet and non-Ethernet systems.

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 embedded application customization.

### BENEFITS

- Rabbit 3000 microprocessor at 30 MHz
- Up to 512K Flash/512K SRAM
- 52 digital I/O and 6 serial ports (IrDA, HDLC, asynch, SPI)
- 3.3V operation, low power "sleepy" modes (< 2mA)
- Small form factor
- Royalty-free TCP/IP stack in source code
- Low-cost embedded microprocessor module
- Security software add-on modules available

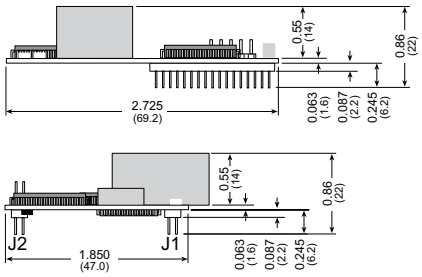
### APPLICATION EXAMPLE

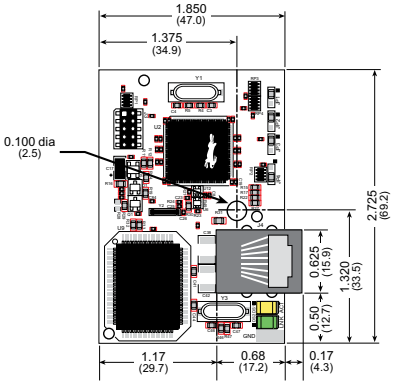



### RELATED PRODUCTS

RabbitCore® RCM3209 Series | RabbitCore® RCM3700 Series | Rabbit MiniCore® RCM6700 Series | ConnectCard® for i.MX28 | Dynamic C®

| SPECIFICATIONS | RCM3000 | RCM3010 |
|---|---|---|
| **FEATURE** | | |
| MICROPROCESSOR | Rabbit® 3000 at 30 MHz | |
| EMI REDUCTION | Spectrum spreader for reduced EMI (radiated emissions) | |
| ETHERNET PORT | 10Base-T interface, RJ-45, 2 LEDs | |
| FLASH MEMORY | 512K (2 × 256K) | 256K |
| SRAM | 512K | 128K |
| BACKUP BATTERY | Connection for user-supplied backup battery (to support RTC and SRAM) | |
| GENERAL-PURPOSE I/O | 52 parallel digital I/0 lines:<br>• 44 configurable I/O<br>• 4 fixed inputs<br>• 4 fixed outputs | |
| ADDITIONAL DIGITAL INPUTS | 2 startup mode, reset in | |
| ADDITIONAL DIGITAL OUTPUTS | Status, reset out | |
| AUXILIARY I/O BUS | 8 data lines and 6 address lines (shared with I/O) plus I/O read/write | |
| SERIAL PORTS | 6 shared high-speed, CMOS-compatible ports:<br>• 6 configurable as asynchronous (with IrDA), 4 as clocked serial (SPI), and 2 as SDLC/HDLC (with IrDA)<br>• 1 asynchronous serial port dedicated for programming<br>• Support for MIR/SIR IrDA transceiver | |
| SERIAL RATE | Max. asynchronous baud rate = CLK/8 | |
| SLAVE INTERFACE | A slave port allows the RCM3000 to be used as a master or as an intelligent peripheral device with Rabbit-based or any other type of processor | |
| REAL-TIME CLOCK | Yes | |
| TIMERS | Ten 8-bit timers (6 cascadable from the first), one 10-bit timer with 2 match registers | |
| WATCHDOG/SUPERVISOR | Yes | |
| PULSE-WIDTH MODULATORS | 10-bit free-running counter and 4 pulse-width registers | |
| INPUT CAPTURE | 2-channel input capture can be used to time input signals from various port pins | |
| QUADRATURE DECODER | 2-channel quadrature decoder accepts inputs from external incremental encoder modules | |
| POWER | 3.15V to 3.45 VDC 150 mA @ 3.3V | |
| OPERATING TEMPERATURE | –40° C to +70° C | |
| HUMIDITY | 5% to 95%, non-condensing | |
| CONNECTORS | Two 2 × 17, 2 mm pitch (for connection to headers J4 and J5) | |
| BOARD SIZE | 1.850" × 2.725" × 0.86" (47 mm × 69 mm × 22 mm) | |




| PART NUMBERS | DESCRIPTION |
|---|---|
| **20-101-0507** | RCM3000. 512K Flash/512K SRAM |
| **20-101-0508** | RCM3010. 256K Flash/128K SRAM |

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