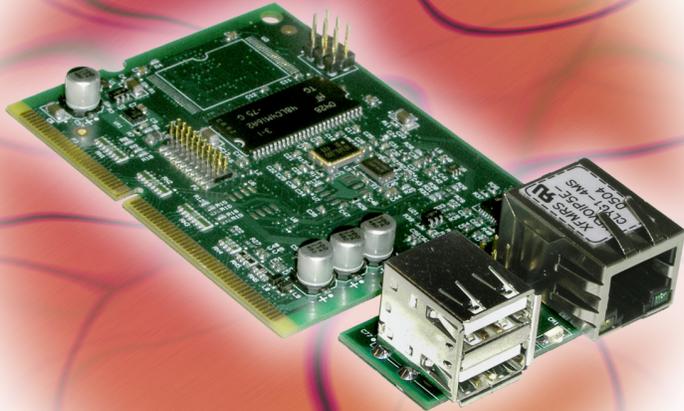
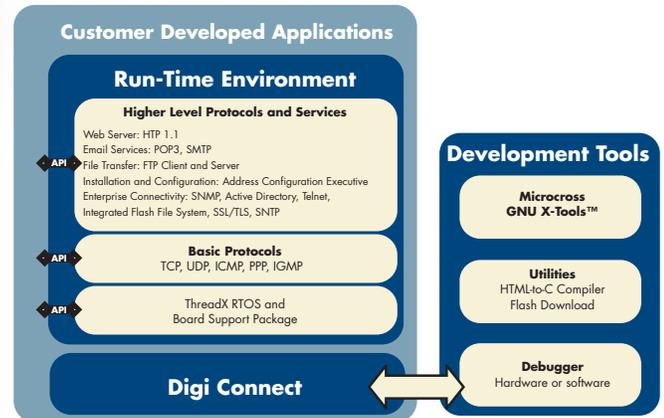


# ConnectCore™ 9C

Powerful ARM9 Core Module



Highly-integrated, compact DIMM form factor module based on the 155 MHz NS9360 ARM9 processor provides core processing functionality with integrated network connectivity.



## Features

- Powerful 32-bit NS9360 processor  
- ARM926EJ-S RISC core with DSP/Jazelle enhancements
- Compact SO-DIMM design
- Low power consumption
- Sleep mode power management
- Industrial operating temperature
- 4 MB Flash, 16 MB RAM integrated
- 10/100 Mbit Ethernet interface with on-board RJ-45 connector
- 802.3af compliant power pass-through (mid-span and end-span)
- Up to four high-speed serial ports  
- UART and SPI mode configurable
- I<sup>2</sup>C bus interface
- USB 1.1/2.0 compliant host/device  
- On-board host connector option
- Integrated LCD controller  
- Supports 18-bit active matrix TFT or single/dual panel STN displays (color/monochrome)
- Population options available  
- Processor, memory, connectors

## Overview

The ConnectCore 9C is a powerful and network optimized ARM9-based core module that enables original equipment manufacturers to design in main processor functionality and networking capabilities with a single, high-performance solution.

It delivers complete and versatile embedded network connectivity while providing additional main processor performance and bandwidth to handle sophisticated embedded applications in a variety of applications such as building automation systems, POS systems, RFID readers, medical devices, instrumentation, networked displays, transportation systems, industrial automation systems and many more.

Built on leading NetSilicon 32-bit NET+ARM technology, the ConnectCore 9C module also provides a seamless migration path to a fully integrated system-on-chip solution. Based on the easy-to-use and entirely royalty-free NetSilicon NET+Works® development platform, the ConnectCore 9C core module delivers a complete out-of-the-box solution for embedded software development. It provides all the integrated building blocks needed to quickly and cost-effectively create secure and fully network-enabled product solutions. This minimizes design risk and significantly accelerates the overall embedded software development process.

Complete development kits containing the module, development board, documentation, sample code, hardware/software debugging options, cables and accessories are available for evaluation and development use.

Please contact us at 1-877-OEM-DIGI or 952-912-3444 for additional information or to discuss your specific application requirements.



# Preliminary Features/Specifications

## HARDWARE

- 32-bit NS9360 high-performance RISC processor (155MHz) w/MMU
- On-board memory
  - 4 MB Flash and 16 MB RAM
- Up to 4 high-speed TTL serial ports
  - Throughput up to 921 Kbps
  - Full signal support
  - Hardware/software flow control
- Up to 4 SPI ports
  - Master data rate up to 8.35Mbps
  - Slave data rate up to 6.25 Mbps
- I<sup>2</sup>C v1.0 bus interface
  - Fast (400 kHz) and normal (100kHz) mode
  - 7-bit and 10-bit address modes
- USB 2.0 Host/Device Interface
  - Full speed (12 Mbps) and low speed (1.5 Mbps) support
- LCD controller
  - Support for 18-bit active matrix TFT displays at 256K colors
  - Single/dual panel STN displays
- General Purpose Timers/Counters/PWM
  - Up to 8 independent 16-/32-bit programmable timers, counters, or 4 PWM functions
- Four programmable external interrupts
- Up to 55 shared General Purpose Input/Output (GPIO) ports
  - Up to 7 high-current (8mA) pins
- Real Time Clock
  - Processor powered, no battery backup

## ENVIRONMENTAL

- Operating temperature: -40° C to +85° C (-40° F to +185° F)
- Relative humidity: 5% to 95% (non-condensing)
- Altitude: 12,000 ft (3657.6 m)

## REGULATORY APPROVALS

- FCC, Part 15 Class B
- EN 55022, Class B
- EN 61000-3-2 and EN 61000-3-3
- ICES-003, Class B
- VCCI, Class II
- AS 3548
- FCC Part 15 Subpart C Section 15.247
- IC (Industry Canada) RSS-210 Issue 5 Section 6.2.2(o)
- EN 300 328
- EN 301 489-3
- UL 60950-1
- EN 60950 (European Union)
- CSA C22.2, No. 60950
- EN 55024

## LEDS

- Ethernet connector
  - Link integrity
  - Network activity

## DIMENSIONS

- Length: 3.5 in (88.9 mm)
- Width: 2.1 in (53.34 mm)
- Height: 0.8 in (20.32 mm) with RJ-45 Ethernet connector

## CONNECTORS/PINOUTS

- SO-DIMM 144-position socket main signal connector
  - AMP 114-01114 or equivalent
  - Suitable for manual and machine placement
- On-board JTAG connector
- See Hardware Reference Manual for complete connector and pinout information

## DEVELOPMENT KIT FEATURES

- Microcross™ GNU X-Tools
- Documentation
  - Hardware Reference Manual
  - Programmer's Guide
  - API Reference
  - Advanced Web Server Toolkit
- Sample code
- Driver source code
  - Serial, Ethernet, I2C, SPI, USB, LCD
- Digi Connect module w/JTAG
- Development board
- Macgraigor Raven JTAG debugger or gdb software debugger
- ThreadX Real-Time Operating System with picokernel™ architecture
  - Requires less than 25 Kb code space
- Fusion™ TCP/IP stack with full networking protocol and extended network services support
- Universal IP address assignment through Address Configuration Executive (ACE)
- Network discovery services
  - ADDP, LDAPv3
- Allegro Software embedded web server
  - DES, 3DES, AES (NIST certified)
- Flexible and robust file system supporting RAM and Flash
- SMIcng SNMP MIB compiler
- Micro XML SAX parser
- Additional utilities
  - HTML-to-C compiler
  - Flash download

## NETWORK INTERFACE

- Standard: IEEE 802.3
- Physical Layer: 10/100Base-T
- Data rate: 10/100 Mbps (auto-sensing)
- Mode: Full or half duplex (auto-sensing)
- On-board connector: RJ-45 w/magnetics
- 802.3af power pass-through (mid-span and end-span)

## POWER REQUIREMENTS

- Module: 3.3VDC @ 750 mA max
- USB interface: 5VDC @ 500mA max per port (optional)

## MODEL.....PART NUMBERS

Model	North America	International
<b>Custom Application</b>		
ConnectCore 9C - NET+Works Development KIT	Call	Call
ConnectCore 9C - Core Module	Call	Call

Bulk packs and customer-specific packaging configurations available. Please visit our website for a complete list of available part numbers.

## DIGI SERVICE AND SUPPORT

You can purchase with confidence knowing that Digi is here to support you with expert technical support and a strong five-year warranty. <http://support.digi.com>

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