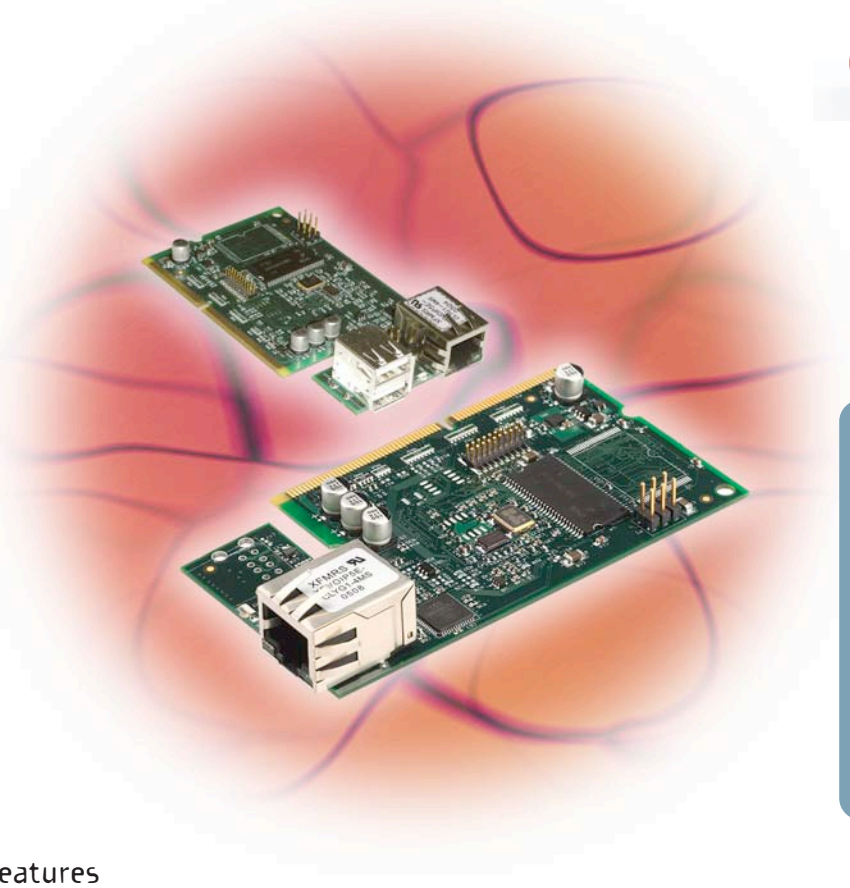
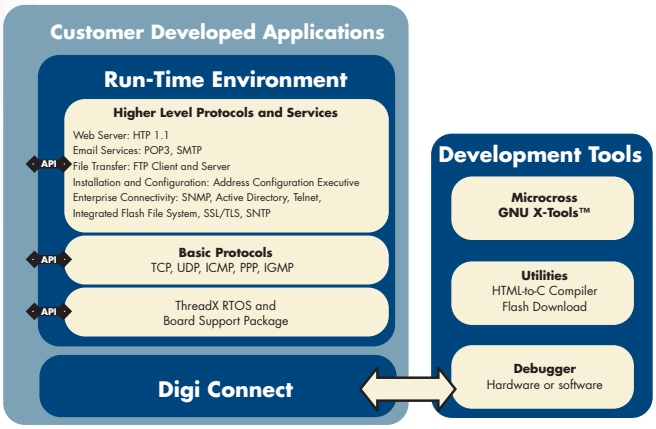
ConnectCore™ 9C

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 power pass-through
- Up to four high-speed serial ports
  - UART and SPI mode configurable
- I²C bus interface
- USB 1.1/2.0 compliant host/device
  - On-board host connector option
- Integrated LCD controller
  - Supports 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. It enables original equipment manufacturers to design in main processor functionality and networking capabilities with a single, high-performance solution.

The ConnectCore 9C delivers complete and versatile embedded network connectivity while providing additional main processor performance and bandwidth to handle sophisticated embedded applications. These include 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 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.

HARDWARE

- 32-bit NS9360 high-performance RISC processor (155 MHz) w/MMU
- On-board memory
  - 4 MB Flash and 16 MB RAM
- Up to 4 high-speed TTL serial ports
  - Data rate up to 921 Kbps
  - Full signal support
  - Hardware/software flow control
- Up to 4 SPI ports
  - Master data rate up to 11.25 Mbps
  - Slave data rate up to 4.5 Mbps
- I^2C v1.0 bus interface
  - Fast (400 kHz) and normal (100 kHz) 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
  - Up to SVGA with up to 18 bpp
  - TFT and single/dual panel STN displays
- General Purpose Timers/Counters/PWM
  - Up to 8 independent 16-/32-bit programmable timers, counters, or 4 PWM functions
- 4 programmable external interrupts
- Up to 55 shared General Purpose Input/Output (GPIO) ports
  - Up to 7 high-current (8 mA) pins
- Real-time clock
  - Processor powered, no battery backup

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)

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)

LEDS

- Ethernet connector
  - Link integrity
  - Network activity
- Module
  - Two status LEDs (software controlled)

DIMENSIONS

- Length: 3.50 in (88.90 mm)
- Width: 2.10 in (53.34 mm)
- Height: 0.80 in (20.32 mm) with RJ-45 Ethernet connector

CONNECTORS/PINOUTS

- SO-DIMM 144-position socket main signal connector
  - AMP 390112-1 or equivalent
  - Suitable for manual and machine placement
- On-board JTAG connector
- See Hardware Reference Manual for complete connector and pinout information

POWER REQUIREMENTS

- Module: 3.3VDC @ 450 mA max
- USB interface: 5VDC @ 500 mA max per port (optional)

REGULATORY APPROVALS (IN PROGRESS)

- FCC Part 15 Class B
- EN55022 Class B
- EN61000-3-2
- EN61000-3-3 ICES-003 Class B
- AS/NZS CISPR 22
- EN55024
- UL60950-1
- CSA C22.2 No.60950-1-03 IEC/EN60950-1
- VCCI V.3/2001.04 Class B

DEVELOPMENT KIT FEATURES

- ConnectCore 9C module
- Development board
- Macgraigor Raven JTAG debugger or gdb software debugger
- 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
- ThreadX Real-Time Operating System with picokernel™ architecture
  - Requires less than 25 Kb code space
- Fusion™ TCP/IP stack with full networking protocol, extended network services support, and stack by-pass option
- Universal IP address assignment through Address Configuration Executive (ACE)
- Network discovery services
  - ADDP, LDAPv3
- Allegro Software Embedded Web Server
- SSL 3.0/TLS 1.0 with strong encryption
  - 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

MODEL.....PART NUMBERS

Model	North America	International
ConnectCore 9C NET+Works GNU Development Kit w/Raven Debugger	CC-9C-GN	CC-9C-GN
ConnectCore 9C NET+Works GNU Development Kit w/Software Debug Option	CC-9C-GN-NR	CC-9C-GN-NR

Bulk packs and population options available. Please visit our website for a complete list of available part numbers and product support options.

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

Digi International
11001 Bren Road E.
Minnetonka, MN 55343 USA
PH: 877-912-3444
952-912-3444
FX: 952-912-4952
Email: info@digi.com
www.digi.com

Digi International GmbH
Joseph-von-Fraunhofer Str. 23
D-44227 Dortmund
Germany
PH: +49-231-9747-0
FX: +49-231-9747-111
www.digi.de

Digi International (HK) Limited
Suite 1703-05, 17/F.,
K Wah Centre
191 Java Road
North Point, Hong Kong
PH: +852-2833-1008
FX: +852-2572-9989
www.digi.cn

NetSilicon
411 Waverley Oaks Road #304
Waltham, MA 02452 USA
PH: 800-243-2333,
781-647-1234
FX: 781-893-1338
Email: info@netsilicon.com

91001328
B2/805

Mouser Electronics

Authorized Distributor

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

Digi International:

CC-9C-GN CC-9C-GN-NR