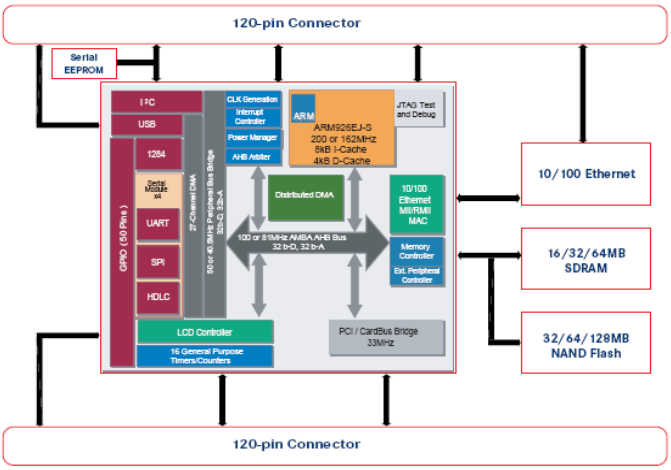
PRELIMINARY
Product Brief

ConnectCore™ 9P

Compact high-performance 32-bit NET+ARM processor module family combines superior performance and design integration flexibility with complete embedded software platform support.



Features/Benefits

- **240-pin core processor module in compact 60 x 44 mm form factor**
- **Powerful 32-bit NET+ARM processor**
  - **NS9750/9360 with ARM926EJ-S core**
- **Up to 128 MB Flash / 128 MB RAM**
- **On-board 10/100 Ethernet MAC/PHY**
- **Up to 4 high-speed serial ports**
  - **UART and SPI configurations**
- **USB host and device mode support**
- **Fast-mode I^2C hardware interface**
- **On-chip LCD controller (TFT/STN)**
- **Integrated Real-Time Clock w/support for external battery backup**
- **Up to 73 shared GPIO port options**
- **External memory bus interface**
- **PCI v2.2/Cardbus option (NS9750)**
- **Complete development platform support offers software design flexibility**
  - **NET+OS®, LxNETES™ Linux and Microsoft® Windows® CE 5.0**

Overview

The ConnectCore 9P modules are part of the ConnectCore embedded core processor module family combining superior performance and a complete set of integrated peripherals and component connectivity options in a compact and versatile form factor.

Built on leading NetSilicon® 32-bit NET+ARM technology, the network-enabled ConnectCore 9P family provides a modular and scalable core processor solution that significantly minimizes software and hardware design risk and dramatically improves the time-to-market aspects of your product development process.

The wide range of available embedded software platform options makes it the ideal choice for your network-enabled product solutions, whether your application requires the small footprint, fast response time, and secure networking offered by our ThreadX®-based NET+OS environment, the comprehensive and scalable set of feature-complete high-level software components and applications of Microsoft Windows CE, or the flexibility and power of the open Linux environment and its extensive software library.

Complete and royalty-free development kits supporting the NET+OS, LxNETES Linux, and Microsoft Windows CE environments are available for platform evaluation and product development use. All development kits include a development board, hardware debugging options, board support packages, sample code, documentation, cables, and related accessories.

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Features/Specifications

HARDWARE

ConnectCore 9P 9750

- 32-bit NET+ARM (ARM926EJ-S) high-performance RISC processor NS9750 @ 200 MHz
- Up to 128 MB NAND Flash and 64 MB SDRAM
  - Standard population 32 MB Flash and 16 MB RAM
- Integrated 32-bit PCI v2.2/Cardbus Bridge (33 MHz)
- 16 General Purpose Timers/Counters
- Up to 50 GPIO port options

ConnectCore 9P 9360

- 32-bit NET+ARM (ARM926EJ-S) high-performance RISC processor NS9360 @ 177 MHz
- Up to 128 MB NAND Flash and 128 MB SDRAM
  - Standard population 32 MB Flash and 32 MB RAM
- 8 General Purpose Timers/Counters or 4 PWM functions
- Up to 73 GPIO port options

ConnectCore 9P Family

- Integrated 10/100 Mbps Ethernet MAC/PHY
- Up to four serial interfaces w/UART and SPI mode
- Integrated USB 2.0 compliant host/device interface
  - Full speed (12 Mbps) and low speed (1.5 Mbps) mode
- On-chip I^2C bus interface (100/400 kHz)
- Flexible LCD controller with support for TFT/STN displays
  - Up to SVGA resolution with up to 18/24 bpp
- External memory bus interface
  - 32-bit data bus and 28-bit address bus
- Real-Time Clock (RTC) w/support for external battery backup
- 8 KB serial EEPROM for configuration storage
- On-board JTAG interface

ENVIRONMENTAL

- Storage temperature: -50˚ C to +125˚ C (-58˚ F to +257˚ F)
- Operating temperature: 0˚ C to +70˚ C (+32˚ F to +158˚ F)
- Relative humidity: 5% to 90% (non-condensing)
- Altitude: 12,000 feet (3658 meters)

POWER REQUIREMENTS

ConnectCore 9P 9750

- 3.3VDC @ 600 mA (max)

ConnectCore 9P 9360

- 3.3VDC @ 400 mA (max)

ETHERNET INTERFACE

- Standard: IEEE 802.3
- Physical layer: 10/100Base-T
- Data rate: 10/100 Mbps (auto-sensing)
- Mode: Full or half duplex (auto-sensing)

DEVELOPMENT KITS

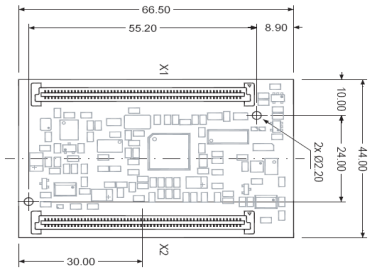
- NET+OS 6.1
  - Hardware debugger
  - GNU development tool chain
    - gcc v3.2.1, Insight v5.1.1
    - binutils v2.13.1, newlib v1.11.0
  - ThreadX™ RTOS
  - Fusion™ TCP/IP stack
    - DNS, SNMPv2, LDAP, POP, SMTP, PPP, FTP, SNTP, Telnet, FastIP, Fast Sockets, Multi-Homing
  - Universal IP address assignment
    - Static IP, DHCP, BOOTP, Auto-IP
  - Allegro embedded web server
  - SSL/TLS with DES/3DES/AES encryption
  - Flash/RAM file system with wear-leveling
  - SMICng SNMP MIB compiler
  - Micro XML SAX parser
- Microsoft Windows CE 5.0
  - Complete BSP (Board Support Package) for Microsoft Windows CE 5.0 w/source code
    - Boot loader (U-Boot)
    - On-chip Ethernet
    - USB Host
    - Display driver (LCD)
    - Touch Screen
    - PCI
- LxNETES 3.1
  - Linux kernel v2.6.11
  - GNU development tool chain
    - gcc v3.3.3, gdb v6.2
    - uClibc v0.9.26, Busybox v1.00 pre-built
  - File system support for JFFS2 and NFS
  - I^2C, USB, PCI , EEPROM support
  - BOA single-tasking HTTP server

All development kits provide sample code and documentation, development board with hardware support for Ethernet, RS232, USB, CAN bus, audio, LCD, touch screen, Mini PCI, CompactFlash, and a power supply.

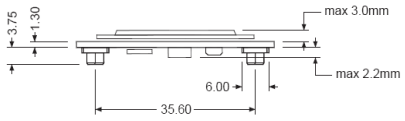
DIMENSIONS

- Length: 2.362 in (6.0 cm)
- Width: 1.732 in (4.4 cm)
- Height: 0.395 in (1.0 cm)

Bottom View



Side View



All measurements in millimeter

MODEL.....PART NUMBERS

Model	North America	International
CC9P 9750 NET+OS 6.1 Development Kit	FS-9053	FS-9053
CC9P 9750 LxNETES 3.1 Development Kit with 5.7" LCD (TFT) and touch screen	FS-9033	FS-9033
CC9P 9750 Microsoft Windows CE 5.0 Kit with 5.7" LCD (TFT) and touch screen	FS-9034	FS-9034
CC9P 9360 LxNETES 3.1 Development Kit with 5.7" LCD (TFT) and touch screen	FS-9065	FS-9065
CC9P 9360 Microsoft Windows CE 5.0 Kit with 5.7" LCD (TFT) and touch screen	FS-9066	FS-9066

Please contact us for additional part number information or visit our website.

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