ConnectCore™ 9U

Powerful ARM9 Core Module

Block Diagram:

- 48pin Conn
- DATA[0-7]
- DATA[0-31]
- ADDR[0-9]
- ADDR[0-23]
- JTAG
- CS1
- WE, OE, CS3, CS4
- AT91RM
- SDRAM 16/32MB
- PORTA[0-7]
- PORTC[0-7]
- CS0
- FLASH 2/4/8 16/32MB
- PHY
- MII
- EEPR OM
- USB Host/Device

Universal 32-bit embedded core processormodule offers a wide range of componentconnectivity options and pin-compatible upgrade options for designs using the ConnectCore™ 7U.

Features/Benefits

- **Core processor module in compact 48-pin DIP form factor**

- **Pin-compatible with ConnectCore 7U**

- **Powerful 32-bit Atmel ARM processor**
  - 160 MHz AT91RM200 with ARM920T core

- **32 MB SDRAM and 16 MB Flash**

- **Integrated 10/100 Ethernet MAC/PHY**

- **USB 2.0 Full Speed host or device**

- **Up to two high-speed serial ports**
  - UART and I²S

- **16 shared GPIO port options**

- **External memory bus interface**

- **Software design flexibility through royalty-free development platforms**
  - LxNETES™ Linux

Overview

The ConnectCore 9U module, based on the FS Forth™ UNC90, is a powerful embedded core module in a compact package. It is well-suited for a variety of networked embedded devices or Industrial Automation applications.

Built on a powerful 32-bit ARM technology, the ConnectCore 9U is a powerful and universal embedded module in a compact 48-pin DIP (Dual-Inline Package) form factor. It provides the ideal core processor platform for product designs demanding an additional level of performance, connectivity and development platform flexibility.

The ConnectCore 9U embedded module offers 32 MB of RAM and 16 MB of on-board Flash memory, an integrated 10/100 Mbit Ethernet MAC/PHY, up to two configurable UART/SSI ports, an I²C bus software interface, 16 shared GPIO ports for application-specific use, and an external 10-bit address/8-bit data bus interface for added component integration flexibility.

Since it is pin-compatible with the ConnectCore 7U and has the same dimensions and footprint, the ConnectCore 9U can be used with no changes to existing hardware. It provides over three times the processing speed, additional memory and USB support. The ARM9 core includes an MMU, so a full Linux implementation is available.

A complete and royalty-free LxNETES Linux development kit with module, development board, documentation, hardware debugging options, cables and accessories is available for evaluation/development use.

Contact us to learn more about our professional support and design services for all of your project-specific hardware and software development needs.

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Features/Specifications

HARDWARE

- 32-bit ARM high-performance RISC processor Atmel AT91RM200 @ 160 MHz
- 16 MB Flash and 32 MB RAM on-board
- Integrated 10/100 Mbps Ethernet MAC/PHY
- 2 serial interfaces
  - UART mode w/data rates up to 230 Kbps
  - I²S
- 8 KB serial EEPROM for configuration storage
- Standard mode I²C software bus interface (100 kHz)
- External memory bus interface
  - 10 adress bits, 8 data bits, 2 external chip selects
- 2 independent 27-bit timers (IRQ/FIQ, 2 microseconds to 20 hrs)
- On-board JTAG interface

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

- LxNETES 3.2
  - Flash programming through on-board JTAG interface
  - Linux kernel v2.6
  - GNU development tool chain
    - gcc v3.3.2
    - gdb
  - uClibc v0.9.24
  - Dynamic loading of modules
  - Shared Libraries
  - File system support for CRAMFS, JFFS2, NFS and others
  - PPP driver support
  - STL and iostreams support
  - Samba client
  - Embedded web server (thttpd/BOA)
  - EEPROM support
  - Debugging via gdbserver (Ethernet and serial port)
  - Flash programming utilities
  - Sample code and documentation

ENVIRONMENTAL

- Storage temperature: -50° C to +125° C (-58° F to +257° F)
- Operating temperature: -25° C to +70° C (-4° F to +158° F)
- Relative humidity: 5% to 90% (non-condensing)
- Altitude: 12,000 feet (3658 meters)
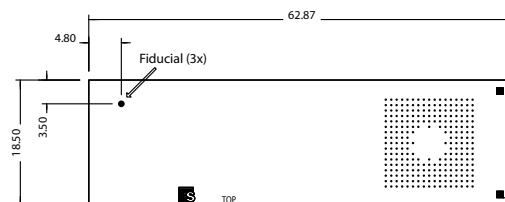
POWER REQUIREMENTS

- 3.3VDC @ 152 ma (operating)

DIMENSIONS

- Length: 2.475 in (6.287 cm)
- Width: 0.728 in (1.850 cm)
- Height: 0.409 in (1.040 cm)

MODEL......................PART NUMBERS

Model	North America	International
ConnectCore 9U Development Kit for LxNETES 3.3	FS-9067	FS-9067
ConnectCore 9U Module w/16 MB Flash	FS-373	FS-373

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

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