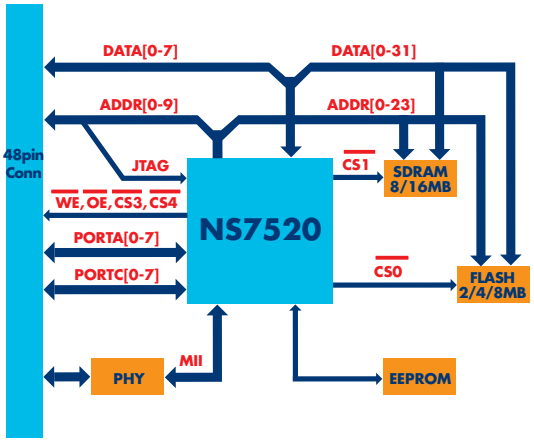
ConnectCore™ 7U

Powerful ARM7 Core Module



Universal 32-bit NET+ARM embedded core processor module offers a wide range of component connectivity options and superior software design flexibility through complete development platform support options.



Features

- Core processor module in compact 48-pin DIP form factor
- Powerful 32-bit NET+ARM processor
  - 55 MHz NS7520 w/ARM7TDMI core
- 16 MB RAM and up to 8 MB Flash
- Integrated 10/100 Ethernet MAC/PHY
- Up to 2 high-speed serial ports – UART and SPI (Master) configurations
- Standard mode I²C software interface
- 16 shared GPIO port options
- External memory bus interface
- Software design flexibility through royalty-free development platforms
  - NET+OS® and LxNETES™ Linux
- Optional VxWorks® support package
- Application-specific development kits
  - Java®, CAN, Bluetooth®, Biometrics, CompactFlash®/Wireless LAN, LCD

Overview

The ConnectCore 7U, based on FS Forth™ UNC20 product technology, is the first member of the ConnectCore embedded core processor module family to utilize the high-performance NetSilicon® NS7520 processor.

Built on leading NetSilicon 32-bit NET+ARM technology, the ConnectCore 7U is a powerful and universal embedded module in a compact 48-pin Dual In-line Package (DIP) 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 7U embedded module offers 16 MB of RAM and up to 8 MB of on-board Flash memory, an integrated 10/100 Mbit Ethernet MAC/PHY, up to two configurable UART/SPI 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.

Complete and royalty-free LxNETES Linux and NET+OS development kits with development board, documentation, hardware debugging options, cables and accessories are available for evaluation/development use.

In addition, ready-to-run application-focused development kits for Java based development, serial LCD integration, CAN bus communication, Bluetooth connectivity, CompactFlash/WLAN support, and biometric fingerprint reading are also available. These kits provide all required hardware/software components and are specifically designed to reduce overall development cost and time-to-market of your products.

Please also visit the FS Forth website at http://www.unc20.net for additional product information and online discussion groups.

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DEVELOPMENT KIT FEATURES

- LxNETES 2.3
  - Flash programming through on-board JTAG interface
  - uClinux kernel v2.4.22
  - GNU development tool chain
    - gcc v2.95.3
    - gdb v5.2.1
    - uClibc v0.9.19 BusyBoxv1.0pre3
  - Dynamic loading of modules
  - 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
- NET+OS 6.0
  - Chameleon POD JTAG 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
    - TCP, UDP, ICMP, IGMP, 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 w/DES, 3DES, AES
  - File system with wear-leveling
  - SMICng SNMP MIB compiler
  - Micro XML SAX parser
  - HTML-to-C compiler
  - Sample code and documentation

HARDWARE

- 32-bit NET+ARM high-performance RISC processor NS7520 @ 55 MHz
- 2/8 MB Flash and 16 MB RAM on-board
- Integrated 10/100 Mbps Ethernet MAC/PHY
- Two serial interfaces
  - UART mode w/data rates up to 230 Kbps
  - SPI mode (Master only)
- 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
- Two independent 27-bit timers (IRQ/FIQ, 2microseconds to 20 hours)
- 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)

ENVIRONMENTAL

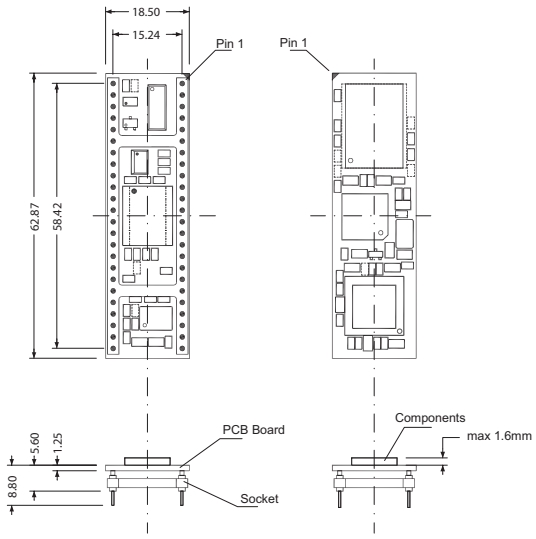
- Storage temperature: -50° C to +125° C (-58° F to +257° F)
- Operating temperature: 0° C to +70° C (+32° F to +158° F)
- Relative humidity: 5% to 90% (non-condensing)
- Altitude: 12,000 feet (3658 meters)

DIMENSIONS

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

POWER REQUIREMENTS

- 3.3VDC @ 280 mA (max)



MODEL.....PART NUMBERS

Model	North America	International
LxNETES 2.3 Development Kit	FS-997	FS-997
NET+OS 6.0 Development Kit	FS-998	FS-998
ConnectCore 7U w/2MB Flash	FS-355	FS-355
ConnectCore 7U w/8MB Flash	FS-352	FS-352

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

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