

Universal embedded ARM core processor module based on the Digi's NS7520 microprocessor offers a wide range of connectivity options and integrated networking support in a compact DIP form factor.



Features/Benefits

- Compact 48-pin Dual In-Line Package (DIP) form factor
- Powerful 32-bit NS7520 processor with 55 MHz ARM7 core
- 16 MB RAM/Up to 8 MB Flash
- 8 KB serial EEPROM for configuration storage
- 10/100 Ethernet MAC/PHY
- Up to 2 UART/SPI ports
- Standard mode I²C interface
- External 8-bit memory bus
- Up to 16 shared GPIO ports
- ThreadX-based NET+OS software platform
- Digi's own ARM processor technology for true long-term product availability
- Seamless migration path to fully integrated Digi NET+ARM system-on-chip solution

Overview

The ConnectCore 7U core processor module is the first member of the ConnectCore embedded core processor module family to utilize Digi's high-performance NS7520 NET+ARM microprocessor. It provides the ideal core processor platform for product designs demanding an additional level of performance, connectivity and flexibility.

Built on leading Digi 32-bit NET+ARM processor technology, the network-enabled ConnectCore 7U combines core processing capabilities with the long-term product availability matching the extended life cycle of embedded product designs. It is perfectly suited for a wide variety of applications such as transportation, security/access control, building and industrial automation, retail systems, warehousing and more.

The module offers 16 MB of SDRAM 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 interface option, 16 shared GPIO ports for application-specific use, and an external 10-bit address/8-bit data bus interface for component integration flexibility.

The easy-to-use, cost-effective and complete Digi JumpStart Kit for NET+OS® development platform is designed to allow instant embedded product development right out of the box. It minimizes traditional product design risks and accelerates the time-to-market aspect of your product design cycle. Based on the efficient and field-proven ThreadX® Real-Time Operating System (RTOS), NET+OS delivers an entirely royalty-free turnkey solution with all integrated building blocks for secure network-enabled embedded software development.

For your project-specific development needs Digi also offers professional technical support as well as a wide range of hardware and software design services.

DIGI JUMPSTART KIT FOR NET+OS 7.X: OVERVIEW

The ConnectCore 7U Digi JumpStart Kit for NET+OS delivers an easy-to-use, complete and royalty-free turnkey solution for embedded software development based on the ThreadX Real-Time Operating System (RTOS).

With over 400 million deployments in products worldwide, ThreadX is one of the most reliable and field-proven RTOS solutions available. In addition to the efficient ThreadX operating system core, NET+OS provides all software components needed to create secure and fully network-enabled product solutions using Digi embedded modules and microprocessors.

The NET+OS development platform provides standards-based networking features such as a dual-mode IPv4/IPv6 TCP/IP stack, integrated web server, SNMPv3, POP/SMTP mail, PPP, XML, LDAP, SSL/TLS with strong 256-bit AES encryption, and more.

It also includes Digi ESP for professional NET+OS software development. This Microsoft Windows-based Integrated Development Environment (IDE) offers an easy-to-use graphical interface with editor, single-step debugging, managed make files, build environment, online help, and innovative features like the Digi project builder wizard. Through simple point-and-click operation you are now able to quick-start your application development by creating a completely functional, customized application framework with ready-to-use software components such as web-based network interface configuration, FTP-based firmware upgrade, secure SSL/TLS connection support, and a fully customizable command line interface (CLI).

Designed with specific focus on ease-of-use, the Digi JumpStart Kit for NET+OS offers an off-the-shelf development solution to accelerate your product design process, minimize traditional design risks and effort, and significantly reduce time-to-market.



- **Royalty-free turnkey solution for embedded software development**
- **Built on field-proven and compact ThreadX RTOS**
- **Integrated, standards-based secure networking support**
- **Professional software development using Microsoft Windows-based Digi ESP or Green Hills MULTI* tools**
- **Seamless migration to other Digi NET+ARM module platforms and integrated system-on-chip solutions**

DIGI JUMPSTART KIT FOR NET+OS 7.X: CONTENTS

- ConnectCore 7U module
 - 8 MB Flash, 16 MB SDRAM, Ethernet MAC/PHY
- Development board
 - 2 serial ports (RS-232, TTL), 2 user push-buttons, 2 user LEDs, prototyping area, user/application header, status LEDs, character display connector, reset button, JTAG connector, 5VDC power supply
- Digi JTAG link USB 2.0 hardware debugger
- NET+OS CD
 - NET+OS 7.x, Digi ESP IDE, BSP source code, sample code, optional Green Hills MULTI* IDE support, documentation
- Documentation
 - Quick start guide, Digi ESP tutorial, NET+OS porting guide, NET+OS API documentation, Advanced Web Server, hardware reference manual, development board schematics
- Power supply and accessories
 - External power supply (110/240VAC to 5VDC) with outlet adapters (North America, EU, UK, and Australia), JTAG adapter, Ethernet cable, serial cable



*Requires purchase of third party product. See website for additional information.

Features/Specifications

HARDWARE

- 32-bit Digi NS7520 high-performance RISC processor (55 MHz ARM7TDMI)
- 2/8 MB Flash and 16 MB SDRAM on-board
- 8 KB serial EEPROM for configuration storage
- Integrated 10/100 Ethernet MAC/PHY
- Up to 2 high-speed serial interfaces
 - UART mode with data rates up to 230 kbps
 - SPI master mode
- Standard mode I²Cv1.0 bus interface (100 kHz)
- 10-bit address and 8-bit address bus interface
 - 2 external chip selects
- Up to 16 shared GPIOs
- 2 independent 27-bit timers
 - IRQ/FIQ, 2 microseconds to 20 hours
- JTAG interface

ENVIRONMENTAL

- Operating temperature: 0° C to 70° C (32° F to 158° F)
- Storage temperature: -50° C to 125° C (-58° F to 257° F)
- Relative humidity: 5% to 90% (non-condensing)
- Altitude: 12,000 feet (3,658 meters)

DIMENSIONS

- Length: 2.475 in (62.87 mm)
- Width: 0.728 in (18.50 mm)

POWER REQUIREMENTS

Module

- 3.3VDC @ 280 mA max.

NETWORK INTERFACE

Wired

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

MODEL.....PART NUMBERS

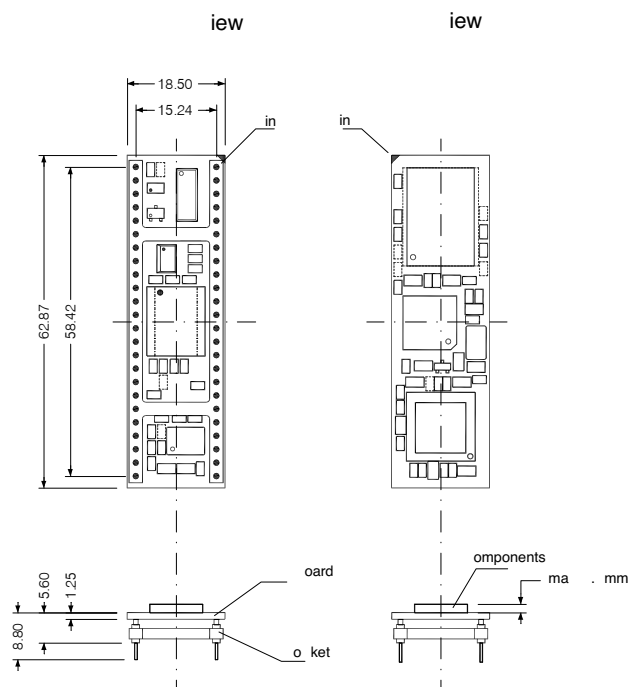
Model

ConnectCore 7U Digi JumpStart Kit for NET+OS

Please visit our website for a complete list of available part numbers and accessories.

Worldwide

CC-7U-NET



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. www.digi.com/support

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Digi International, the leader in device networking for business, develops reliable products and technologies to connect and securely manage local or remote electronic devices over the network or via the web. With over 20 million ports shipped worldwide since 1985, Digi offers the highest levels of performance, flexibility and quality.

www.digiembedded.com

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