

The industry's first interchangeable secure wired and wireless embedded modules with plug-and-play functionality and comprehensive development tools for custom applications make it easy to add embedded web-enabled wired and wireless network connectivity.



Features/Benefits

- Highly integrated 32-bit network co-processor module
- Family of interchangeable and pin-compatible solutions
- 2/4 MB Flash and 8MB RAM
- High-speed serial interface with up to 230 kbps throughput
- 5 shared GPIO port options
- 10/100 Mbit Ethernet or 802.11b WLAN with WPA2/802.11i
- Fully pre-certified radio reduces overall design cost/risk and time-to-market
- Industrial operating temp and FCC Class B low-emission design
- NIST-certified 256-bit AES encryption based on SSL/TLS
- ThreadX®-based NET+OS® software development platform
- Digi plug-and-play firmware option eliminates software development effort
- Digi's own ARM processor and WLAN technology for true long-term product availability
- Seamless migration path to Digi NET+ARM system-on-chip

Overview

The advances of personal computers and the proliferation of the Internet have laid the groundwork for an era in which billions of networked electronic devices will work invisibly and jointly with each other and with people. The introduction of wireless technology into the rapidly emerging world of ubiquitous networking creates a new dimension of network collaboration that complements existing wired infrastructures. Making the right network technology decisions is a key factor for market success and defines the competitive edge of your products.

The Digi Connect ME family of secure embedded modules enables original equipment manufacturers to keep pace with ever-evolving networking technology by delivering complete and versatile embedded network connectivity solutions. They are cost effective and easy to implement in existing and new product designs, while powerful enough to meet future product performance needs for a wide range of applications. These include retail systems, security/access control, medical devices, building/ industrial automation, warehousing, and transportation systems.

Based on a common platform design approach, the Digi Connect ME and Digi Connect Wi-ME embedded modules offer complete "drop-in" integration combined with true long-term product availability. This allows you to build future-proof products on a single layout design by simply selecting between 10/100 wired and secure (WPA2) by a population option.

The Digi Connect ME family makes this possible without the traditional complexities of hardware and software integration work, and at a fraction of the time and cost required to create your own custom solutions.

Built on Digi's leading 32-bit NET+ARM processor technology, the Digi Connect ME family of embedded modules offer serial-to-Ethernet functionality through Digi's plug-and-play firmware, and the freedom and flexibility of professional embedded software development provided by the easy-to-use, cost-effective and complete Digi JumpStart Kits™ for NET+OS®.

DIGI PLUG-AND-PLAY INTEGRATION KIT: OVERVIEW

Digi Integration Kits provide everything needed for evaluation, rapid prototyping and integration of Digi Connect embedded modules using the feature-rich and field-proven Digi plug-and-play firmware.

The Digi plug-and-play firmware in combination with the design of the Digi Connect ME and Digi Connect Wi-ME modules dramatically reduces time-to-market by eliminating time-consuming embedded hardware and software development. They deliver instant and fully transparent wired and wireless device server networking functionality for all existing and new product designs, and allow you to quickly network enable your products while focusing on your core product design competency.

Digi plug-and-play firmware offers industry-leading features such as a robust TCP/IP stack with support for IPv4 and IPv6, universal IP address assignment, integrated web server (HTTP/HTTPS), web user interface with private labeling/branding options, user management, custom Java applet support, user file system, NIST-certified 256-bit AES encryption (plus DES and 3DES), SSL/TLS, SSH, Modbus, intelligent device management via SNMP, email alarms, XML-based configuration options, and Digi's patented RealPort® COM/TTY port redirection. These features make it an ideal solution for every network-enabled application that requires ready-made versatility and performance.



- **Complete kit for product evaluation, rapid prototyping, and integration**
- **Transparent wired and wireless device server functionality**
- **Digi plug-and-play firmware eliminates embedded software development effort**
- **Strong, standards-based wired and wireless security out-of-the-box**
- **Full private-labeling/branding supported out-of-the-box**

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

The easy-to-use, cost-effective and complete Digi JumpStart Kits for NET+OS deliver a 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 ThreadX, NET+OS provides the integrated building blocks needed to create secure and fully network-enabled product solutions using Digi embedded modules and microprocessors. This includes a dual-mode IPv4/IPv6 TCP/IP stack, integrated web server, SNMPv3, POP/SMTP mail, PPP, XML, LDAP, SSL/TLS, and support for enterprise-grade WPA2/802.11i wireless LAN security.

The Digi JumpStart Kit for NET+OS minimizes product design risks and dramatically shortens traditional time-to-market aspects of your C-based embedded product development by providing all needed software and hardware components right out of the box.

Digi ESP for NET+OS, the Microsoft Windows-based Integrated Development Environment (included), 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 it generates a completely functional, customized application framework with ready-to-use software components such as web-based network interface configuration, FTP-based firmware upgrade, SSL/TLS, serial and Telnet Command Line Interface (CLI), and more.



- **Royalty-free turnkey solution for embedded software development**
- **Built on field-proven and compact ThreadX Real-Time Operating System**
- **Fully integrated, standards-based secure wired and wireless networking**
- **Professional state-of-the-art software development using Digi ESP or Green Hills MULT!* development tools**
- **Seamless migration to other Digi NET+ARM module platforms and fully integrated system-on-chip solutions**

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

DIGI PLUG-AND-PLAY INTEGRATION KIT: CONTENTS

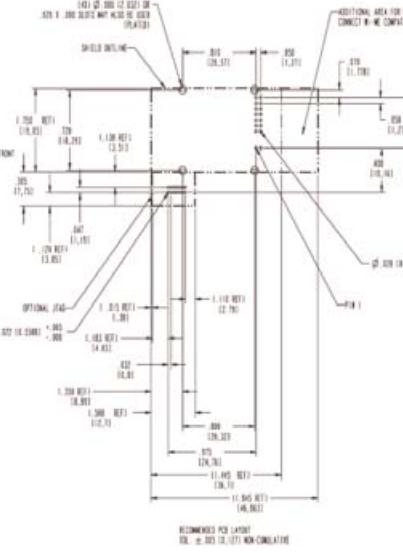
- Digi Connect ME or Digi Connect Wi-ME module
 - 4 MB Flash, 8 MB SDRAM, 2 dBi dipole antenna (Digi Connect Wi-ME)
- Development board
 - 1 RS-2323 serial port, GPIO configuration/test switches (hi/lo), screw terminal for GPIO signals, status LEDs (serial, GPIO, power), logic signal header, test points, reset button, 9-30VDC power supply w/Power-over-Ethernet support (mid-span), JTAG header and RS-232 console/debug port (JTAG modules)
- Digi Connect Integration Kit CD
 - Device discovery tool w/source code, device configuration wizard w/source code, RCI library, device discovery (ADDP) library, Java applet sample source code, C/C++ sample source code (TCP, UDP, SSL)
- Documentation
 - Getting started, hardware reference manual, development board schematics Digi Connect user's guide, command line reference, RCI specification
- Power supply and accessories
 - External wall power supply (110/240VAC to 12VDC @ 850 mA) with interchangeable outlet adapters (North America, EU, UK, and Australia), JTAG adapter, crossover serial cable, Ethernet cable (Digi Connect ME)

NET+OS 7.X DIGI JUMPSTART KIT: CONTENTS

- Digi Connect ME or Digi Connect Wi-ME module
 - 2 MB Flash, 8 MB SDRAM, 2 dBi dipole antenna (Digi Connect Wi-ME)
- Development board
 - 1 RS-2323 serial port, GPIO configuration/test switches (hi/lo), screw terminal for GPIO signals, status LEDs (serial, GPIO, power), logic signal header, test points, reset button, 9-30VDC power supply w/Power-over-Ethernet support (mid-span), JTAG header and RS232 console/debug port (JTAG modules)
- Digi JTAG link USB 2.0 hardware debugger
- Digi NET+OS CD
 - NET+OS 7.x, Digi ESP IDE, BSP source code, sample code, 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 wall power supply (110/240VAC to 12VDC @ 850 mA) with interchangeable outlet adapters (North America, EU, UK, and Australia), JTAG adapter, crossover serial cable, Ethernet cable (Digi Connect ME)

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

Features/Specifications

HARDWARE	ENVIRONMENTAL	REGULATORY APPROVALS
<ul style="list-style-type: none"> 32-bit Digi NET+ARM high-performance RISC processor <ul style="list-style-type: none"> NS7520 @ 55 MHz Digi Connect ME on-board memory <ul style="list-style-type: none"> 2/4 MB Flash and 8 MB RAM Digi Connect Wi-ME on-board memory <ul style="list-style-type: none"> 4 MB Flash and 8 MB RAM On-board power supervisor High-speed TTL serial interface <ul style="list-style-type: none"> Throughput up to 230 Kbps Full signal support for TXD, RXD, RTS, CTS, DTR, DSR and DCD Hardware/Software flow control 5 shared GPIO ports Wave-solderable design (no clean flux process) 	<p>Digi Connect ME</p> <ul style="list-style-type: none"> Operating temperature: -40° C to 85° C (-40° F to 185° 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) <p>Digi Connect Wi-ME</p> <ul style="list-style-type: none"> Operating temperature: -30° C to 75° C (-22° F to 167° 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) 	<ul style="list-style-type: none"> FCC Part 15 Class B, EN 55022 Class B EN 61000-3-2 and EN 61000-3-3 ICES-003 Class B, VCCI Class II, AS 3548 FCC Part 15 Sub C Section 15.247 IC RSS-210 Issue 5 Section 6.2.2(o) EN 300 328, EN 301 489-17 UL 60950-1, EN 60950 (EU) CSA C22.2, No. 60950 EN 55024
NETWORK INTERFACE	WLAN SECURITY	
<p>Wired</p> <ul style="list-style-type: none"> Standard: IEEE 802.3 Physical layer: 10/100Base-T Data rate: 10/100 Mbps (auto-sensing) Mode: Full or half duplex (auto-sensing) Connector: RJ-45 w/magnetics 802.3af mid-span power pass-through <p>Wireless LAN</p> <ul style="list-style-type: none"> Standard: IEEE 802.11b Frequency: 2.4 GHz Data rate: Up to 11 Mbps w/fallback Modulation: DBPSK (1 Mbps), DQPSK (2 Mbps), CCK (11,5.5 Mbps) Transmit power: 16 dBm typical Receive sensitivity: -82 dBm @ 11 Mbps Connector: 1 x RP-SMA 	<ul style="list-style-type: none"> WEP (Wired Equivalent Privacy) <ul style="list-style-type: none"> 64/128-bit encryption (RC4) WPA/WPA2/802.11i <ul style="list-style-type: none"> 128-bit TKIP/CCMP (AES) encryption Enterprise mode (802.1X) <ul style="list-style-type: none"> LEAP (WEP only), PEAP, TTLS, TLS GTC, MD5, OTP, PAP, CHAP, MSCHAP, MSCHAPv2, TTLS-MSCHAPv2 	
MODEL	POWER REQUIREMENTS	DIMENSIONS
	<p>Digi Connect ME</p> <ul style="list-style-type: none"> 3.3VDC @ 250 mA typical (825 mW) <p>Digi Connect Wi-ME</p> <ul style="list-style-type: none"> 3.3VDC @ 400 mA max (1.32 W) 	<p>Digi Connect ME</p> <ul style="list-style-type: none"> Length: 1.445 in (36.7 mm) Width: 0.75 in (19.05 mm) Height: 0.735 in (18.67 mm) <p>Digi Connect Wi-ME</p> <ul style="list-style-type: none"> Length: 1.945 in (49.4 mm) Width: 0.75 in (19.05 mm) Height: 0.735 in (18.67 mm)
PART NUMBERS		



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

Digi International
11001 Bren Road E.
Minnetonka, MN 55343
U.S.A.
PH: 877-912-3444
952-912-3444
FX: 952-912-4952
email: info@digi.com

Digi International France
31 rue des Poissonniers
92200 Neuilly sur Seine
PH: +33-1-55-61-98-98
FX: +33-1-55-61-98-99
www.digi.fr

**Digi International
KK**
NES Building South 8F
22-14 Sakuragaoka-cho,
Shibuya-ku
Tokyo 150-0031, Japan
PH: +81-3-5428-0261
FX: +81-3-5428-0262
www.digi-intl.co.jp

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

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

© 2004-2007 Digi International Inc.

© 2004-2007 Digi International Inc. Digi, Digi International, the Digi logo, the When Reliability Matters logo, Digi Connect, Digi Connect ME, Digi JumpStart Kit, NET+ and NET+OS are trademarks or registered trademarks of Digi International Inc. in the United States and other countries worldwide. ARM and NET+ARM are trademarks or registered trademarks of ARM Limited. All other trademarks are the property of their respective owners.

91001258
€1/207

