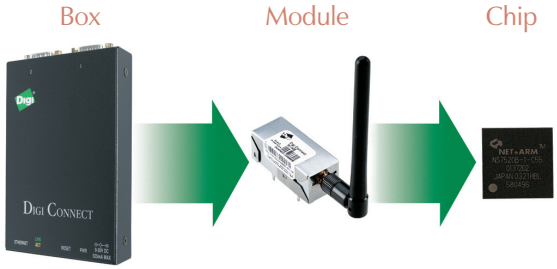
PRELIMINARY
Product Data Sheet

Digi Connect™ ME Family

Wired and Wireless Embedded Modules

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



Seamless migration to total integration

Future proof protection - software development migrates fully to chip solutions.

Features/Benefits

- **Interchangeable and pin-compatible single-component solution based on 32-bit NET+ARM processor**
- **2MB Flash and 8MB RAM on board**
- **High-speed TTL serial interface with up to 230 Kbps throughput**
- **Wireless Ethernet network interface**
  - **802.11b network interface with data rates up to 11 Mbps**
  - **WPA security and WEP encryption**
  - **FCC module approval improves time-to-market**
- **Wired Ethernet network interface**
  - **Auto-sensing 10/100Base-T network interface**
  - **Innovative power pass-through option for network powered products**
- **Five shared GPIO port options**
- **Low power consumption and industrial temperature range**
- **Strong SSL/TLS encryption for security sensitive environments**
- **Plug-and-play firmware option eliminates embedded software development effort**
- **Easy-to-use and royalty-free NET+Works development platform for custom application development**

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 this 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 your future product performance needs.

Based on a unique common platform design approach, the Digi Connect ME and Digi Connect Wi-ME embedded modules offer complete "drop-in" integration. This allows you to build future-proof products based on a single design supporting wired 10/100Base-T and 802.11b wireless Ethernet connectivity. The Digi Connect embedded modules make all of this possible without the traditional complexities of hardware and software integration work, and at a fraction of the time and cost required to create custom solutions.

Built on leading NetSilicon 32-bit NET+ARM technology, the Digi Connect ME embedded modules also provide a seamless migration path to a fully integrated system-on-chip solution. They combine true plug-and-play functionality with the freedom and flexibility of complete software customization using the proven NetSilicon NET+Works® development platform.

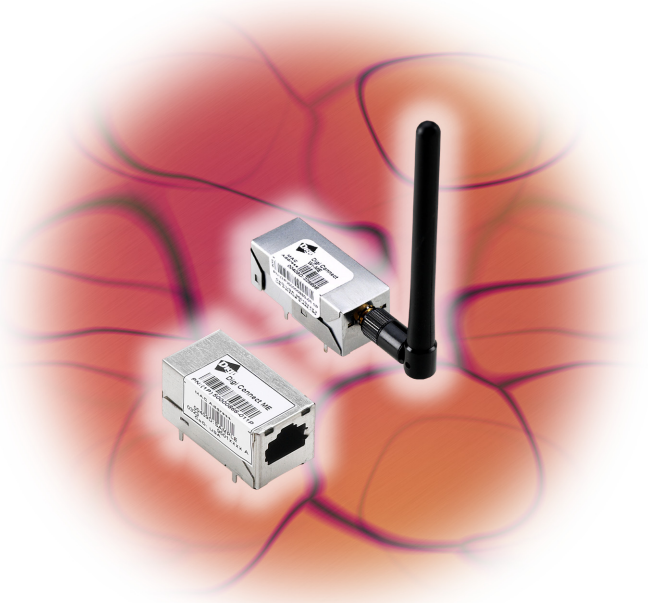
An integration kit and a complete development kit containing a development board, documentation, sample code, cables and accessories are available for evaluation and development use.

Please contact us at 1-877-OEM-DIGI or 952-912-3444 for additional information or to discuss your specific application requirements.

Digi®

Connectware™

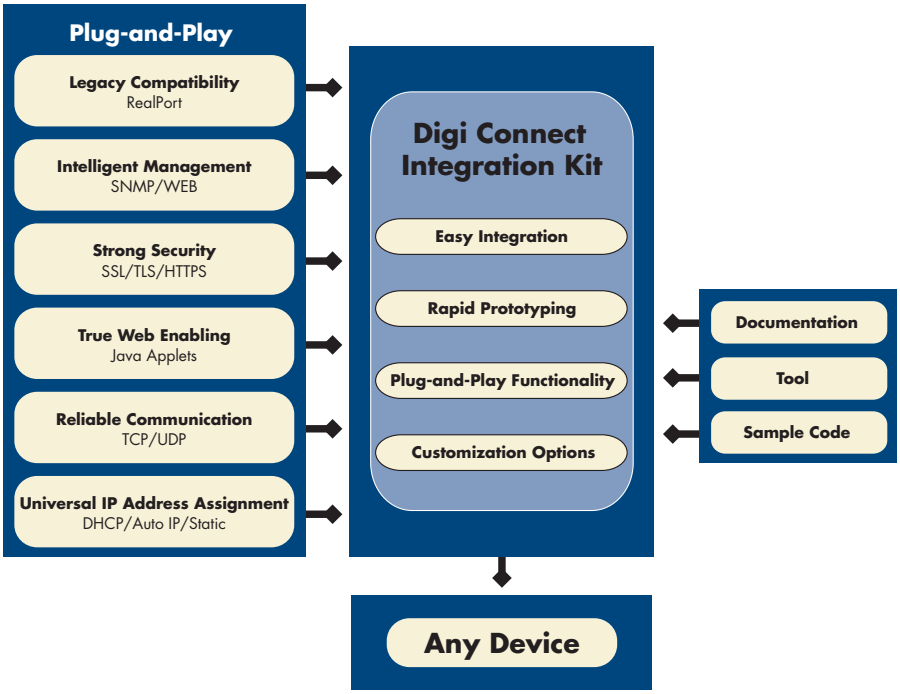
Plug-and-Play Modules



The Digi Connect ME and Digi Connect Wi-ME embedded modules with plug-and-play firmware dramatically reduce time-to-market by eliminating the need for embedded hardware and software development. They deliver instant and completely transparent wired and wireless device server networking functionality, with the flexibility of web-based customization options.

Unique and industry-leading features such as a robust TCP/IP stack, universal IP address assignment, integrated web server with user file system, fully customizable web user interface, custom Java applet support, enhanced security with strong DES/3DES/AES encryption based on the SSL/TLS standard, intelligent device management via SNMP, and patented RealPort® COM/TTY port redirection make it an ideal solution for any application that requires versatility and performance.

The Digi Connect Integration Kit provides a platform for evaluation, rapid prototyping, and integration of Digi Connect embedded modules with plug-and-play firmware. It offers all tools, sample code, and documentation that make product integration and web-based product customization possible.



SOFTWARE FEATURES

- Robust on-board TCP/IP stack with built-in web server
  - TCP, UDP, DHCP, SNMP, SSL/TLS, Telnet, Rlogin, RFC 2217, LPD, HTTP/HTTPS, SMTP, ICMP, IGMP, ARP
- Universal IP address assignment
  - Static IP, DHCP, Auto-IP
- Secure web-based configuration (HTTP/HTTPS)
- Fully customizable web interface with support for custom Java applets
  - Applet space: 512 kb
- Telnet Command Line Interface
- Low-level serial configuration interface
- User-defined network service configuration
  - HTTP/HTTPS, Telnet, Rlogin, ADDP, SNMP, RealPort, SSL/TLS, TCP/UDP
- TCP/UDP forwarding characteristics
  - Bytes, Idle Time, Data Pattern
- User-configurable TCP/UDP Socket ID string
- Event notification (SMTP/SNMP traps)
  - GPIO Status, Data Pattern
- Intelligent SNMP device management
  - RFC 1213/1215/1316/1317
- Strong SSL v3.0/TLS v1.0 based encryption
  - DES (56-bit)
  - 3DES (168-bit)
  - AES (128/256-bit)
- Patented RealPort® COM/TTY port redirection for Microsoft Windows, UNIX, and Linux environments

Customizable Modules

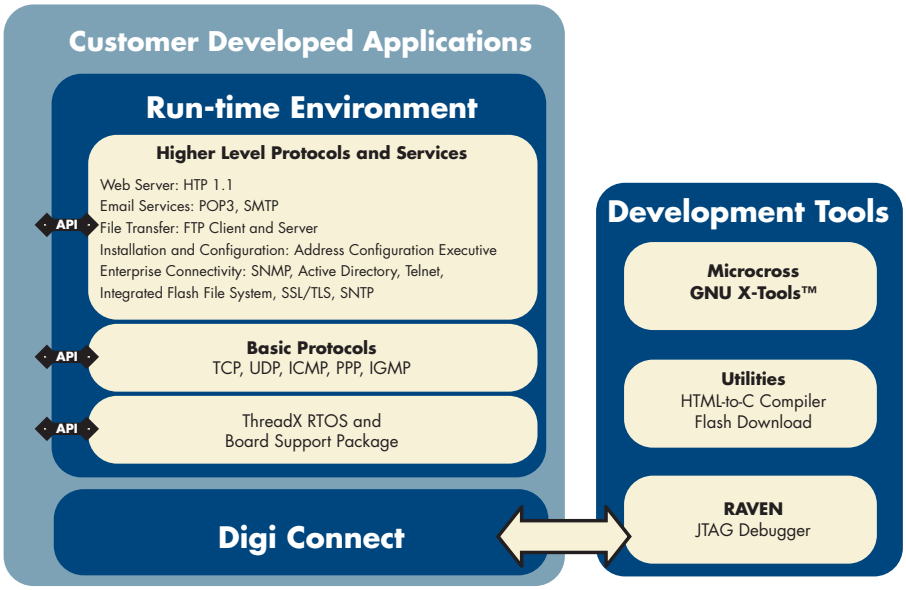
The customizable versions of the Digi Connect ME and Digi Connect Wi-ME embedded modules enable customers to quickly and cost-effectively implement and deploy application-specific and future-proof embedded software solutions for wired and wireless network environments, without the additional complexities of traditional hardware design efforts.

Based on the easy-to-use and royalty-free NetSilicon NET+Works development platform, the Digi Connect Development Kit delivers a complete out-of-the-box solution for embedded software development. It includes all the integrated building blocks that are required to quickly and cost-effectively create secure and fully network-enabled product solutions.

The common NetSilicon development platform minimizes design risk and significantly accelerates the overall embedded software development process. It provides a seamless migration path to a fully integrated NetSilicon system-on-chip solution using the award-winning family of network-enabled NET+ARM processors.

DEVELOPMENT KIT FEATURES

- Digi Connect embedded module w/JTAG
- Development board
- Macgraigor Raven JTAG debugger
- Microcross™ GNU X-Tools with command line and visual GDB debugger
- ThreadX Realtime Operating System with picokernel™ architecture
  - Requires less than 25 kb kernel code space
- Fusion™ TCP/IP stack with full networking protocol and extended network services support
  - TCP, UDP, ICMP, IGMP, DNS, SNMPv2, LDAP, POP, SMTP, PPP, FTP, SNTP, Telnet, FastIP, Fast Sockets, Multi-Homing
- Universal IP address assignment through Address Configuration Executive (ACE)
  - Static IP, DHCP, BOOTP, Auto-IP, RARP, ARP/Ping (ARP-Ping?)
- Allegro Software Embedded Web Server
- SSL 3.0/TLS 1.0 with strong encryption
  - DES, 3DES, AES
- Flexible and robust file system supporting RAM and Flash (with wear leveling)
- SMICng MIB Compiler
- Micro XML SAX Parser
- Additional utilities
  - HTML-to-C Compiler
  - Flash download
  - Sample code
- Documentation
  - Hardware reference manual
  - Programmer's guide
  - API reference
  - Advanced web server toolkit



Features/Specifications

HARDWARE

- 32-bit NET+ARM high-performance RISC processor (NS7520 @ 55MHz)
- On-board memory 2MB Flash and 8MB RAM
- On-board power supervisor
- High-speed TTL serial interface
  - Throughput up to 230 Kbps
  - Full signal support for TXD, RXD, RTS, CTS, DTR, DSR and DCD
  - Hardware and software flow control
- Five shared General Purpose Input/Output (GPIO) ports
- Wave-solderable design (no clean flux process)

NETWORK INTERFACE

Digi Connect ME
- Standard: IEEE 802.3
- Physical Layer: 10/100Base-T
- Data rate: 10/100Mbps (auto-sensing)
- Mode: Full or half duplex (auto-sensing)
- Connector: RJ-45

Digi Connect Wi-ME
- Standard: IEEE 802.11b
- Frequency: 2.4 GHz
- Data rate: Up to 11 Mbps with automatic fallback
- Modulation: CCK (11/5 Mbps), DQPSK (2 Mbps), DBPSK (1 Mbps)
- Transmit power: 15 dBm
- Receive sensitivity: -87 dBm @ 11 Mbps
- Antenna connector: 1 x RP-SMA
- Security: WPA, WEP encryption (64-/128-bit)

ENVIRONMENTAL

- Ambient operating temperature: -40° C to 85° C (-40° F to 185° F)
- Relative humidity: 5% to 95% (non-condensing)
- Altitude: 12,000 ft (3685 m)

REGULATORY APPROVALS (IN PROGRESS)

- 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 Subpart C Section 15.247
- IC (Industry Canada) RSS-210 Issue 5 Section 6.2.2(o)
- EN 300 328
- EN 301 489-3
- UL 60950-1
- EN 60950 (European Union)
- CSA C22.2, No. 60950
- EN 55024

DIMENSIONS

Digi Connect ME
- Length: 1.445 in (36.7 mm)
- Width: 0.75 in (19.05 mm)
- Height: 0.735 in (18.67 mm)

Digi Connect Wi-ME
- Length: 1.945 in (49.4 mm)
- Width: 0.75 in (19.05 mm)
- Height: 0.735 in (18.67 mm)

PINOUTS

Pin		Signal	Description
1	*	VETH+	Power Pass-Thru +
2	*	VETH-	Power Pass-Thru -
3		N/A	Position Removed
4		N/A	Position Removed
5		N/A	Position Removed
6		N/A	Position Removed
7		RXD	Receive Data (Input)
8		TXD	Transmit Data (Output)
9		RTS/GPIO4	Request to Send (Output)/GPIO
10		DTR/GPIO5	Data Terminal Ready (Output)/GPIO
11		CTS/GPIO2	Clear to Send (Input)/GPIO
12		DSR/GPIO3	Data Set Ready (Input)/GPIO
13		DCD/GPIO1	Data Carrier Detect (Input)/GPIO
14		RESET	Reset
15		+3.3V	Power
16		GND	Ground
17		Reserved	Reserved
18		Reserved	Reserved
19		Reserved	Reserved
20		Reserved	Reserved

*Digi Connect ME only

Samtec FTS-110-01-F-DV-TR 20-pin micro header (10-pin double row) with 1.27 mm (.50") pitch, positions 3-6 removed.

POWER REQUIREMENTS

Digi Connect ME
- 3.3Vdc @ 250mA typical (825mW)

Digi Connect Wi-ME
- 3.3Vdc @ 400mA max (1.32W)

LEDS

- Link integrity
- Network activity

MODEL.....PART NUMBERS

Model	North America	International
Custom Application		
Digi Connect ME Development Kit	DC-ME-01T-GN	DC-ME-01T-GN
Digi Connect Wi-ME Development Kit	DC-WME-01T-GN	DC-WME-01T-GN
Plug-and-Play Firmware		
Digi Connect ME Integration Kit	DC-ME-01T-KT	DC-ME-01T-KT
Digi Connect Wi-ME Integration Kit	DC-WME-01T-KT	DC-WME-01T-KT

Bulk packs and customer-specific packaging configurations available.

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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