Welcome to E-XFL.COM

Understanding Embedded - Microcontroller, Microprocessor, FPGA Modules

Embedded - Microcontroller, Microprocessor, and FPGA Modules are fundamental components in modern electronic systems, offering a wide range of functionalities and capabilities. Microcontrollers are compact integrated circuits designed to execute specific control tasks within an embedded system. They typically include a processor, memory, and input/output peripherals on a single chip. Microprocessors, on the other hand, are more powerful processing units used in complex computing tasks, often requiring external memory and peripherals. FPGAs (Field Programmable Gate Arrays) are highly flexible devices that can be configured by the user to perform specific logic functions, making them invaluable in applications requiring customization and adaptability.

Applications of Embedded - Microcontroller,

Details	
Product Status	Discontinued at Digi-Key
Module/Board Type	MPU Core
Core Processor	ARM7TDMI, NS7520
Co-Processor	-
Speed	55MHz
Flash Size	2MB
RAM Size	8MB
Connector Type	RJ45
Size / Dimension	1.45" x 0.75" (36.7mm x 19.1mm)
Operating Temperature	-40°C ~ 85°C
Purchase URL	https://www.e-xfl.com/product-detail/digi-international/dc-me-01t-s-50

DEVICE SERVER MODULE

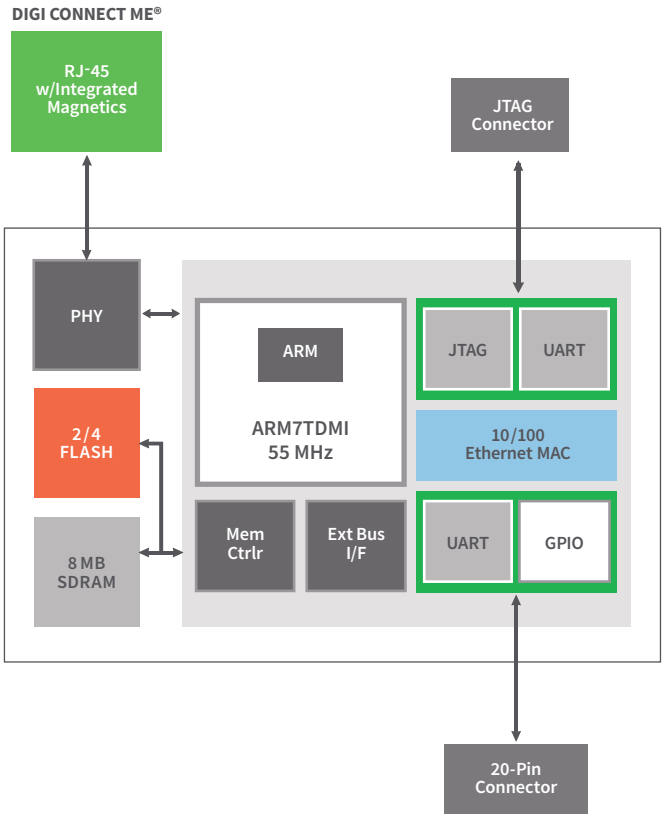
DIGI CONNECT ME®

Secure device server module with plug-and-play functionality and professional development tools for custom applications

The Digi Connect ME is a secure device server module that delivers complete and versatile embedded IPv6-ready network connectivity and strong standards-based encryption services such as SSL/SSH. Built on leading Digi 32-bit NET+ARM technology, the Digi Connect ME is cost effective and easy to use in existing and new product designs, while powerful enough to meet future product performance needs. The connector-style module is pin-compatible and interchangeable with the Digi Connect® Wi-ME, providing a direct migration path to a wireless solution without the traditional complexities of hardware and software integration work.

Digi Connect ME is available pre-loaded with Digi plug-and-play firmware, which eliminates software development efforts by providing powerful and configurable IPv4/IPv6 device server functionality, including an easy-to-use web user interface and security features. Target applications include retail systems, security/access control, medical devices and building/industrial automation.

BLOCK DIAGRAM



BENEFITS

- Compact and secure 32-bit device server modules
- Complete family of pin-compatible module solutions
- Integrated 10/100 Mbit Ethernet interface
- Strong enterprise-grade network security
- Highly integrated low emission design (FCC Class B)
- Extended and industrial operating temperature
- Digi processor and WLAN technology for true long-term availability

RELATED PRODUCTS


Digi Connect® ME/Wi-ME 9210


ConnectCore® 9P 9215


ConnectCard™ for i.MX28


XBee®


Development Kits

DIGI JUMPSTART KIT® OVERVIEW

PLUG-AND-PLAY INTEGRATION KITS

Digi Integration Kits provide everything needed for evaluation, rapid prototyping and integration of Digi Connect device server modules using the feature-rich Digi plug-and-play device server firmware. They deliver fully transparent wired and wireless serial-to-network functionality and allow you to quickly network-enable your existing and new product designs.

Digi plug-and-play firmware offers industry-leading features such as a robust IPv6-ready TCP/IP stack, fully-featured serial tunneling, Modbus/TCP, web user interface with private labeling/branding options, user management, file system, SSL/TLS, SSH, Modbus/TCP, intelligent device management via SNMP, configurable e-mail alarms, and patented RealPort® COM/TTY port redirection.

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

DIGI JUMPSTART KIT® FOR NET+OS®

This royalty-free turnkey solution for embedded software development is based on the ThreadX Real-Time Operating System (RTOS), 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 product solutions with leading network security using Digi embedded modules and microprocessors.

For professional NET+OS software development, the Microsoft Windows based Digi ESP™ Integrated Development Environment (IDE), with graphical user interface and a high-speed USB 2.0 hardware debugger, is provided out-of-the-box.

- Royalty-free turnkey solution for embedded software development
- Built on field-proven and compact ThreadX RTOS
- Fully integrated support for secure, IPv4/IPv6 networking applications
- Professional software development using Windows-based Digi ESP IDE

SOFTWARE PLATFORM	DIGI PLUG-AND-PLAY DEVICE SERVER FIRMWARE	NET+OS®
MODULE	Digi Connect ME w/ 2 MB Flash, 8 MB SDRAM	
DEVELOPMENT BOARD	1 RS-2323 serial port, GPIO configuration switches, Screw terminal for GPIO signals, Prototyping area, Status LEDs (serial, GPIO, power), Logic signal header, Test points, Reset button, User buttons, PoE module header, 9-30VDC power supply, JTAG header and RS-232 console/debug port for JTAG-equipped modules	
CD/DVD	Digi Connect Integration Kit CD: Device discovery tool w/source code, Device discovery library, Java applet sample source code, C/C++ samples, (TCP, UDP, SSL)	Digi NET+OS CD: NET+OS 7, Digi ESP IDE, BSP source code, Sample code, Green Hills MULTI IDE support files, User documentation
DOCUMENTATION	Getting started, Hardware reference manual, Development board schematics Digi Connect user's guide, Command line reference, RCI specification	Quick start guide, Digi ESP tutorial, NET+OS porting guide, NET+OS API documentation, Advanced Web Server, Hardware reference manual, Development board schematics
POWER SUPPLIES	External wall power supply (110/240 VAC to 12 VDC @ 850 mA) with interchangeable outlet adapters (North America, EU, UK, and Australia)	
ACCESSORIES	Crossover serial cable, Ethernet cable	
OTHER	–	Digi JTAG link USB 2.0 hardware debugger

Please refer to the feature specs on our website for detailed information about the specific software platform capabilities.

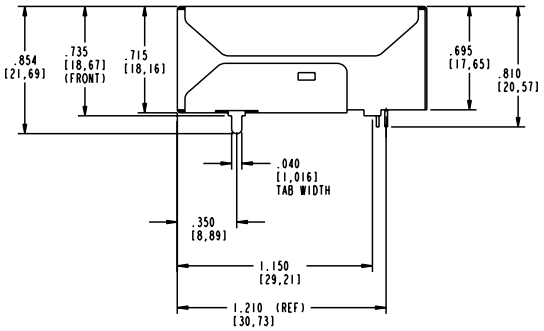
SPECIFICATIONS

Digi Connect ME®

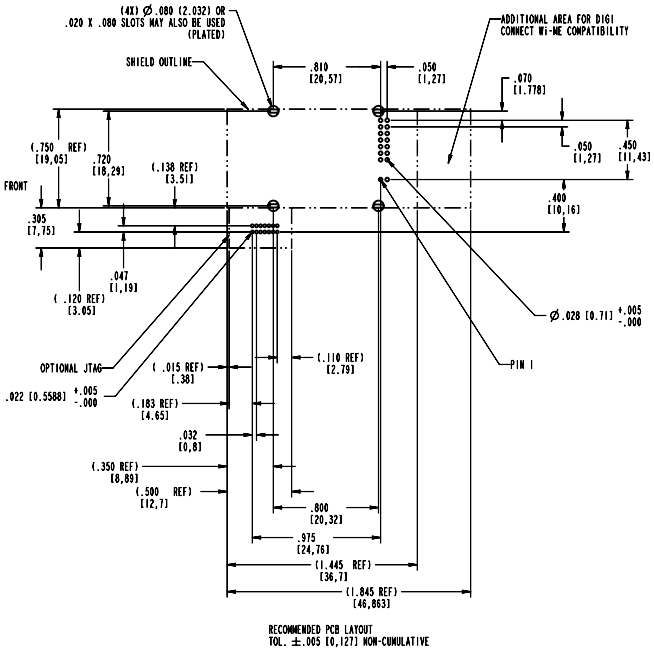
HARDWARE	
PROCESSOR TYPE	32-bit Digi NS7520 processor
ARM CORE	ARM7TDMI
PROCESSOR SPEED	55 MHz
MEMORY BASE POPULATION	2/4 MB NOR flash
	8 MB SDRAM
PINS/FORM FACTOR	RJ-45 connector style with 20-pin micro pin header (Samtec FTS-110-01-F-DV-TR)
HIGH-SPEED TTL SERIAL INTERFACE	Up to 230 Kbps data rate; Full signal support for TXD, RXD, RTS, CTS, DTR, DSR and DCD; Hardware/Software flow control
GPIO	Up to 10 shared with 1 external IRQ
ON-MODULE POWER SUPERVISOR	Yes
JTAG INTERFACE	NET+OS development modules only
WAVE-SOLDERABLE DESIGN	No clean flux process
DIMENSIONS (L X W X H)	1.445 in (36.7 mm) x 0.75 in (19.05 mm) x 0.854 in (21.69 mm)
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)
CONNECTOR	RJ-45
INTEGRATED ETHERNET MAC/PHY	Yes
POE POWER PASS-THROUGH	Yes (see website for available options)
ENVIRONMENTAL	
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)
POWER REQUIREMENTS (3.3V)	
MAXIMUM	270 mA (891 mW)
REGULATORY APPROVALS	
FCC PART 15 CLASS B, EN 55022 CLASS B	Yes
EN 61000-3-2 AND EN 61000-3-3	Yes
ICES-003 CLASS B, VCCI CLASS II, AS 3548	Yes
FCC PART 15 SUB C SECTION 15.247	Yes
IC RSS-210 ISSUE 5 SECTION 6.2.2(O)	Yes
EN 300 328, EN 301 489-17	Yes
UL 60950-1, EN 60950 (EU)	Yes
CSA C22.2, NO. 60950	Yes
EN 55024	Yes

PRODUCT DIMENSIONS

Digi Connect ME® - Side



Recommended PCB Layout



THREADX®

PART NUMBERS	DESCRIPTION
KITS	
DC-ME-NET	Digi Connect ME Digi JumpStart Kit for NET+OS 7 w/Eclipse-based Digi ESP IDE, USB debugger, installation and setup support package
DC-ME-KT	Digi Connect ME Integration Kit - Includes module w/plug-and-play firmware, development board, documentation, Integration CD, cables and power supply
MODULES FOR NET+OS	
DC-ME-01T-C	Digi Connect ME w/2 MB Flash, 8 MB RAM (single-unit pack)
DC-ME-01T-PC	Digi Connect ME w/2 MB Flash, 8 MB RAM, 802.3af compliant power pass-thru (single-unit pack)
DC-ME4-01T-C	Digi Connect ME w/4 MB Flash, 8 MB RAM (single-unit pack)
MODULES WITH PLUG-AND-PLAY FIRMWARE	
DC-ME-01T-PS	Digi Connect ME w/2 MB Flash, 8 MB RAM, 802.3af compliant power pass-thru (single-unit pack)
DC-ME-01T-S	Digi Connect ME w/2 MB Flash, 8 MB RAM (single-unit pack)
DC-ME4-01T-S	Digi Connect ME w/4 MB Flash, 8 MB RAM (single-unit pack)

DIGI SERVICE AND SUPPORT / You can purchase with confidence knowing that Digi is always available to serve you with expert technical support and our industry leading warranty. For detailed information visit www.digi.com/support.

91001258
F1/915

DIGI INTERNATIONAL WORLDWIDE HQ
877-912-3444 / 952-912-3444 / www.digi.com

DIGI INTERNATIONAL FRANCE
+33-1-55-61-98-98 / www.digi.fr

DIGI INTERNATIONAL JAPAN
+81-3-5428-0261 / www.digi-intl.co.jp

DIGI INTERNATIONAL SINGAPORE
+65-6213-5380

DIGI INTERNATIONAL CHINA
+86-21-50492199 / www.digi.com.cn

DIGI