



COMPACT AND
POWERFUL WIRED
AND WIRELESS
EMBEDDED MODULES



DIGI CONNECT ME 9210 FAMILY

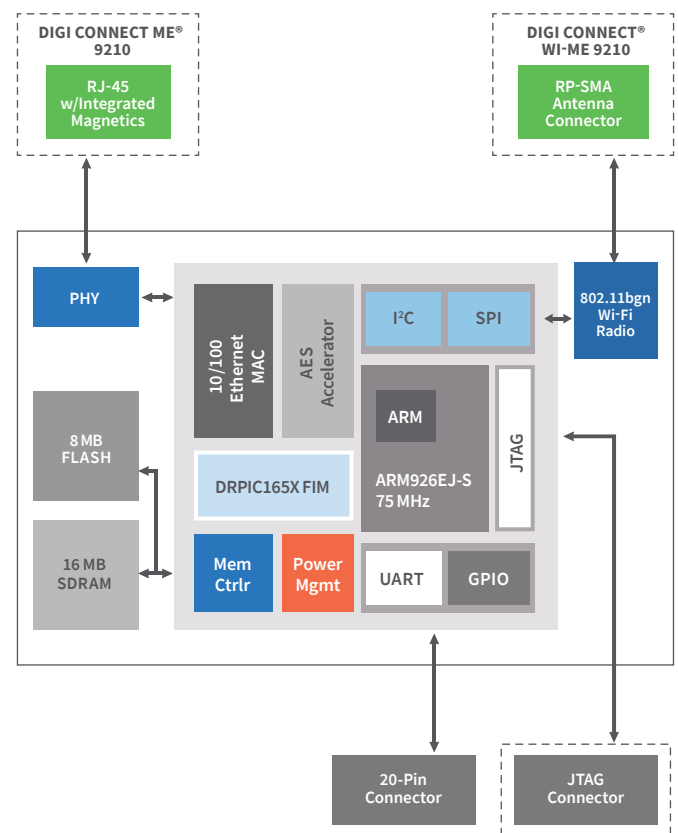
Ultra-compact high-performance embedded modules for M2M networking combine on-chip security and integrated 802.11b/g/n Wi-Fi or Ethernet networking

The Digi Connect ME 9210 family of embedded modules enables secure wired and wireless networking. Built on Digi's powerful NS9210 ARM9 processor, these high-performance modules allow customers to implement next generation network-enabled products. Additionally, their RJ-45 form factor is pin compatible with modules in the Digi Connect ME family.

These modules can provide future application-specific interface options through the programmable Flexible Interface Module (FIM), while keeping the main serial port or other key peripheral interfaces available. They are well-suited for more advanced core module applications by supporting up to ten shared GPIOs, external IRQs and an extended set of peripheral interface options.

The Digi Connect ME 9210 family features the development and operational benefits of Digi Remote Manager®. This secure, highly-scalable platform seamlessly ties enterprise applications and remote devices together. Using Digi Remote Manager, customers can also easily configure, upgrade, monitor and troubleshoot their devices from a centralized location.

BLOCK DIAGRAM



BENEFITS

- Secure 802.11b/g/n Wi-Fi support
- Integrated 10/100 Mbit Ethernet interface
- Support for Digi Embedded Linux and Digi NET+OS
- Industrial operating temperature System-on-Module
- RJ-45 form factor compatible with Digi Connect ME
- On-chip hardware encryption engine
- Extended set of on-chip interfaces and signals
- Power management modes
- Low-emission design (FCC Class B)

RELATED PRODUCTS



DIGI JUMPSTART KIT® OVERVIEW

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 Eclipse based Digi ESP™ Integrated Development Environment (IDE) with graphical user interface and 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



DIGI JUMPSTART KIT® FOR EMBEDDED LINUX

Built around a standard Linux 2.6 kernel distribution, the Digi JumpStart Kit for Embedded Linux is tailored to the specific needs of embedded Linux development and provides an easy-to-use, complete off-the-shelf embedded development platform. It includes all components that are required to build secure network-enabled products based on the Digi Connect ME 9210 family.

The kit includes Digi ESP™ for Embedded Linux, a powerful and fully Linux-hosted Integrated Development Environment based on the open Eclipse™ framework. Ideal for new and experienced Linux developers, Digi ESP improves software design productivity by accelerating and greatly simplifying driver and application development through a user-friendly graphical interface.

- Off-the-shelf development platform for network-enabled embedded systems
- Royalty-free and with optimized 2.6 kernel and services support
- Linux Digi ESP IDE for accelerated software development
- Full Linux and Digi BSP source code included



SOFTWARE PLATFORM	NET+OS®	EMBEDDED LINUX
MODULE	Digi Connect ME 9210 or Digi Connect Wi-ME 9210 w/ 8 MB Flash, 16 MB SDRAM	
DEVELOPMENT BOARD	1 RS-232 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/wake-up buttons, PoE module header, 9-30 VDC power supply, JTAG header and RS-232 console/debug port for JTAG-equipped modules	
CD/DVD	Digi NET+OS CD: NET+OS 7, Digi ESP IDE, BSP source code, sample code, Green Hills MULTI IDE support files, user documentation	Digi Embedded Linux 4 DVD: Digi Embedded Linux, Digi ESP IDE, Linux and platform specific source code, Universal boot loader source code (U-Boot), sample code, 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	Quick start guide, Digi Embedded Linux user's guide, hardware reference manual, development board schematics
POWER SUPPLIES AND ACCESSORIES	External wall power supply (110/240 VAC) with interchangeable outlet adapters (North America, EU, UK, and Australia), crossover serial cable, Ethernet cable	
OTHER	Digi JTAG Link USB 2.0 hardware debugger	N/A

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

SPECIFICATIONS		Digi Connect ME® 9210		Digi Connect Wi-ME® 9210	
HARDWARE					
PROCESSOR TYPE		32-bit Digi NS9210 processor			
ARM CORE		ARM926EJ-S			
PROCESSOR SPEED		75 MHz			
CACHE		4k I/D Cache			
MEMORY BASE POPULATION		Support up to 8 MB NOR Flash; Support up to 16 MB SDRAM			
FLEXIBLE INTERFACE MODULES (FIMS)		300 MHz DRPIC165X CPU; 2k program/192 bytes data RAM			
ON-CHIP 256-BIT AES ACCELERATOR		Yes			
POWER MANAGEMENT MODES		On-the-fly clock scaling; Low-power sleep modes; Configurable scaling/wake-up events (EIRQ, UART, Ethernet, etc.)			
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		Full signal support (TXD, RXD, RTS, CTS, DTR, DSR and DCD); Hardware/Software flow control			
GPIO		10 shared; Up to 3 external IRQ options			
SPI		Master data rate up to 16.7 Mbps; Slave data rate up to 7.5 Mbps			
I²C		v1.0 bus interface; 7-bit and 10-bit address modes			
FLEXIBLE INTERFACE SUPPORT (FIM)		UART, 1-Wire, USB device (low-speed), CAN BUS			
WATCHDOG TIMER (16-BIT)		Yes			
JTAG INTERFACE		Available on development modules only			
ON-BOARD POWER SUPERVISOR		Yes			
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 0.735 in (18.67 mm)			
NETWORK INTERFACE - WIRED					
PHYSICAL LAYER		10/100Base-T		N/A	
DATA RATE		10/100 Mbps (auto-sensing)		N/A	
MODE		Full- or half-duplex (auto-sensing)		N/A	
CONNECTOR		RJ-45 w/ magnetics		N/A	
POE POWER PASS-THROUGH		802.3af compliant (Mid- and End-span)		N/A	
NETWORK INTERFACE – WIRELESS LAN					
STANDARD		N/A		IEEE 802.11b/g/n	
FREQUENCY		N/A		2.4 GHz	
DATA RATE		N/A		Up to 65 Mbps with automatic fallback	
MODULATION		N/A		CCK (11/5 Mbps), DQPSK (2 Mbps), DBPSK (1 Mbps), OFDM (6, 9, 12, 18, 24, 48, 54 and 65 Mbps)	
TYPICAL TRANSMIT POWER		N/A		+17 dBm	
RECEIVE SENSITIVITY		N/A		-69 dBm @ 54 Mbps	
CONNECTOR		N/A		1 x RP-SMA	
WLAN SECURITY					
WEP (WIRED EQUIVALENT PRIVACY)		N/A		64/128-bit encryption (RC4)	
WPA/WPA2/802.11I		N/A		128-bit TKIP/CCMP (AES) encryption. Enterprise mode (802.1X): LEAP (WEP only), PEAP, TTLS, TLS, EAP-FAST, GTC, MD5, OTP, PAP, CHAP, MSCHAP, MSCHAPv2, TTLS-MSCHAPv2. Pre-shared key mode (PSK/Personal).	
ENVIRONMENTAL					
OPERATING TEMPERATURE		-40° C to +75° C (-40° F to +167° F) -40° C to +85° C (-40° F to +185° F) with external thermal pad*			
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 (3.3 VDC)					
MAXIMUM		450 mA (1.485 W)			
TYPICAL		346 mA (1.14 W) UART and Ethernet activated			
IDLE		186 mA (613 mW)/16 clock scaling, Ethernet activated		–	
SLEEP		3.3 VDC @ 34 mA (113 mW)		3.3 VDC @ 142 mA (486 mW)	
WARRANTY					
PRODUCT WARRANTY		3 years			

*Please see hardware reference manual for detailed information

