HIGHLY INTEGRATED
NETWORK-ENABLED
CORE MODULES

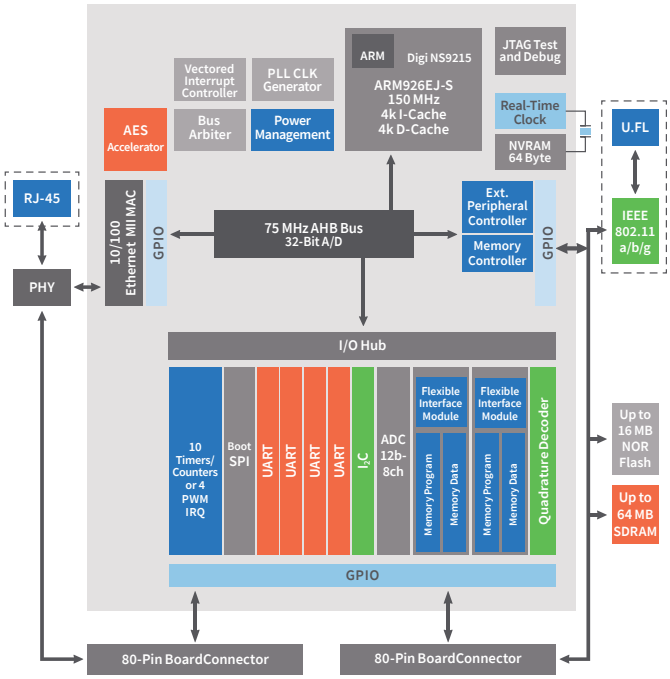
DIGI CONNECTCORE 9P 9215

Compact ARM9-based core modules combine main processing functionality and unique interface flexibility with secure wired and wireless network connectivity

The ConnectCore 9P 9215 module delivers a powerful, secure and compact network-enabled 150 MHz NS9215 processor solution with ARM9 core, a rich set of peripherals and unique interface flexibility. With leading features like an on-chip AES encryption engine, two independent and fully programmable flexible interface modules and Digi's patented dynamic power management options, it is the ideal solution for today's networked embedded applications. Digi's own NET+ARM processor technology also delivers the true long-term availability that is a key requirement for embedded applications.

ConnectCore 9P 9215 modules feature the design, development and administrative advantages offered by Digi Remote Manager. This secure, highly-scalable platform seamlessly ties enterprise applications and remote devices together.

BLOCK DIAGRAM



BENEFITS

- Compact, interchangeable 150 MHz ARM9 modules
- Integrated 10/100 Mbit Ethernet interface
- 802.11a/b/g wireless LAN with WPA2/802.11i security
- Rich set of peripheral connectivity options
- 2 programmable interface controllers (FIM)
- Industrial/extended temperature range
- Pre-certified low-emission design
- Digi processor and WLAN technology for true long-term availability
- Seamless migration path to Digi NET+ARM system-on-chip solution

RELATED PRODUCTS


Digi Connect® ME


Digi Connect® ME 9210


ConnectCard® for i.MX28

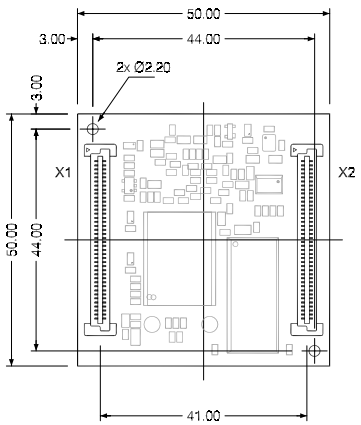

Digi XBee®


Development Kits

SPECIFICATIONS	ConnectCore® 9P 9215
HARDWARE	
PROCESSOR TYPE	32-bit NS9215 processor
ARM CORE	ARM926EJ-S
CACHE	4k I-Cache/4k D-Cache
PROCESSOR SPEED	150 MHz
MEMORY BASE POPULATION	Up to 16 MB NOR flash; Up to 32 MB SDRAM
ADDITIONAL POPULATION OPTIONS	RJ-45 Ethernet connector; 2 / 4 / 8 / 16 MB NOR flash; 8 / 16 / 32 MB SDRAM
FLEXIBLE INTERFACE MODULES (FIMS)	2 x 300 MHz DRPIC165X CPUs with 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 (RTC, ADC, EIRQ, UART, etc.)
PINS/FORM FACTOR	Small-footprint module with 2 x 80-pin board-to-board connectors
UART	Up to 4 high-speed UARTs; Maximum data rate 1.8432 Mbps
GPIO	Up to 64 GPIOs; 2 external IRQs
SPI	Master data rate 33.3 Mbps; Slave data rate 7.5 Mbps
I2C	v1.0 bus interface; 7-bit and 10-bit address modes
EXTERNAL MEMORY BUS	17-bit address and 16-bit data bus with 2 external chip select
ADC	12-bit/8-channel; External reference
TIMERS/PWM	Up to ten 16-/32-bit timers/counters Modes: internal timer with external terminal count option, external gated timer, event counter Up to 5 PWM functions
LEDS	2 (general purpose)
POR CONTROLLER	Yes
WATCHDOG TIMER (16-BIT)	Yes
REAL-TIME CLOCK	With 64 bytes of NVRAM and external battery backup
JTAG INTERFACE	Yes
QUADRATURE DECODER/COUNTER	Yes
5V TOLERANT GENERAL PURPOSE AND MEMORY INPUTS	Yes
DIMENSIONS (L X W X H)	1.97 in (50 mm) x 1.97 in (50 mm) x 6.1 mm (population option w/o RJ-45)
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)
NETWORK INTERFACE – WIRELESS LAN	
STANDARD	IEEE 802.11a/b/g
SECURITY	WEP/WPA/WPA2/802.11i
FREQUENCY	2.4/5 GHz
DATA RATE	Up to 54 Mbps with automatic rate fallback
MODULATION	DBPSK (1 Mbps), DQPSK (2 Mbps), CCK (11, 5.5 Mbps), BPSK (6, 9 Mbps), QPSK (12,18 Mbps), 16-QAM (24, 36 Mbps), 64-QAM (48, 54 Mbps)
TYPICAL TRANSMIT POWER	18 dBm @ 1 Mbps (802.11b); 12 dBm @ 54 Mbps (802.11g)
RECEIVE SENSITIVITY	-72 dBm @ 54 Mbps (802.11a/g)
CONNECTORS	2 x U.FL

SPECIFICATIONS	ConnectCore® 9P 9215
ENVIRONMENTAL	
OPERATING TEMPERATURE	-40° C to +85°C
STORAGE TEMPERATURE	-40° C up to +85° C (-40° F to +185° F)
RELATIVE HUMIDITY	5% to 95% (non-condensing)
ALTITUDE	12,000 feet (3,658 meters)
POWER REQUIREMENTS (3.3V)	
MAXIMUM	554 mA (1.83 W)
TYPICAL	443 mA (1.46 W); UART B/D and Ethernet on
IDLE	208 mA (686 mW); /16 clock scaling, Ethernet on
SLEEP	46 mA (151 mW); EIRQ wake-up, Ethernet PHY off
REGULATORY APPROVALS	
FCC PART 15 CLASS B, EN 55022, CLASS B	Yes
EN 61000-3-2 AND EN 61000-3-3	Yes
EN 301 893 V1.5.1 (2008-12)	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
JAPAN	Yes
WARRANTY	
PRODUCT WARRANTY	3 years

ConnectCore 9P 9215 Bottom View



PART NUMBERS	DESCRIPTION
MODULES FOR LINUX	
CC-9P-V513-LX	ConnectCore 9P 9215, 8 MB flash, 16 MB SDRAM, no on-module RJ
CC-9P-V524-LX	ConnectCore 9P 9215, 16 MB flash, 32 MB SDRAM, no on-module RJ
MODULES FOR NET+OS	
CC-9P-V502-C	ConnectCore 9P 9215 module with 4 MB Flash, 8 MB SDRAM, no on-module RJ-45

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