ConnectCore™ Wi-9C

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Hardware

- 32-bit NS9360 high-performance RISC processor (155 MHz) w/MMU

- On-board memory
  - Up to 256 MB Flash and 256 MB SDRAM

- Up to 4 high-speed TTL serial ports
  - Throughput up to 921 Kbps
  - Full signal support
  - Hardware/software flow control

- Up to 4 SPI ports
  - Master data rate up to 8.35 Mbps
  - Slave data rate up to 6.25 Mbps

- I^2C v1.0 bus interface
  - Fast (400 kHz) and normal (100 kHz) mode
  - 7-bit and 10-bit address modes
- USB 2.0 Host/Device Interface
  - Full speed (12 Mbps) and low speed (1.5 Mbps) support
- LCD controller
  - Support for 18-bit active matrix TFT displays
  - Up to SVGA (800x600) resolution
  - Single/dual panel STN displays
- General purpose timers/counters/PWM
  - Up to 8 independent 16-/32-bit programmable timers, counters, or 4 PWM functions
- 4 programmable external interrupts
- Up to 55 shared General Purpose Input/Output (GPIO) ports
  - Up to 7 high-current (8 mA) pins
- Real-time clock
  - Processor powered, no battery backup

802.11b/g Wireless Network Interface

- Standard: IEEE 802.11b/g
- Frequency: 2.4 GHz
- Data rate: Up to 54 Mbps w/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)
- Transmit power: 16 dBm typical
- Receive sensitivity: -73 dBm @54 Mbps
- Connector: 1 x RP-SMA or 2 x U.FL

Wired Network Interface

- Standard: IEEE 802.3
- Physical Layer: 10/100Base-T

- Data rate: 10/100 Mbps (auto-sensing)

- Mode: Full or half duplex (auto-sensing)

- On-board connector: RJ-45 w/magnetics

- 802.3af power pass-through (mid-span and end-span)

Environmental

- Operating temperature: -30° C to 75° C (-22° F to 167° F)

- Relative humidity: 5% to 95% (non-condensing)

- Altitude: 12,000 ft (3657.6 m)

LEDs

- Ethernet connector
    - Link integrity
    - Network activity

- On-board
    - 2 x user-definable (default: wireless link, wireless activity)

Dimensions

- Length: 3.055 in (7.76 cm)

- Width: 3.590 in (9.12 cm)

- Height: 0.80 in (20.32 mm) with RJ-45 Ethernet connector

Connectors/Pinouts

- SO-DIMM 144-position socket main signal connector
    - AMP 390112-1 or equivalent
    - Suitable for manual and machine placement

- On-board JTAG connector

- See Hardware Reference Manual for complete connector and pinout information

Power Requirements

- Module: 3.3VDC @800 mA max
- USB interface: 5VDC @500 mA max per port (optional)

Regulatory Approvals (In Progress)

- FCC, Part 15 Class B
- EN55022, Class B
- EN61000-3-2 and EN61000-3-3
- 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)
- EN300 328
- EN301 489-3
- UL 60950-1
- EN60950 (European Union)
- CSA C22.2, No. 60950
- EN55024

Digi JumpStart Kit for NET+OS

- Microcross™ GNU X-Tools
- Eclipse-based Digi Workbench IDE
- Documentation
  - Hardware Reference Manual
  - Programmer's Guide
  - API Reference
  - Advanced Web Server Toolkit
- Sample code

- Driver source code
  - Serial, Ethernet, I^{2}C, SPI, USB, LCD
- ConnectCore Wi-9C module
- Development board
- USB debugger or gdb software debugger
- ThreadX Real-Time Operating System with picokernel™ architecture
  - Requires less than 25 Kb code space
- High-performance TCP/IP stack with full networking protocol and extended network services support
- Universal IP address assignment through Address Configuration Executive (ACE)
- Network discovery services
  - ADDP, LDAPv3
- Allegro Software Embedded Web Server
- SSL 3.0/TLS 1.0 with strong encryption
  - DES, 3DES, AES (NIST certified)
- Flexible and robust file system supporting RAM and Flash
- SMICng SNMP MIB compiler
- Micro XML SAX parser
- Additional utilities
  - HTML-to-C compiler
  - Flash download

Digi JumpStart Kit for Embedded Linux

- GNU toolchain (gcc/binutils/uClibc)
- Eclipse-based Digi Workbench IDE
- Linux kernel 2.6.x w/patches
- BSP source code
- Boot loader w/source files
- Sample files and documentation

- ConnectCore Wi-9C module

- Development board

- Power supply and cords

- USB debugger/JTAG booster and adapter
  - Flash programming/verification
  - I^2C device access
  - CPU signal tests

Digi JumpStart Kit for NET+OS for Microsoft Windows Embedded CE 6.0

- Microsoft Windows Embedded CE 6.0 BSP
  - BSP source code
  - Boot loader w/source files

- Microsoft QFEs

- Sample files and documentation

- ConnectCore Wi-9C module

- Development board

- Power supply and cords

- JTAG booster and adapter
  - Flash programming/verification
  - I^2C device access
  - CPU signal tests