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	Obsolete
Module/Board Type	-
Core Processor	-
Co-Processor	-
Speed	-
Flash Size	-
RAM Size	-
Connector Type	-
Size / Dimension	-
Operating Temperature	-
Purchase URL	https://www.e-xfl.com/product-detail/digi-international/cc-9p-v225-z1

ConnectCore™ 9P 9360

Compact High-Performance ARM9 Core Module

32-bit NET+ARM core module combines performance, peripheral options and design integration flexibility with complete embedded software platform support.

Overview

The ConnectCore 9P 9360 module combines superior performance and a complete set of integrated peripherals and component connectivity options in a very compact and versatile form factor. It is the ideal solution for a wide variety of applications including medical, industrial/building automation and transportation.

Built on leading Digi 32-bit NET+ARM processor technology, the network-enabled ConnectCore 9P 9360 module provides a modular and scalable core processor solution. It significantly minimizes software and hardware design risk by simplifying the overall design process and improving time-to-market.

Cost-effective and easy-to-use Digi JumpStart Kit® development solutions enable you to take advantage of the reliability and flexibility of the royalty-free ThreadX-based NET+OS® platform, the feature-complete high-level software components and applications of Microsoft® Windows® Embedded CE 6.0, or the readily available library of software and community support of the Linux® environment.

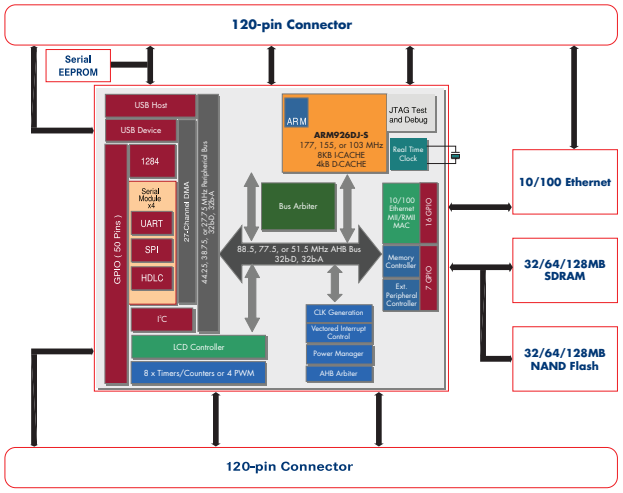
Platforms and Services

Design Services | Application Kits | Support

NET+OS | Windows Embedded

Supported Software Platforms

Block Diagram



Features/Benefits

- Powerful 32-bit Digi NS9360 processor (ARM9)
- Integrated 10/100 Ethernet networking
- On-chip LCD controller and USB host/device
- Commerical and industrial operating temperature
- FCC Class B low-emission module design
- Digi processor technology for true long-term product availability
- Complete NET+OS, Microsoft Windows Embedded CE 6.0 and Linux software platform support
- Seamless migration path to fully integrated Digi NET+ARM system-on-chip solution

Development Kits

Digi JumpStart Kits® Overview

Digi JumpStart Kit® for NET+OS®

TThis 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 development solution
- Built on field-proven and compact ThreadX RTOS
- Fully integrated support for secure IPv4/IPv6
- Professional Digi ESP IDE (Microsoft Windows)

Digi JumpStart Kit® for Microsoft Windows Embedded CE

Microsoft Windows Embedded CE 6.0 is a highly componentized operating system, offering pre-tested technology components designed to create sophisticated embedded applications with minimized design effort and risk. It includes a wide range of ready-to-use components such as a graphical user interface, networking, web browser and multimedia. The professional Microsoft Visual Studio 2005 development tools also support native and managed code applications using various programming languages.

The Digi JumpStart Kit for Microsoft Windows Embedded CE 6.0 provides a complete kit with all hardware and software components needed to start immediate software development on the ConnectCore 9P 9360 core module platforms. This includes support for key processor platform features such as power management modes.

- Complete kit for Windows Embedded CE 6.0 development
- Seamless integration into Microsoft Windows Embedded CE
- Full Digi Board Support Package (BSP) source code
- 180-day Visual Studio and Windows Embedded CE 6.0 trial

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 ConnectCore 9P 9360 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.

- Complete embedded Linux development platform
- Royalty-free and with optimized 2.6 kernel and services
- Linux-based Digi ESP IDE for rapid product development
- Full Linux and Digi BSP source code included

Digi JumpStart Kit® Contents

Software Platform	NET+OS®	Microsoft Windows Embedded CE	Embedded Linux
Module	ConnectCore 9P 9360 module w/ 128 MB NAND Flash, 64 MB SDRAM		
Development Board	4 serial ports (1 x RS-232/422/485, 1 x RS-232, 2 x TTL),VGA interface, LCD/Touchscreen connector, User/Application connectors, I²C/SPI headers, Screw terminal for access to 8 GPIO signals, 2 user push-buttons, 2 user LEDs, 9-30VDC power supply, Power switch		
CD/DVD	Digi NET+OS CD: NET+OS 7, Digi ESP IDE, BSP source code, Sample code, Green Hills MULTI support option, User documentation	Digi Windows CE 6.0 CD: Microsoft Windows Embedded CE 6.0 BSP w/source code, Universal Boot Loader (U-Boot) source code, Sample code, Documentation Microsoft Embedded Windows CE 6.0 evaluation DVD: 180-day trial of Microsoft Embedded Windows CE 6.0, Platform Builder, Visual Studio 2005	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 Windows CE 6.0 BSP user's guide, 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 (110/240VAC to 12VDC @ 850 mA) with interchangeable outlet adapters (North America, EU, UK and Australia), Ethernet cable, Serial cable		
Other	Digi JTAG Link USB 2.0 hardware debugger	–	–
Ethernet Only	CC-9P-NET	CC-9P-CE6	CC-9P-LX

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

ConnectCore™ 9P 9360

Hardware	
Processor Type	32-bit Digi NS9360 high-performance RISC processor
ARM Core	ARM926EJ-S
Processor Speed	177 MHz
Cache	4k D-Cache/8k I-Cache
Memory Population	Up to 128 MB NAND flash
	Up to 128 MB SDRAM
Serial EEPROM	8 KB
UART	4 high-speed UARTs Maximum data rate 921.6 Kbps
GPIO	Up to 55 shared GPIO ports with 7 high-current (8 mA) pin options
SPI	Up to 4 SPI ports Master data rate up to 11.25 Mbps Slave data rate up to 5.5 Mbps
I²C	Fast mode (400 kHz) and normal mode (100 kHz) support 7-bit and 10-bit address modes
USB	USB 2.0 Host/Device low/full speed interface with internal PHY (external PHY interface available) Parallel operation of host and device using combination of internal PHY and external PHY
External Memory Bus	28-bit address/32-bit data
LCD Controller	Up to SVGA (800x600) resolution Up to 18 bpp; 256K colors (TFT) 1, 2, 4 bpp palletized grayscale (STN) Up to 16 bpp 4:4:4 RGB, 3375 colors (Color Passive Matrix)
Timers/PWM	Up to 8 independent 16-/32-bit programmable timers/counters Up to 4 PWM functions
External IRQs	4
Real-Time Clock	• (no battery-backup)
JTAG	•
Pins/Form Factor	Small-footprint module with 2 x 120-pin board-to-board connectors
Dimensions (L x W x H)	2.362 in (60 mm) x 1.732 in (44 mm) x 0.0395 in (10.0 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)
Environmental	
Operating Temperature	0° C to 70° C (32° F to 158° F) Industrial temperature version available. See website for information.
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)

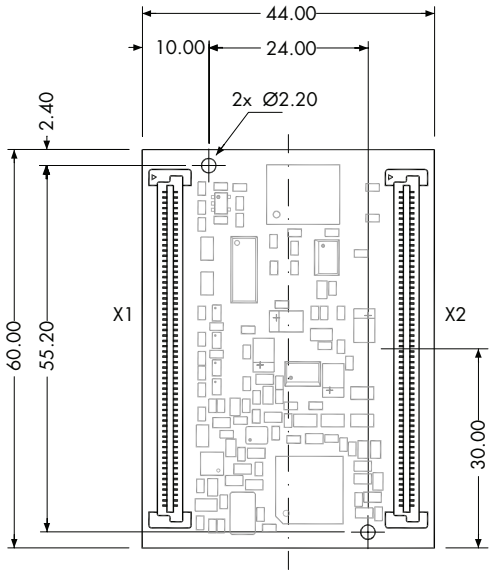
• Module Feature

ConnectCore™ 9P 9360

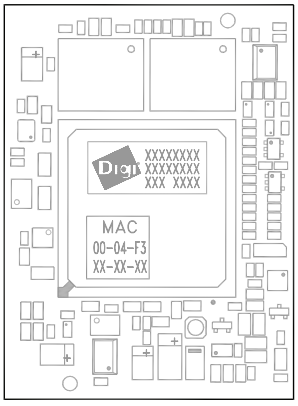
Power Requirements (3.3V)	
Maximum	400 mA
Regulatory Approvals	
FCC Part 15 Class B	•
EN55022:2006 Class B	•
ICES-003, Class B	•
VCCI, Class B	•
EN55024:1998 +A1:2001, A2:2003	•
EN61000-3-2:2006	•
EN61000-3-3:1995 +A1:2001, A2:2005	•
UL 60950-1, EN 60950 (EU)	•

• Module Feature

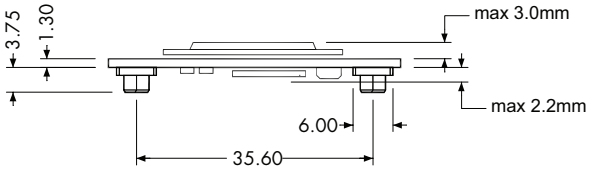
Bottom View



Top View



Side View



Visit www.digiembedded.com for part numbers.

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