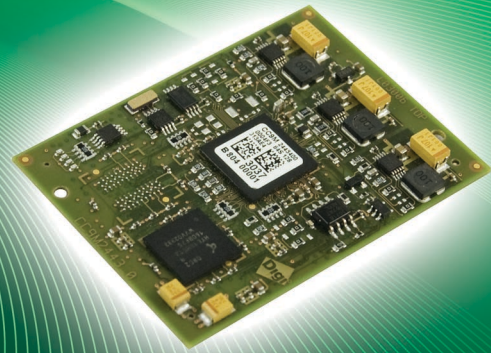


ConnectCore™ 9M 2443 Family

Network-Enabled High-End ARM9 Core Modules

Compact, high-end ARM9 core module with complete software platform support, superior performance, low-power operation and integrated Ethernet networking.



Overview

The network-enabled ConnectCore 9M 2443 core module family delivers leading performance, low-power operation, and rich peripheral interface support for a wide variety of applications, including medical devices, transportation, security/access control, networked displays and more.

Designed from the ground up with power budget conscious applications in mind, it is also an ideal system platform for mobile and battery-operated product designs with full hard- and software support for power management. Based on a 400/533 MHz S3C2443 ARM9 processor, the module offers a wide variety of on-board peripherals such as a TFT/CSTN LCD controller, camera interface, audio codec interfaces, hi-speed USB device, full-speed USB host, high speed memory card support, external mass storage, and other interfaces. An on-module 10/100 Mbit Ethernet interface provides seamless integration into existing network infrastructures.

Digi JumpStart Kits® for Microsoft® Windows® Embedded CE and Digi Embedded Linux® allow immediate and professional embedded product development right out of the box.

Related Items



Design Services



Accessory Kits

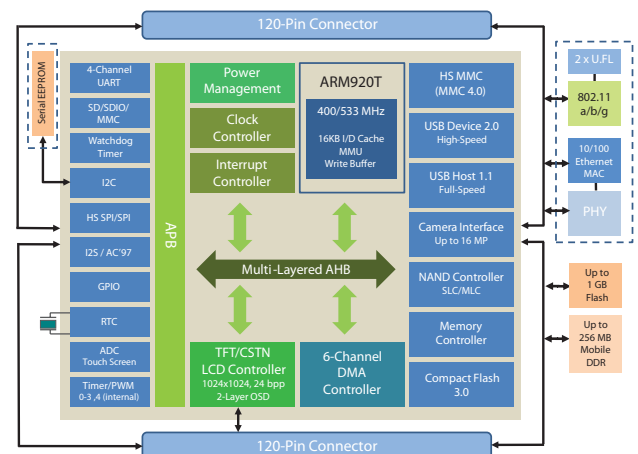


Support



Supported Software Platforms

Block Diagram



Features/Benefits

- High-performance 32-bit core module family
- Bandwidth optimized processor architecture
- Compact and power-efficient design
- Integrated 10/100 Mbit Ethernet networking
- Complete multimedia connectivity options
- Power-efficient design for low power operation
- Extended/Industrial operating temperature
- FCC Class B low-emission design
- Complete Microsoft Windows Embedded CE 6.0 and Linux platform support with full BSP source code



Development Kits

Digi JumpStart Kits Overview

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 9M 2443 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 Linux development platform for embedded systems
- Royalty-free and with optimized 2.6 kernel and services support
- Linux-based Digi ESP IDE for rapid product development
- Full Linux and Digi Board Support Package (BSP) source code



Digi JumpStart Kit for Microsoft Windows Embedded CE 6.0

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 9M 2443 core module platforms. This includes support for key processor platform features such as power management modes.

- Complete kit for immediate Windows Embedded CE 6.0 development
- Seamless integration into Microsoft Windows Embedded CE environment
- Full Digi Board Support Package (BSP) source code
- 180-day Visual Studio 2005 and Windows Embedded CE 6.0 evaluation



Digi JumpStart Kit Contents

Software Platform	Embedded Linux	Microsoft Windows Embedded CE 6.0
Module	ConnectCore 9M 2443 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, camera connector, user/application connectors, SD/MMC socket, HS-MMC socket, USB host/device connectors, I ² C/SPI headers, screw terminal for access to 8 GPIO signals, 2 user push-buttons, 2 user LEDs, battery, 802.3af (PoE) module support (sold separately), 9-30VDC power supply, power switch	
CD/DVD	Digi Embedded Linux with Live DVD support, Digi ESP IDE, Linux and platform specific source code, Universal boot loader source code (U-Boot), sample code, documentation	<p>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</p> <p>Microsoft Embedded Windows CE 6.0 evaluation DVD: 180-day trial of Microsoft Embedded Windows CE 6.0, Platform Builder, Visual Studio 2005</p>
Documentation	Quick start guide, Digi Embedded Linux user's guide, hardware reference manual, development board schematics	Quick start guide, Digi Windows CE 6.0 BSP 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	
Part Numbers (worldwide)	CC-9M-2443-LX	CC-9M-2443-CE6

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

ConnectCore 9M 2443 Family

Hardware

Processor Type	32-bit Samsung S3C2443
Cache	16k I-/D-cache
ARM Core	ARM920T
Processor Speed	400/533 MHz
Memory Base Population	Up to 1 GB NAND flash
	256 MB mDDR
Additional Population Options	Memory/processor speed grade/operating temperature
Power Over Ethernet	Yes, on carrier board
Pins/Form Factor	Small-footprint module with 2 x 120-pin board-to-board connectors
UART	4-channel; Up to 921 Kbps, IrDA 1.0 SIR mode
GPIO	24 external IRQs, 147 multiplexed IRQs
SPI/HS-SPI	Master and slave mode
I ² C	Standard and fast mode
SD/SDIO/MMC	1-/4-bit and block/stream, up to 25 MHz
High-Speed (HS) MMC	SD HC 1.0, SD MC 2.1, SDIO 1.0, MMC 4.2 1-/4-/8-bit modes, up to 50 MHz CE-ATA mode support
CF/ATA	Compact Flash 3.0 PC card mode ATA/ATAPI-6 mode w/ PIO/UDMA
USB Support with Integrated PHYs	USB 2.0 device, 1-port, high-/full-speed USB 1.1 host, 2-port, low-/full-speed
LCD Controller	Up 1024x1024 pixels resolution Up to 16 grey levels/4096 colors (STN) Up to 24 bpp, 2 overlay windows (TFT)
Camera Interface	ITU-R BT 601/656 8-bit mode support 4096x4096 pixels / 2048x2048 scaling Mirror, 180° rotation, digital zoom in RGB 16/24-bit, YCbCr 4:2:0/4:2:2 output
I ² S and AC'97 Audio Codec Controllers	•
10-bit ADC & Touch Screen Interface	10-channel multiplexed, 500k samples/s
Timers/PWM	4-ch 16-bit timer/PWM, 1-ch 16-bit internal
8-/16-bit External Memory Bus Interface	•
Power Management Modes	Normal, idle, stop, sleep Ext IRQ, RTC alarm, tick interrupt wake-up
Watchdog Timer (16-bit)	•
Real-Time Clock	•
Dimensions (L x W x H)	2.362 in (60 mm) x 1.732 in (44 mm) x 0.266 in (6.75 mm)

- Module Feature

ConnectCore 9M 2443 Family

Network Interface

Physical Layer	10/100Base-T
Data Rate	10/100 Mbps (auto-sensing)
Mode	Full or half duplex (auto-sensing)

Power Requirements (3.3V)

Maximum	554 mA
Normal Operation	308 mA
Idle Mode	280 mA
Stop Mode	184 mA
Sleep Mode	37 mA

Environmental

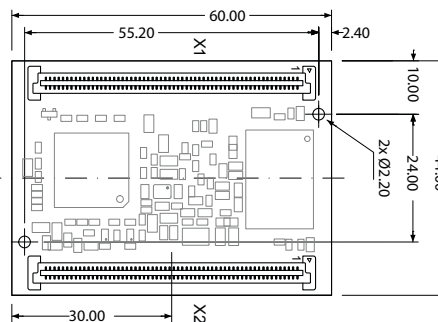
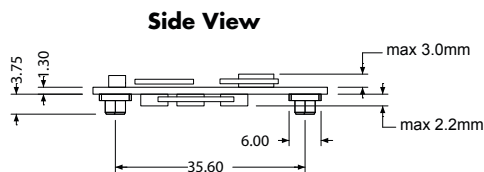
Operating Temperature	-40° C to +85° C (-40° F to +185° F) -20° C to +70° C (-4° F to +158° F)
Storage Temperature	-50° C to +125° C (-58° F to +257° F)
Relative Humidity	5% to 90% (non-condensing)
Altitude	12,000 feet (3,658 meters)

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	•
EN60950-1:2001 (UL60950-equivalent)	•

Bottom View

• Module Feature



Visit www.digiembedded.com for part numbers.

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