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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	MPU Core
Core Processor	ARM7TDMI, NS7520
Co-Processor	-
Speed	55MHz
Flash Size	4MB
RAM Size	16MB
Connector Type	RJ45
Size / Dimension	3.88" x 1.68" (98.5mm x 42.7mm)
Operating Temperature	-40°C ~ 85°C
Purchase URL	https://www.e-xfl.com/product-detail/digi-international/dc-sp-01r-c-25



WIRELESS DEVICE
SERVER



DIGI CONNECT® WI-SP

The industry's first secure 802.11b wireless device server delivers leading network-to-serial connectivity and strong WPA2/802.11i security

The introduction of wireless technology into the rapidly emerging world of fully networked electronic devices creates a new dimension of device and software collaboration that complements existing wired infrastructures.

Built on Digi's leading 32-bit NET+ARM technology, the Digi Connect Wi-SP wireless device server delivers a true plug-and-play device networking solution that combines the benefits of secure wireless networking technology with proven serial port connectivity. It is the ideal choice in retail, warehouse, healthcare and medical applications, allowing you to respond immediately to the ever-changing requirements and challenges that are crucial to the success of your business.

Whenever sensitive and business-critical data is involved, network security is a key requirement. The significant benefits of wireless technology often come with potential risks, and choosing the right product provides you with peace-of-mind and a competitive edge.

The Digi Connect Wi-SP also offers product customization options, intelligent remote management and monitoring capabilities through Digi Remote Manager™.

BENEFITS

- Compact enclosure design with integrated mounting tabs
- Fully switch-selectable RS-232/422/485 serial interface
- Flexible 9-30 VDC power input
- Wireless 802.11b with data rates up to 11 Mbps
- Industry's first secure wireless device server solution supporting enterprise-class WPA2/802.11i security
- Easy-to-use Digi plug-and-play firmware offers complete serial-to-network connectivity and customization
- Strong SSL/TLS encryption with NIST-certified AES encryption for security sensitive environments
- Digi's patented RealPort® technology for COM/TTY port redirection and control

RELATED PRODUCTS



Digi Connect®
SP



PortServer®
TS



Portserver®
TS MEI

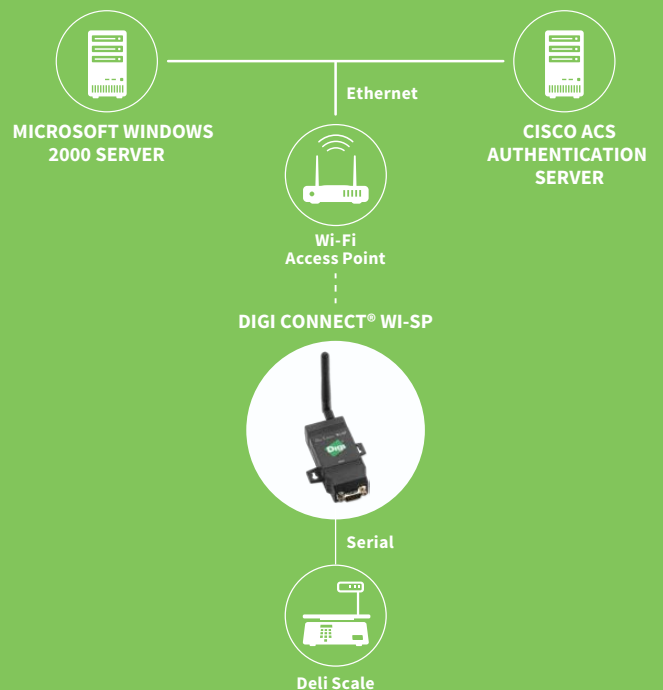


ConnectPort®
TS 8/16



RealPort®

APPLICATION EXAMPLE



SPECIFICATIONS

Digi Connect® Wi-SP

FEATURES

MANAGEMENT	HTTP/HTTPS configuration
PROTOCOLS	TCP/UDP Socket Services, Telnet, Rlogin, Advanced Digi Discovery Protocol (ADDP), SNMP, SSL/TLS
SOFTWARE	Patented RealPort® COM/TTY port redirection for Microsoft Windows®, UNIX and Linux
ENCRYPTION	SSL/TLS based: DES (56-bit), 3DES (168-bit), AES (128/256-bit)
WEB INTERFACE	Customizable with optional Java applet support (File system w/512 kb user space)
OTHER	Robust on-board TCP/IP stack with built-in web server; Dynamic DNS support (DHCP Option 12); Pre-defined and custom device profiles; Modem emulation and port logging; Data pattern event notification via email/SNMP traps; Intelligent SNMP device management

HARDWARE

PROCESSOR TYPE	32-bit NET+ARM high-performance RISC processor (NS7520 55 MHz)
MEMORY BASE POPULATION	4 MB Flash and 16 MB RAM
STATUS LEDS	Power, Network Link, Activity
DIMENSIONS (L X W X H)	4.188 in x 1.680 in x 0.999 in (10.64 cm x 4.267 cm x 2.537 cm)
OTHER	5/6/7/8 data bits; 1/1.5/2 stop bits; None/even/odd parity; Full signal support with software/hardware flow control

INTERFACES

SERIAL

PORT	RS-232/422/485 (switch selectable)
CONNECTOR	DB-9M
THROUGHPUT	Up to 230,400 bps with automatic fallback
CONFIGURATION	Command line, XML Remote Command Interface (RCI)

WIRELESS

STANDARD	IEEE 802.11b
FREQUENCY	2.4 GHz
DATA RATE	Up to 11 Mbps with automatic fallback
MODULATION	CCK (11/5 Mbps), DQPSK (2 Mbps), DBPSK (1 Mbps)
TRANSMIT POWER	16 dBm typical
RECEIVER SENSITIVITY	-82 dBm @ 11 Mbps
ANTENNA CONNECTOR	1 x RP-SMA

WLAN SECURITY

WEP (WIRED EQUIVALENT PRIVACY)	64/128-bit encryption (RC4)
WPA/WPA2/802.11I	128-bit TKIP/CCMP encryption Enterprise mode (802.1X): Dynamic WEP, LEAP (WEP only), PEAP, EAP-TLS, EAP-TTLS PEAP/MSCHAPv2, PEAP/TLS, PEAP/GTC, PEAP/OTP, PEAP/MD5, EAP-TTLS/EAP-MD5, EAP-TTLS/EAP-GTC, EAP-TTLS/EAP-OTP, EAP-TTLS/EAP-MSCHAPv2, EAP-TTLS/EAP-TLS, EAP-TTLS/MSCHAPv2, EAP-TTLS/MSCHAP, EAP-TTLS/PAP, EAP-TTLS/CHAP Enterprise and Pre-Shared Key (PSK) mode

POWER REQUIREMENTS

POWER SUPPLY	9-30 VDC @ 450 mA
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ENVIRONMENTAL

STORAGE TEMPERATURE	-40° C to +90° C (-40° F to 194° F)
OPERATING TEMPERATURE	-20° C to +65° C (-4° F to 149° F)
RELATIVE HUMIDITY	5% to 90% (non-condensing)
ALTITUDE	12,000 feet (3658 meters)

REGULATORY APPROVALS

SAFETY/EMISSIONS/IMMUNITY	FCC Part 15, Subpart B; ICES-003; EN55022:1998, Class B; EN301 489-3:2002, Class B; FCC Part 15, Subpart C, Class B; Canada RSS 210 (Wireless); AS/NZS CISPR 22:2002, Class B; VCCI V.3/2001.04, Class B; EN 300 328 V1.4.1 2003-04; EN55024; EN 301 489-3 V.1 4.1:2002; IEC/EN 60950-1 (2001); UL/CUL 60950-1
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PART NUMBERS	DESCRIPTION
DC-WSP-01-S	Digi Connect Wi-SP (single-unit pack w/power supply and dipole antenna)
DC-WSP-01-S-W	Digi Connect Wi-SP (single-unit pack w/power supply and dipole antenna) (International)

FOR MORE INFORMATION
PLEASE VISIT WWW.DIGI.COM

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