

Product Information

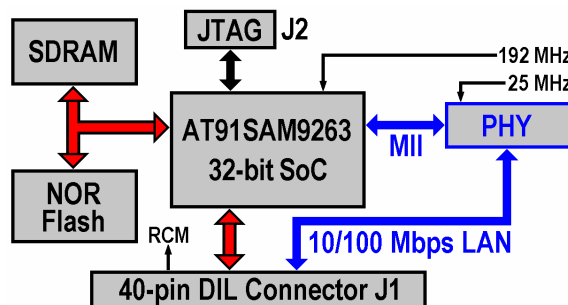
DIL/NetPC DNP/9265

Embedded Linux Module with Ethernet, PHP, SQL Database and HTTP(S) Client/Server Support



Description

The DIL/NetPC DNP/9265 provides a very compact Atmel 32-bit AT91SAM9263 ARM9 SoC (System on Chip) with preinstalled U-Boot boot loader, Linux 2.6 O/S, full-featured TCP/IP stack, HTTP(S) server/client, PHP, SQL database, SSV/ECC (SSV Embedded Cloud Computing) support for complex and sophisticated embedded networking applications with Ethernet connectivity.



Block diagram DNP/9265: The DIL/NetPC DNP/9265 offers 1x 10/100 Mbps Ethernet LAN interface, 20-bit GPIO, 1x SPI, 1x I2C, 1x CAN, 3x UART and 1x USB 2.0 host port. The SPI and I2C interfaces both support the master and slave mode. The main application area of the DNP/9265 is the field of HTTP(S) client and server gateway applications (embedded web client) for modern industrial and laboratory environments.

The main component of the DNP/9265 is the Atmel AT91SAM9263. This microcontroller-based system-on-chip embeds a 200 MIPS ARM926EJ-S-based processor. Its parallel bus architecture incorporating distributed DMA overcomes the bottlenecks that occur with conventional ARM9-based MCUs in data-intensive applications. The AT91SAM9263 employs 27 DMA channels, a 9-layer bus matrix and two additional busses to boost CPU performance and provide on-chip data transfer rates of up to 41.6 Gbps.

The DNP/9265 drive space for boot loader, operating system and user files is implemented with a NOR-type flash chip. The DNP/9265 Linux O/S contains a JFFS (Journalling Flash File System) driver with NOR flash chip support. For flash memory expansion the DNP/9265 DIL-40 connector offers the card interface signals for an external (Micro) SD card socket.

The DNP/9265 offers the footprint of a standard 40-pin DIL socket with 2.54 mm (0.1") centers and all the hardware and software features necessary to add high-speed Ethernet and device connectivity capabilities to any product design.

Technical Data DNP/9265

Basic

CPU	Atmel AT91SAM9263 32-bit ARM9 SoC
Speed	192 MHz
RAM	32 MByte SDRAM
Flash	32 MByte NOR-type
Ethernet	1 x 10/100 Mbps Ethernet

I/O Functions

Parallel	20-bit GPIO (General Purpose Input Output)
Asynchronous Serial I/Os	3 x UART (COM1 with all hardware handshake signals, COM2 TX/RX only, COM3 TX/RX/RTS/CTS - functional OR-ed with four GPIO signals)
SPI	1 x SPI master/slave controller, functional OR-ed with four GPIO signals
I2C	1 x I2C master/slave controller, functional OR-ed with two GPIO signals
CAN	1 x ISO/11898A 2.0B CAN controller (supports transmission rates from 50 kbps to 1 Mbps)
USB	1 x USB 2.0 host port with FS and LS support

Special Functions

SSD Expansion	1 x SD card interface signals for external socket, functional OR-ed with GPIO signals
Watchdogs	1 x timer watchdog, 1 x power supervisor

Software Functions

Boot Loader	U-Boot with RS232-based Command Line Interface (CLI) preinstalled in Flash
Preinstalled O/S	Linux O/S with kernel Version 2.6.24 (based on the OpenEmbedded software framework)
TCP/IP Support	Ethernet, PPP, PPPoE, DHCP, BootP, DNS, ARP, IP, TCP, UDP, ICMP, HTTP, HTTPS, FTP, TFTP, Telnet, SSL, SSH, NTP, DynDNS, and other
Specials	Embedded HTTP/HTTPS server with FastCGI, HTTP/HTTPS client, SQLite database, PHP 5.3 runtime environment with JSON support, Twitter API
SSV/ECC	HTTP/HTTPS client-based embedded cloud computing support

Other

Mechanical	40-pin DIL form factor with 2.54 mm (0.1") centers
Size	23 mm x 55 mm
Power	3.3 VDC
Current	300 mA typical / 500 mA max.

Delivery

DNP/9265	DNP/9265 with preinstalled U-Boot and embedded Linux O/S
DNP/SK30	Starter Kit with DNP/9265 and evaluation board DNP/EVA6

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