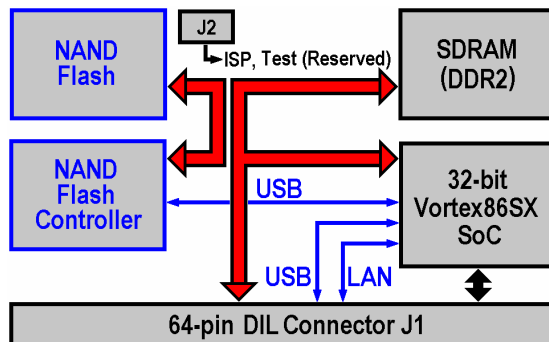Product Information

DIL/NetPC DNP/2486

Embedded Linux Module with Ethernet, 480 Mbps USB and Java 6 Support

Description

The DIL/NetPC DNP/2486 provides a very compact Vortex86SX 32-bit x86 SoC (System on Chip) with preinstalled Linux O/S, full-featured TCP/IP stack, Web (HTTP) server, Telnet and (T)FTP support for embedded networking applications with Ethernet connectivity.

Block diagram DNP/2486: The DIL/NetPC DNP/2486 comes with 1x 10/100 Mbps Ethernet LAN interface, 20-bit GPIO, 1x SPI, 2x UART and 1x USB 2.0 host port. The 8-bit bus interface (available over the DIL-64 connector) supports the connection to external chips and devices. The main application area of the DNP/2486 is the field of embedded IP gateways for modern industrial and laboratory environments.

The main component of the DNP/2486 is the Vortex86SX. The Vortex86SX is a high performance MCU, which is compatible with DOS, Linux and Microsoft Windows CE. It integrates 32 KB write through direct map L1 cache, PCI Rev. 2.1 32-bit bus interface at 33 MHz, DDR2 SDRAM controller, ROM controller, IPC (Internal Peripheral Controller) with DMA and interrupt timer/counter, Fast Ethernet MAC and PHY, 16C550/16C552-compatible FIFO UART, USB 2.0 host controller and many more

The DNP/2486 drive space for the operating system and the user files is implemented with a NAND flash controller and a NAND flash chip. The NAND flash controller is connected to one of the USB 2.0 host controller of the Vortex86SX. This means the DNP/2486 is using an on-board USB boot device.

The DNP/2486 offers the footprint of a standard 64-pin DIL socket with 2.54 mm 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/2486

Basic

CPU	Vortex86SX 32-bit x86 SoC
Speed	300 MHz
RAM	64 MByte DDR2 SDRAM @ 133 MHz bus speed
Flash	1024 MByte NAND with USB-based controller
Flash Erase Cycles	10.000 typ.
Ethernet	1x 10/100 Mbps Ethernet

I/O Functions

Parallel I/Os	20-bit GPIO or 16-bit GPIO + 4 SPI signals
Serial I/Os	2x 16C550/16C552 compatible UARTs
SPI	1x SPI with one chip select output
USB	1x USB 2.0 Host Port for external USB devices with HS (480 Mbps), FS and LS support (factory default, available over DIL-64 pins 40 & 41)
Bus Interface	8-bit for external I/O devices

Special Functions

BIOS	PC-compatible AMI Basic I/O System
RTC	1x Real Time Clock with external battery-backup
Watchdogs	1x timer watchdog, 1x power supervisor
Chip Select Outputs	4x CS output lines for external expansion
Interrupt Inputs w/o USB	5 x INT interrupt input line for external devices
Interrupt Inputs with USB	3 x INT interrupt input line for external devices

Other

Mechanical	64-pin DIL form factor
Size	28 mm x 82 mm
Power	3.3 VDC
Current	350 mA typical / 600 mA max.

Delivery

DNP/2486-L	DNP/2486 with preinstalled embedded Linux O/S
DNP/2486-D	DNP/2486 with preinstalled ROM-DOS 6.22
DNP/SK29	Starter Kit with DNP/2486 and evaluation board DNP/EVA11-SV1

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