Product Information

DIL/NetPC PNP/5280

**Embedded Linux Module with a rich set of I/O Functions**

Description

The DIL/NetPC PNP/5280 provides a very compact ColdFire-based low power embedded controller (Motorola/Freescale 32-bit MCF5280) with pre-installed Linux O/S, full-featured TCP/IP stack, and Web server for Ethernet-based embedded networking applications. The PNP/5280 is available in three different 10/100 Mbps Ethernet LAN configurations.
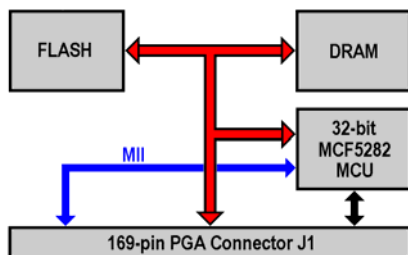
Block diagram PNP/5280-M: This PNP/5280 version offers the full set of 10/100 Ethernet MII (Media Independent Interface) signals on the 169-pin PGA connector. The PNP/5280-M allows you to connect external PHY or switch devices. A typical application is a high-end industrial switch with Web-based management and supervisor functions.
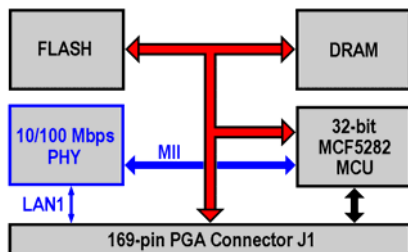
Block diagram PNP/5280-N: This version of the PNP/5280 comes with an on-board PHY chip and one 10/100 Ethernet LAN interface. The main application area of the PNP/5280-N are Ethernet-to-CAN gateways. The 32-bit bus interface supports the connection to other external field bus chips.
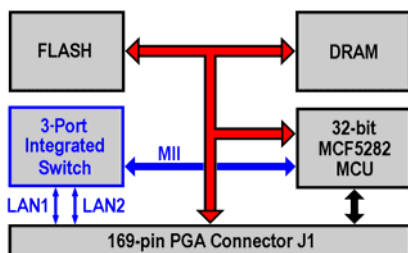
Block diagram PNP/5280-S: This PNP/5280 version comes with an on-board 3-port integrated switch chip. This switch chip includes also two embedded PHY devices. The PNP/5280-S offers two 10/100 Ethernet LAN interfaces. This two interfaces can be used for implementing star-based LAN topologies or on-board Ethernet connections for embedded computing grid's.

The PNP/5280 offers the footprint of a standard 169-pin PGA socket (Socket 3) with 2.54mm centers and all the hardware and software features necessary to add high-speed

networking capabilities to any product design. The PNP/5280 is developed specifically for products that need to be connected to 10 or 100 Mbps Ethernet-based TCP/IP networks with minimum development costs.

The PNP/5280 is build around Motorola's (Freescale) 32-bit MCF5282 microcontroller unit (MCU) running with 66 MHz. The external main components around the ColdFire are one Flash memory chip with 8 Mbytes and one 16 MByte SDRAM memory chip. The PNP/5280 offers the footprint of a standard 169-pin PGA socket with 2.54 mm centers and all the hardware and software features necessary to add high-speed networking capabilities to any product design for industrial Ethernet applications.

Technical Data

Basic
CPU	32-bit Motorola Coldfire 66 MHz
RAM	16 MByte SDRAM
Flash	8 MByte

I/O Functions
Parallel (PIO)	20-bit GPIO
Serial I/Os	1 x SPI, 1x I2C, 1x CAN, 2 x UARTs
Bus Interface	32-bit for external expansion

Special Functions
RTC	1 x Real Time Clock with external battery-backup
Watchdogs	1 x timer watchdog, 1 x power supervisor
Chip Select Outputs	5 x CS output lines for external expansion
Interrupts	1 x INT interrupt input line for external devices

Other
Mechanical	169-pin PGA form factor (Socket 3)
Size	45mm x 45mm
Power	3.3 VDC
Current	(depends on version) 350 mA typical

Delivery
PNP/5280-M	PNP/5280 with MII and pre-installed embedded Linux O/S
PNP/5280-N	PNP/5280 with on-board PHY and pre-installed embedded Linux O/S
PNP/5280-S	PNP/5280 with on-board switch and pre-installed embedded Linux O/S
DNP/SK20	Linux Starter Kit with PNP/5280 and Evaluation Board DNP/EVA8