DAVICOM
Connectivity Beyond Limits

DM90xx/DM9102
Fast Ethernet MAC+PHY Controller

The single-port embedded ethernet controller chips support SPI, 8/16/32-Bit parallel and PCI Bus Interfaces. They integrate a Fast Ethernet MAC+PHY and 4k Dword SRAM in a low power and high performance process that supports 3.3V with 5V IO tolerance. All controllers are fully compliant to IEEE802.3 and support HP´s Auto MDI-X feature.

DM9000A, DM9010 and DM9102 are based on a power saving analog manufacturing process. DM9000B, DM9010B and DM9102H are more cost-effective due to a digital signal process. They are also available in industrial temperature range and 100% backward compatible to their predecessors. DM9051 low cost SPI controller supports clock speeds up to 160MHz for higher throughput and EEE.

All controllers support generation and validation of TCP/IP and UDP checksum to reduce application controller load. Early TX minimizes the latency of the device.

Drivers for Windows CE, Linux and VxWorks are available for quick and easy integration.

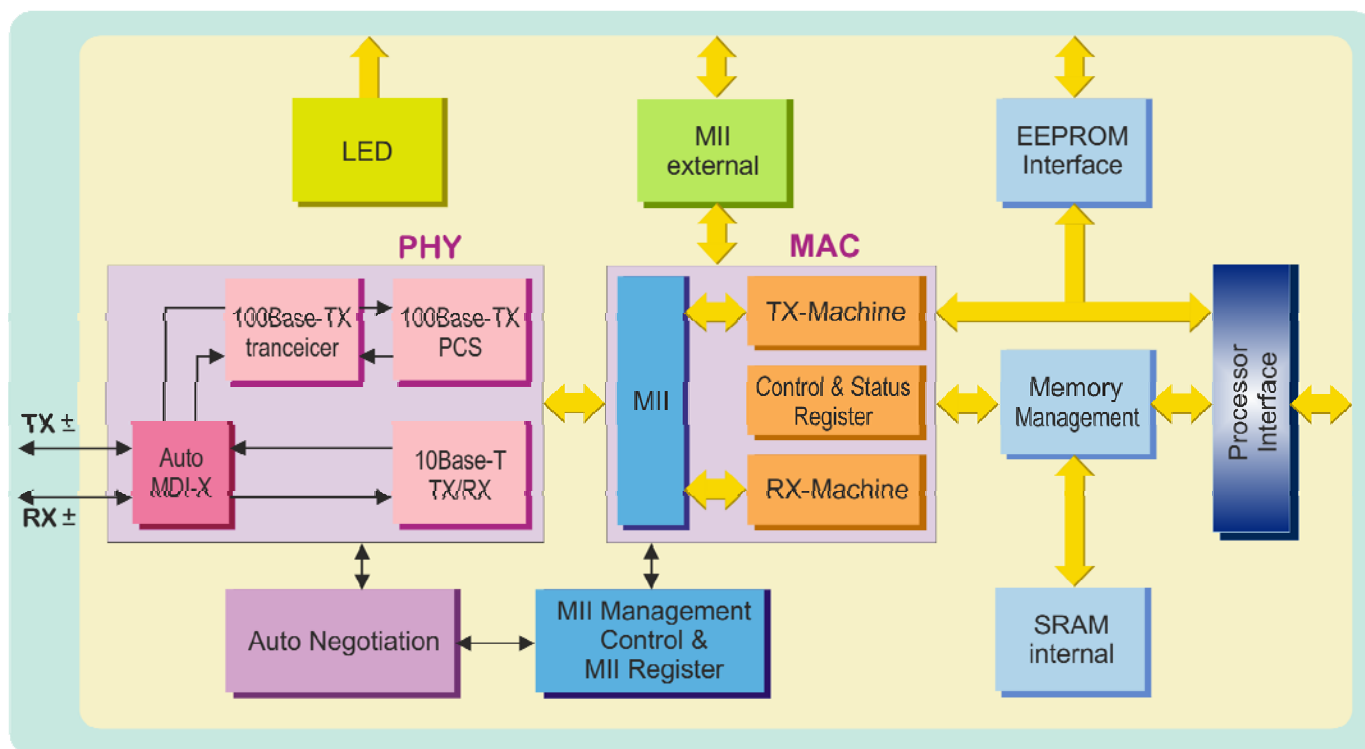| Parameter Typ	Interface				External I/F	Copper	Fiber	MDI-X PHY	Temperature range		Current [max.] mA	Package
	SPI	8/16-Bit	32-Bit	PCI	MII / RMII				0°...70°C	-40°...85°C		
DM9051	✔					10/100M	100FX	✔	✔	✔	102+40*	32-QFN
DM9008C		✔				10M		✔	✔		130+40*	48-LQFP
DM9000A		✔				10/100M	100FX	✔	✔		52+40*	48-LQFP
DM9000B		✔				10/100M	100FX	✔	✔	✔	130+40*	48-LQFP
DM9000		✔	✔		✔	10/100M	100FX		✔		60+40*	100-LQFP
DM9010		✔	✔		✔	10/100M	100FX	✔	✔		52+40*	100-LQFP
DM9010B		✔	✔		✔	10/100M	100FX	✔		✔	130+40*	100-LQFP
DM9102D				✔	✔	10/100M	100FX	✔	✔		52+40*	128-LQFP
DM9102H				✔	✔	10/100M	100FX	✔	✔	✔	130+40*	128-LQFP

*with transformer

General Features

- Integrated 10/100M PHY with Auto MDI-X
- Supports wake-up frame, link status change and magic packet events for remote wake-up
- Compatible with 3.3V and 5.0V tolerant I/Os
- Optional EEPROM configuration
- Supports early Transmit
- Supports IP/TCP/UDP Checksum generation and validation
- Very Low Power consumption mode:
  - Power Reduced mode (cable detection)
  - Power Down mode
- Selectable TX drivers for 1:1 or 1.25:1 transformers for additional power reduction

Block Diagram DM9010

Applications

- VoIP CPE (ATA, IP Phone, Video Phone)
- IP STB, IPC, Internet Radio
- Industrial Automation, Security, Networking
- Smart meter

Evaluation Board DM9000B