

## DM9161 Fast Ethernet Single PHY



The single chip PHY transceiver of Davicom's DM9161 series are physical layer and low power transceivers in the LQFP-48 and QFN-32 package. The frontend can drive 10BaseT, 100BaseTX TP-transformer and FX-transceiver. Through the **MII / RMI Interface** the transceiver can be connected to MAC layer chips, switches or micro controller with integrated MAC. An integrated wave filter saves external filters for the signal forwarding in 100BaseTX or 10BaseT modes. DM9161 and DM9161A are based on a power saving analog technology. DM9161B and DM9191C are cost friendlier due to a DSP based 0.18μ implementation. As DM9161BI and DM9161CI those are also available for industrial temperature standards (-40°C to +85°C). In addition, DM9161A, DM9161B and DM9161C are equipped with the **Auto MDI-X** feature, patented by HP, thus patch and cross cables can automatically be detected.

### Product List

Parameter Typ	Interface MII / RMII	Copper	Fiber	MDI-X	Temperature range		Current [max.]	Package
					0°...70°C	-40°...85°		
<b>DM9161</b>	✓	✓	✓		✓		48+40mA*	LQFP 48
<b>DM9161A</b>	✓	✓		✓	✓		52+40mA*	LQFP 48
<b>DM9161B</b>	✓	✓		✓	✓	✓	128+40mA*	LQFP 48
<b>DM9161C</b>	✓	✓		✓	✓	✓	90+40mA*	LQFP 48 QFN 32

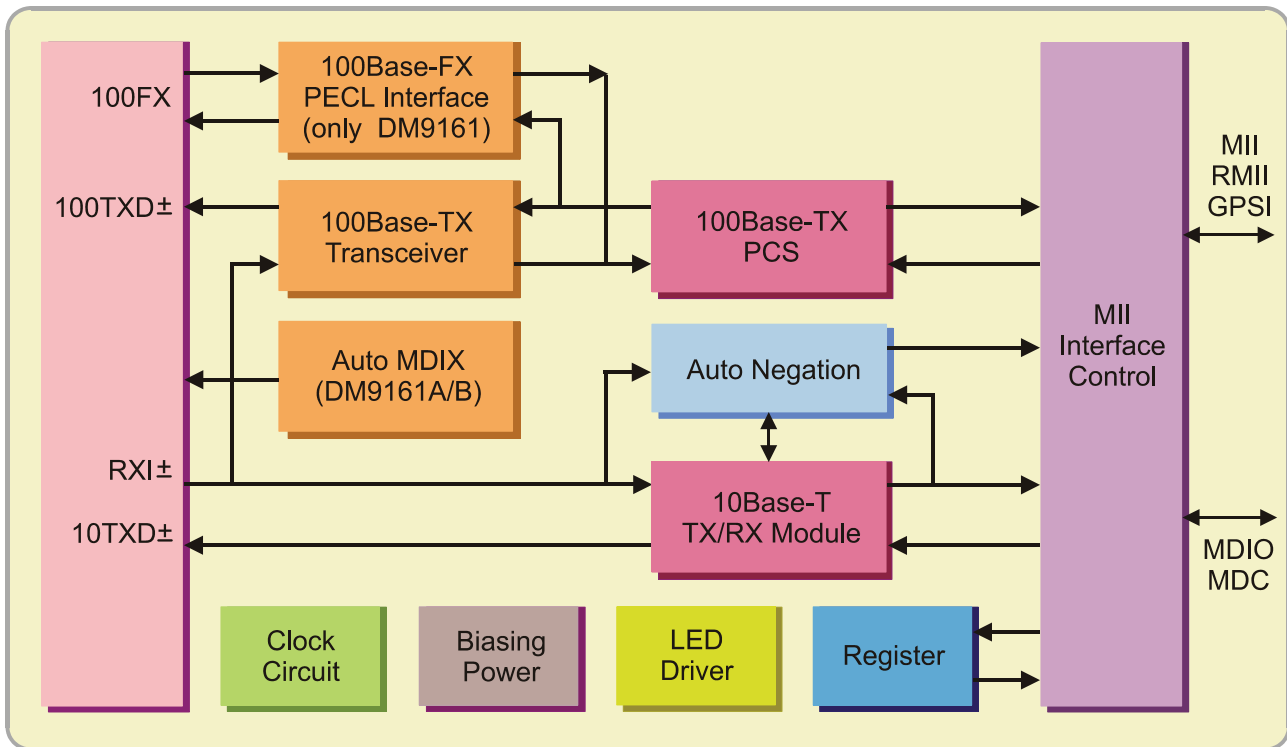
\*with transformer

### Features

- ◆ Small LQFP-48 and 5x5mm QFN-32 (DM9161C only) package
- ◆ Fully compatible with IEEE 802.3u
- ◆ 10-BaseT, 100BaseTX/FX, ANSI X3T12 TP-PMD
- ◆ with MDI/MDI-X auto crossover function (DM9161A/B/C)
- ◆ Auto Negotiation compliant with IEEE 802.3u
- ◆ Compatible with 3.3V and 5.0V tolerant I/O
- ◆ Supports MII, Reduced MII (RMII) and GPSSI Interfaces
- ◆ Selectable full-duplex or half-duplex operation
- ◆ MII management interface with mask-able Interrupt output capability diagnostics
- ◆ Selectable twisted-pair or fiber mode output (DM9161)
- ◆ LED status outputs indicate Link/Activity,
- ◆ Speed 10/100 and Full-duplex/Collision
- ◆ Loopback mode for easy system diagnostics
- ◆ 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 DM9161x



## Applications

- ◆ VoIP CPE (ATA, IP Phone, Video Phone)
- ◆ IP STB, IPC, Internet Radio
- ◆ Industrial Control, Security, Networking

## Evaluation Board DM9161

