

DM860x/ DM9xx6/ DM9302 Switch Controller



With the chip families DM9xx6 and DM860x Davicom offers affordable two-, three-, and six-port switch controller for industry and consumer applications. The six-port switch DM8606C with one gigabit-MAC supports a variety of interface configurations (4+2, 5+1 or 3+2+1). In addition to store-and-forward frames in the DM8606C can be forwarded via cut-through.

As a variation on the DM9006 the DM9301 is available with 1TP and 1FX port. The connection to the micro controller or MAC can be established via MII / RMII or Reverse MII, as well as 8/ 16/ 32 bit parallel or PCI interface.

Those ports on the switches are **individually configurable**. Even **cascading** and **ring-architecture** can be realized easily. The switch controller generates and checks the TCP/UDP and IPv4 checksum to relieve the processor. In addition they support IGMP v1, v2, snooping, STP, IPv6, Port, Security and partially GMII, I/F. As a special feature the DM8603 supports the rapid Spanning Tree protocol. The integrated PHY ports are **IEEE 802.3u** compliant and support HP's Auto MDI-X technology. Different power-down modes reduces power consumption. All switches are available for consumer (0°C to 70°C) and **industrial (-40°C bis +85°C)**.

Product List

Parameter		Type	DM8603	DM9302	DM9006	DM9016	DM9106	DM8606C
Interface	8/16 Bit			✓	✓	✓		
	32 Bit					✓		
	PCI						✓	
	MII / RMII		✓			✓	✓	✓
	Rev. MII		✓			✓	✓	✓
	RGMII				✓	✓	✓	✓
Ports			2	1TP+1FX	2	3	3	5TP+GMII, 5TP+GMII, 3TP+2MII+ RGMII
MDI-X PHY			2	1	2	2	2	
Spanning Tree Protocol			✓ + RSTP		✓	✓	✓	✓
Speed			10/100M	10/100M	10/100M	10/100M	10/100M	10/100/1000M
Switching approach			Store-and-Forward					+ Cut-Through
Current max.			280+80mA*	280+80mA*	280+80mA*	280+80mA*	350+80mA*	510+240mA*
Package			LQFP 64	LQFP 64	LQFP 64	LQFP 128	LQFP 128	QFP 128

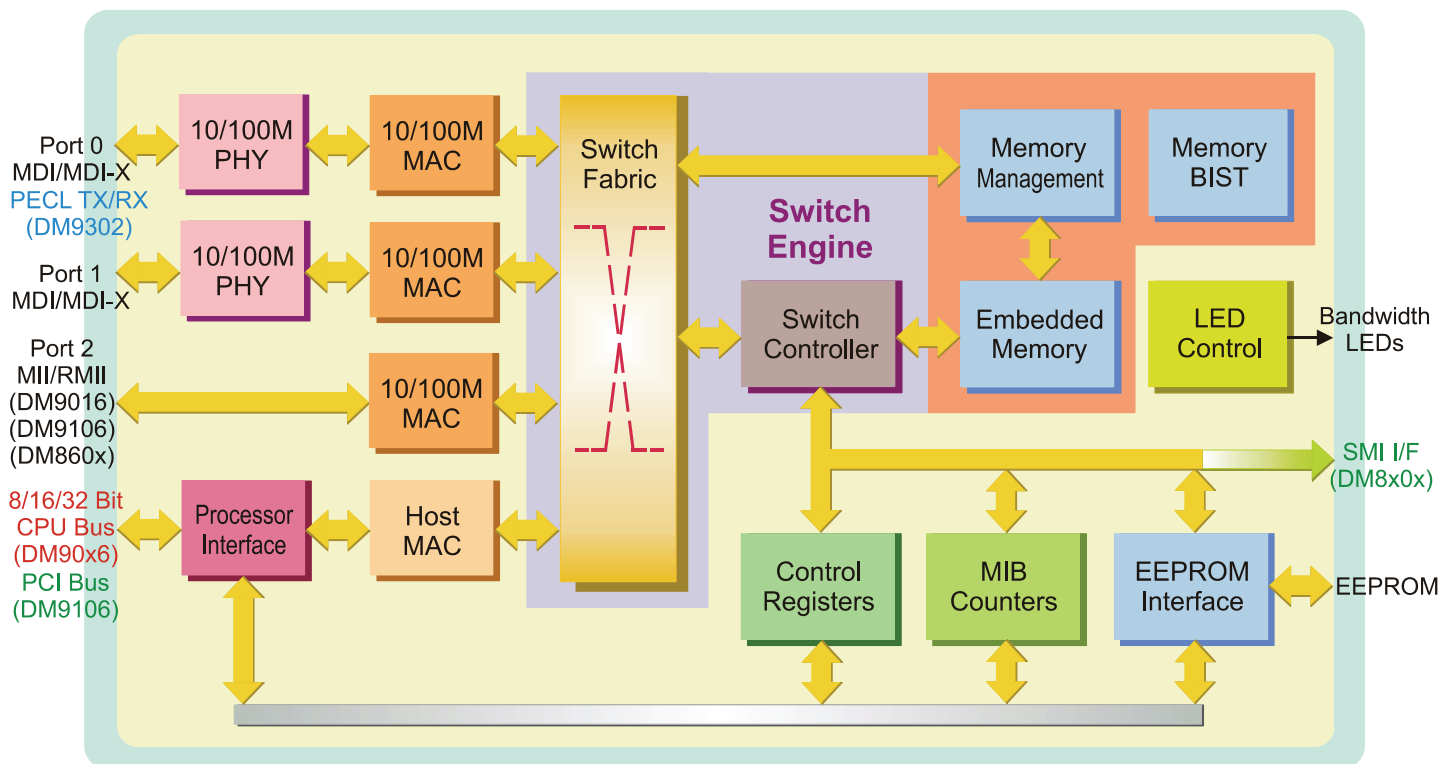
*with transformer

General Features

- ◆ Integrated 10/100 PHY with Auto MDI-X
- ◆ IPv4 and IPv6 support
- ◆ TCP/UDP/IPv4 checksum offload
- ◆ Supports Early TX
- ◆ IGMP v1, v2 snooping
- ◆ Port Security
- ◆ Spanning Tree Protocol (+RSTP DM8603 only)
- ◆ Store-and-Forward and Cut-Through (DM8606C only)
- ◆ QoS
- ◆ System clock up to 100 MHz
- ◆ MII, RMII, Reverse MII, GMII and RGMII Interface
- ◆ Processor Interface or PCI
- ◆ Integrated voltage regulator
- ◆ Temperature range / Consumer: 0°C to +70°C
- ◆ Temperature range / Industrial: -40°C to +85°C



Block Diagram DM9016 & Family



Applications

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

Evaluation Board DM9016

