Ethernet Switch 7-Port 100Mbps Automotive 128-Pin TQFP EP Tray

Manufacturer:	Microchip Technology, Inc
Package/Case:	TQFP128
Product Type:	Switches
RoHS:	RoHS Compliant/Lead free [RoHS]
Lifecycle:	Active
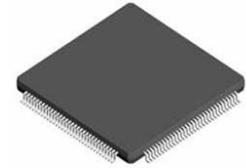
Images are for reference only

Inquiry

General Description

The KSZ8567 is a fully integrated layer 2, managed, seven-port 10/100 Ethernet switch with numerous advanced features, designed to exceed Automotive AEC-Q100 Grade 2 (-40°C to +105°C) and EMC requirements . Five of the seven ports incorporate 10/100 Mbps PHYs. The other two ports have 1000 Mbps MAC interfaces that can be configured as SGMII, RGMII, MII or RMII. Either of these may connect directly to a host processor or to an external PHY.

Full register access is available by SPI or I^2C interfaces, and by optional in-band management via any of the data ports. PHY register access is provided by a MIIM interface.

Security features include support for IEEE 802.1X port-based authentication and Access Control List (ACL) filtering.

As a member of the EtherSynch® product family, the KSZ8567 incorporates full hardware support for the IEEE 1588v2 Precision Time Protocol (PTP), including hardware time-stamping at all PHY-MAC interfaces, and a high-resolution hardware "PTP clock". IEEE 1588 provides sub-microsecond synchronization for a range of industrial Ethernet applications.

The KSZ8567 fully supports the IEEE family of audio video bridging (AVB) standards, which provide for high quality of service (QoS) for latency sensitive traffic streams over Ethernet. Time-stamping and time-keeping features support IEEE 802.1AS time synchronization. All ports feature credit based traffic shapers for IEEE 802.1Qav, and a time aware scheduler as proposed for IEEE 802.1Qbv.

An assortment of power-management features including Energy-Efficient Ethernet (EEE) have been designed in to satisfy energy efficient environments.

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Key Features

Non-blocking wire-speed Ethernet switching fabric

IEEE802.1AS (AVB) time synchronization support

IEEE802.1Qav (AVB) credit based traffic shaper

Time aware traffic scheduler with low latency cut- through mode

IEEE1588v2 Precision Time Protocol support

Time-stamping on all ports

Precision GPIO pin timed to the AVB/1588 clock

Full-featured forwarding and filtering control, including Access Control List (ACL) filtering

IEEE802.1X support (Port-Based Network Access Control)

IEEE802.1Q VLAN supportfor 128 active VLAN groups and the full range of 4096 VLAN IDs

IEEE802.1p/Q tag insertion or removal on a per port basis and support for double-tagging

VLAN ID tag/untag options on per port basis

IEEE802.3x full-duplex flow control and half-duplex back pressure collision control

IGMPv1/v2/v3 snooping for multicast packet filtering

IPv6 multicast listener discovery (MLD) snooping

QoS/CoS packets prioritization support: 802.1p, DiffServ-based and re-mapping of 802.1p priority field per-port basis on four priority levels

IPv4/IPv6 QoS support

Programmable rate limiting at ingress and egress ports

Broadcast storm protection

Four priority queues with dynamic packet mapping for IEEE802.1p, IPv4 DIFFSERV, IPv6 TrafficClass

MAC filtering function to filter or forward unknown unicast, multicast and VLAN packets

Self-address filtering for implementing ring topologies

High-speed SPI (4-wire, up to 50MHz) interface to access all internal registers

I2C Interface to access all registers

MII management (MIIM, MDC/MDIO 2 wire) interface to access all PHY registers per IEEE 802.3 specification

In-band management to access all registers via any of the seven ports, strap enabled

I/O pin strapping facility to set certain register bits from I/O pins at reset time

Control registers configurable on-the-fly

Port mirroring/monitoring/sniffing: ingress and/or egress traffic to any port or MII/RMII

MIB counters for fully-compliant statistics gathering (34 MIB counters per port)

Full-chip software power-down

Energy detect power-down (EDPD)

Support IEEE P802.3az Energy Efficient Ethernet (EEE)

Wake on LAN (WoL) support

Recommended For You

KSZ8851-16MQL

Microchip Technology, Inc

PQFP-128

KSZ8851-16MLL

Microchip Technology, Inc

LQFP48

KSZ8893MQL

Microchip Technology, Inc

QFP128

KSZ8851SNL

Microchip Technology, Inc

VQFN32

KSZ8893MQLI

Microchip Technology, Inc

QFP128

KSZ8863RLLI

Microchip Technology, Inc

LQFP-48

KSZ8895FQXI

Microchip Technology, Inc

PQFP128

KSZ8895RQXI

Microchip Technology, Inc

PQFP128

KSZ8895MQXIA

Microchip Technology, Inc

PQFP-128

KSZ8895FQXI-TR

Microchip Technology, Inc

PQFP-128

KSZ8851SNLI-TR

Microchip Technology, Inc

QFN32

KSZ8842-PMQL

Microchip Technology, Inc

PQFP-128

KSZ8863MLL

Microchip Technology, Inc

LQFP48

KSZ8993M

Microchip Technology, Inc

QFP128

KSZ8993MI

Microchip Technology, Inc

QFP128