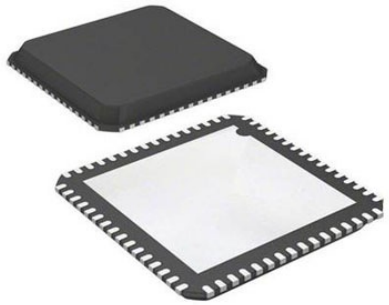
KSZ9893RNXI-TR

Data Sheet

IC ETHERNET SWITCH 64VQFN

Manufacturers	Microchip Technology, Inc
Package/Case	VQFN-64
Product Type	Interface ICs
RoHS	
Lifecycle	



Images are for reference only

Please submit RFQ for KSZ9893RNXI-TR or Email to us: sales@ovaga.com We will contact you in 12 hours. RFQ

General Description

The KSZ9893 is a fully integrated layer 2, managed, three-port gigabit Ethernet switch with numerousadvanced features. Two of the three ports incorporate10/100/1000 Mbps PHYs. The other port has interfaces that can be configured as RGMII, MII or RMII. This port may connect directly to a host processor orto an external PHY.

Full register access is available by SPI or I2C 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.

An assortment of power-management features includingEnergy-Efficient Ethernet (EEE) have been designed in tosatisfy energy efficient environments.

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Features

Highlights

Non-blocking wire-speed Ethernet switching fabric

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

Full VLAN and QoS support

Two ports with integrated 10/100/1000BASE-T PHYs

One port with 10/100/1000 Ethernet MAC and configurable RGMII/MII/RMII interface

IEEE 802.1X port-based authentication support

EtherGreenTM power management features, including low power standby and IEEE 802.3az

Flexible management interface options: SPI, I2C, MIIM, and in-band management via any port

Commercial/Industrial temperature range support

64-pin VQFN (8 x 8mm) lead-free package

Switch Management Capabilities

10/100/1000Mbps Ethernet switch basic functions: frame buffer management, address look-up table, queue management, MIB counters

Non-blocking store-and-forward switch fabric assures fast packet delivery by utilizing 4096 entry forwarding table with 128kByte frame buffer

Jumbo packet support up to 9000 bytes

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

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

Tail tagging mode (one byte added before FCS) support at host port to inform the processor which ingress port receives the packet and its priority

Loopback modes for remote failure diagnostics

Multiple spanning tree protocol (MSTP) support

Rapid spanning tree protocol (RSTP) support for topology management and ring/linear recovery

Advanced Switch Capabilities

IEEE 802.1Q VLAN support for 128 active VLAN groups and the full range of 4096 VLAN IDs

IEEE 802.1p/Q tag insertion/removal on per port basis

VLAN ID on per port or VLAN basis

IEEE 802.3x full-duplex flow control and half-duplex back pressure collision control

IEEE 802.1X (Port-Based Network Access Control)

IGMP v1/v2/v3 snooping for multicast packet filtering

IPv6 multicast listener discovery (MLD) snooping

IPv4/IPv6 QoS support, QoS/CoS packet prioritization

802.1p QoS packet classification with 4 priority queues

Programmable rate limiting at ingress/egress ports

Broadcast storm protection

Four priority queues with dynamic packet mapping for IEEE 802.1p, IPv4 DIFFSERV, IPv6 Traffic Class

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

Self-address filtering for implementing ring topologies

Comprehensive Configuration Registers Access

High-speed 4-wire SPI (up to 50MHz), I2C interfaces provide access to all internal registers

MII Management (MIIM, MDC/MDIO 2-wire) Interface provides access to all PHY registers

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

In-band management via any of the three ports

On-the-fly configurable control registers

Power Management

IEEE 802.3az Energy Efficient Ethernet (EEE)

Energy detect power-down mode on cable disconnect

Dynamic clock tree control

Unused ports can be individually powered down

Full-chip software power-down

Wake-on-LAN (WoL) standby power mode

Related Products

KSZ8081MLXIA

Microchip Technology, Inc

LQFP-48

KSZ8721BT

Microchip Technology, Inc

TQFP-48

KSZ8721BLI-TR

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KSZ8091RNAIA-TR

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VQFN-24

KSZ8041NLI-TR

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VQFN-32

KSZ8721B

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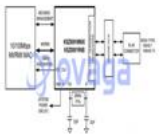
SSOP-48



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VQFN-32

[KSZ8061MNGW]

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VQFN-48