KSZ84xx EtherSynch™
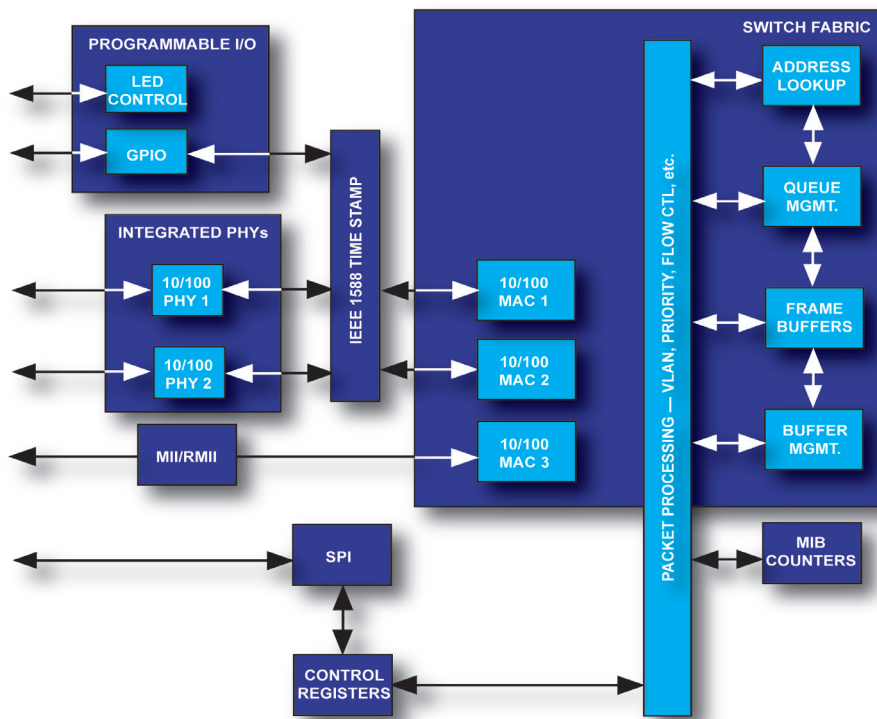# IEEE 1588v2 Over Ethernet Product Family

KSZ8463MLI/RLI — EtherSynch IEEE 1588v2 3-Port 10/100 Switch with MII/RMII Interface

The KSZ8463 switch family enables end-device attachments for industrial Ethernet and electrical substation automation networks. Key applications include industrial Ethernet standards, including EtherNet/IP™, PROFINET®, Modbus TCP™, and POWERLINK, along with IEC 61850 standard for substation communications.

The KSZ8463 switch simplifies integration with host CPUs that provide an embedded Ethernet MAC and has been optimized to offload synchronization and communications host processing through its hardwire-intensive architecture.

Micrel offers a precision timing protocol (PTPv2) synchronization stack solution integrated with the KSZ8463 driver to accelerate the design cycle. The KSZ8463 switch is also interoperable with leading third- party PTP stacks.

Micrel features the industry's most robust and cost-effective Ethernet switches and physical layer tranceivers, built upon Micrel's low-power physical layer technology, advanced power management, and innovative design.

EtherSynch is a trademark of Micrel, Inc.
EtherNet/IP is a trademark of ControlNet (under license by ODVA).
PROFINET is a registered trademark of the PI organization
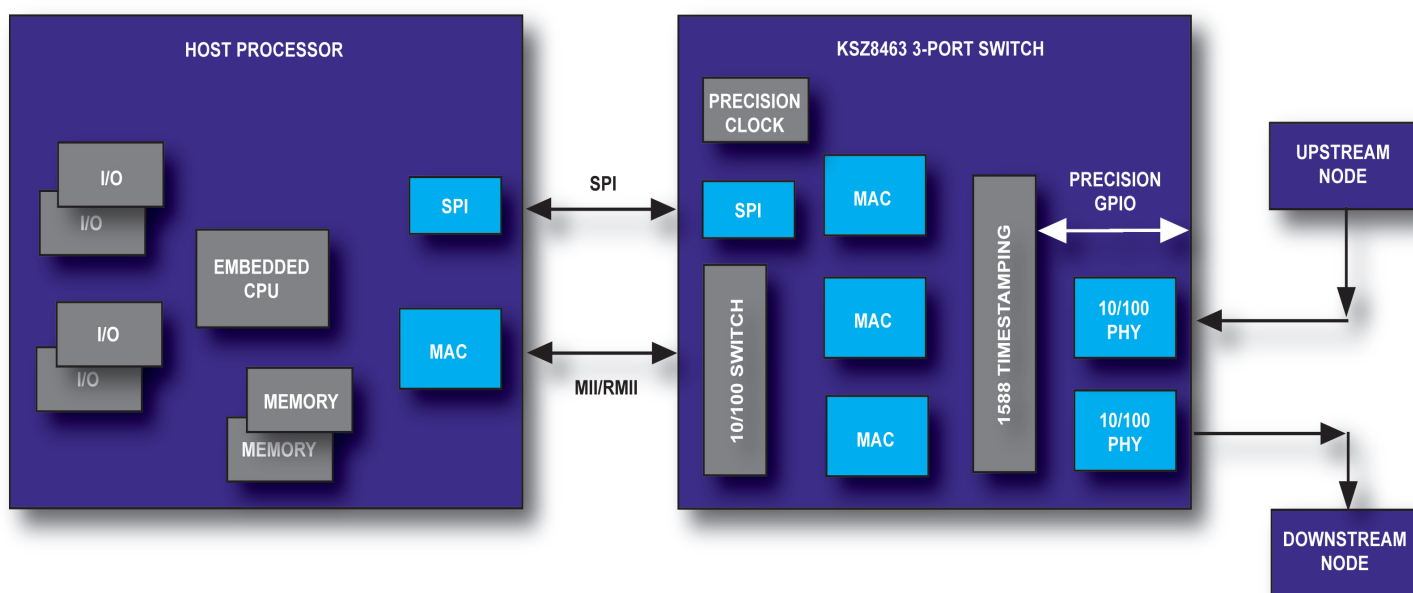*Modbus TCP is a trademark of Modbus IDA.*

Features

- Comprehensive PTP clock modes.
- Hardware-assisted PTP implementation.
- Extensive GPIO synchronized to precision clock.
- Bypass mode and source address filtering.
- Flexible Host Interface Options: MII, RMII, and Generic Host Interface.
- PTP protocol stack integrated with KSZ8463 driver.
- Compact 10mm x 10mm, 64-pin, LQFP package.
- Advanced power management.

Benefits

- Supports Ordinary, Master, Slave, and Transparent clocks in a single device.
- Reduces Host CPU processing load and network traffic.
- Extends system synchronization to locally-connected devices.
- Enables distributed, daisy-chained topologies.
- Supports a wide range of Host CPUs.
- Reduces time to deployment with pre-qualified solution.
- Reduces board resources and BOM costs.
- Industry's lowest power consumption and energy efficiency.

KSZ8463 readily integrates with host CPUs providing an embedded Ethernet MAC

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