The GSW120, GSW140, and GSW141 (GSW1xx) devices are highly integrated, non-blocking four-port (GSW120) or six-port (GSW140 and GSW141) Gigabit Ethernet QoS switches with two (GSW120) or four (GSW140 and GSW141) Ethernet PHY, one 1G RGMII, one 2.5G SGMII+, and one management port.

The GSW1xx device complies with 10BASE-TE, 100BASE-TX, and 1000BASE-T standards. Support of Energy-Efficient Ethernet 802.3az reduces power consumption further in idle state. A smart LED brightness control logic is integrated for additional power saving. LED brightness can be adjusted either by an external push button or varies dynamically depending on the intensity of the light with an external light sensor.
The GSW1xx device is configurable through pin-strapping, by means of the MDIO interface, UART interface, SPI interface, or optionally by connecting an external EEPROM. Integrated QoS technology prioritizes switch traffic for different classes of applications, for example, VoIP, video, audio, and data based on port ID, 802.1p, IP DSCP/ToS, and multiple fields of the packet. IEEE 1588v2 support enables highly accurate precision timing protocol applications.

The 1M Bits embedded packet storage SRAM is integrated with 9KB jumbo frame support.

The GSW1xx device features 4K entry VLAN table for 802.1Q VLAN operation and double VLAN tagging (Q-in-Q) translation. The device supports IGMP V1/2 and MLD V1 snooping for efficient use of network bandwidth.

**Application Examples**

- **Home Gateway**
  - GSW120
  - 2.5G SGMII
  - LED
  - RJ45

- **Standalone Desktop Switch with Optional Brightness On/Off Switch**
  - GSW140
  - LED
  - Optional EEPROM Interface

- **PUMA™ 6 Dual WAN, Router, and Gateway**
  - GSW141
  - LED
  - Optional SFP Cage

**SOLUTION HIGHLIGHTS**
- Smart LED brightness control integrated for power saving
- Industry’s smallest footprint MROFN-105 8x8mm
- 2.5G SGMII+ uplink support (GSW120 and GSW140)
- IEEE 1588 Version 2 support

**MAIN APPLICATIONS**
- Home gateways
- Standalone switches plus 2.5G uplink

**STANDARDS**
- IEEE 802.3az: Energy-Efficient Ethernet
- IEEE 1588 Version 2
## Product Information

<table>
<thead>
<tr>
<th>Product</th>
<th>Description</th>
<th>Ordering Code</th>
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<tbody>
<tr>
<td>GSW120 Gigabit Ethernet Switch</td>
<td>4-port Gigabit Ethernet QoS switch with two Ethernet PHY, one 1G RGMII, one 2.5G SGMII+, and one management port</td>
<td>GSW120A3MC</td>
<td>MRQFN-105 (8x8)</td>
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<tr>
<td>GSW140 Gigabit Ethernet Switch</td>
<td>6-port Gigabit Ethernet QoS switch with four Ethernet PHY, one 1G RGMII, one 2.5G SGMII+, and one management port</td>
<td>GSW140A3MC</td>
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<tr>
<td>GSW141 Gigabit Ethernet Switch</td>
<td>6-port Gigabit Ethernet QoS switch with four Ethernet PHY, one 1G RGMII, one 1G SGMII, and one management port</td>
<td>GSW141A3MC</td>
<td>MRQFN-105 (8x8)</td>
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