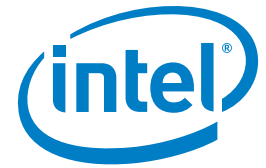


**PRODUCT BRIEF**

**Intel® Ethernet Switch FM4000 Series**

Network Connectivity

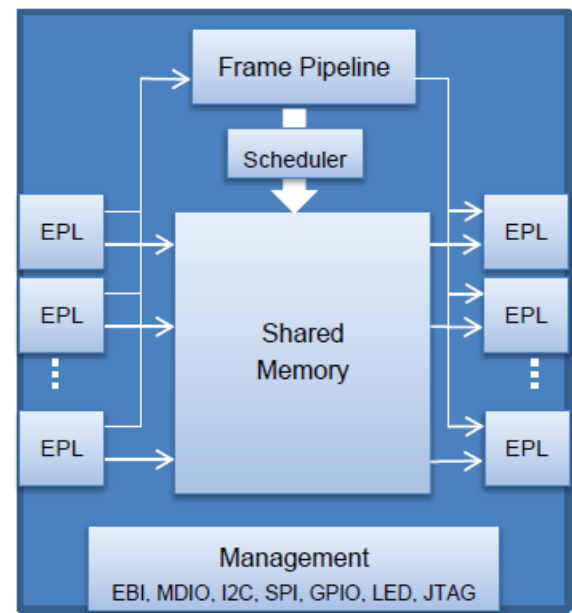


# Intel® Ethernet Switch FM4000 Series

## 10 GbE Low Latency L2/L3 Switching Silicon

The Intel® FM4000 family of switch devices contains up to 24 10 GbE ports and uses a high performance, low latency Ethernet switch architecture including a comprehensive suite of Layer 3 features along with advanced classification, congestion management, and system management capabilities. The switches contain all the features necessary to enable Ethernet as the single, converged data center fabric, transporting inter-processor, storage, and networking traffic. The FM4000 products provide many advanced features, which are listed below.

Intel® Ethernet Switch FM2000 Series	
Features	Benefits
<ul style="list-style-type: none"> <li>24 ports support XAUI or SGMII                             <ul style="list-style-type: none"> <li>Integrated 3.125 Gbps PHYs</li> <li>CX4 compliant</li> <li>10/100/1000/2500 SGMII modes</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>Works with a wide range of external PHYs</li> <li>Several available port configurations</li> <li>Serial 2.5 Gbps capability</li> </ul>
<ul style="list-style-type: none"> <li>Low latency (300 nS)--Cut-through or store and forward</li> </ul>	<ul style="list-style-type: none"> <li>Improved data center performance</li> </ul>
<ul style="list-style-type: none"> <li>Advanced frame processing pipeline                             <ul style="list-style-type: none"> <li>16K x 36b TCAM</li> <li>16KB ARP table</li> <li>16KB MAC address table</li> <li>Programmable frame hashing</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>Up to 360M frames per second</li> <li>Support for advanced ACL rules</li> <li>IPv4/IPv6 routing</li> <li>Hardware-base learning and aging</li> <li>Advanced load distribution</li> </ul>
<ul style="list-style-type: none"> <li>Output queued shared memory                             <ul style="list-style-type: none"> <li>2 MB supporting eight traffic classes</li> <li>Two shared memory partitions</li> <li>Eight CoS queues per egress port</li> <li>Multi-level egress scheduling</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>Low cut-through latency</li> <li>Excellent multicast performance</li> <li>Logical traffic separation</li> <li>Per-port egress QoS provisioning</li> </ul>
<ul style="list-style-type: none"> <li>Data center bridging features                             <ul style="list-style-type: none"> <li>Priority flow control</li> <li>Enhanced transmission selection</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>Provides lossless operation</li> <li>Converged storage traffic</li> <li>Support advanced QoS</li> </ul>
<ul style="list-style-type: none"> <li>Virtualization and scaling features                             <ul style="list-style-type: none"> <li>Global virtual port tags</li> <li>Remote learning</li> <li>Multi-chip LAG and mirroring</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>Support for VEPA or VN-Tag</li> <li>Single point of management</li> <li>Fat trees, meshes and rings</li> </ul>
<ul style="list-style-type: none"> <li>Management Features                             <ul style="list-style-type: none"> <li>Local bus</li> <li>8 KB frame counters</li> <li>In-band management</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>Managed or unmanaged</li> <li>Remote management</li> </ul>



Part Numbers	Max Port BW	Max SGMII Ports	Max XAUI Ports
FM4410	90 Gb	16	8
FM4112	100 Gb	24	8
FM4212	120 Gb	12	12
FM4224	240 Gb	24	24

## FM4000 Series Advances Data Center Switching

Data centers are migrating to large, virtualized networks. System designers are attracted to the proposition of leveraging ubiquitous Ethernet to interconnect devices, thus enabling them to create high-performance computing and communications systems while reducing complexity and cost. This demand was initially met with the FM2000 Series switches and now the pin-compatible FM4000 Series, with enhanced Layer 2 and new Layer 3/4 features, provides designers with new tools to address a broader range of data center networking demands.

The FM4000 Series continues to deliver an unprecedented level of performance and integration supporting L3 forwarding. The Layer 2 and Layer 3 latencies are held to extremely low values, providing improved network performance. Cost effective aggregation of a very large number of servers is made feasible through the use of the devices' stacking and fat tree capabilities. A comprehensive set of queue management features enables highly flexible QoS implementations and security policies can be implemented and enforced through extensive Access Control List (ACL) capabilities.

## FM4000 Eases System Design

The FM4000 Series devices are offered in a variety of port speed combinations to match a wide range of connectivity requirements. For added flexibility, all 10 Gb interfaces may be operated in lower-speed modes.



The FM4224 top-of-rack switch reference platform with 24 SFP+ ports.

## Customer Support

Intel® Customer Support Services offers a broad selection of programs including phone support and warranty service. For more information, contact us at:

[support.intel.com/support/go/network/](http://support.intel.com/support/go/network/)

(Service and availability varies by country.)

## For Product Information

To speak to a customer service representative regarding Intel products, call 1-800-538-3373 (U.S. and Canada) or visit:

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For more information on the Intel® Ethernet Switch FM4000 Series of 10 GbE low latency switching silicon visit: [www.intel.com/go/ethernet](http://www.intel.com/go/ethernet)

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