

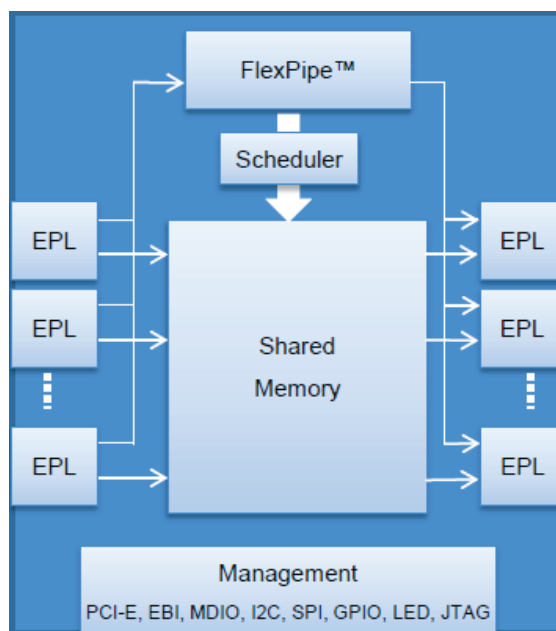
Intel® Ethernet Switch FM6000 Series

10/40 GbE Low Latency Switching Silicon

The Intel® FM6000 series is a family of fully integrated wire-speed 10/40 Gbps Ethernet switch silicon. The FM6000 supports enhanced features critical for today's High Performance Switching environments: low latency, scalability, L3 routing, MPLS, IPinIP, NAT, Priority Flow Control, Enhanced Transmission Selection, as well as support for TRILL, EVB, VxLAN, NVGRE, FCoE and DCBx. The FM6000 series supports up to 64 10 GbE Ethernet ports and the ability to group ports as 40 GbE MLD uplinks. The FM6000 delivers tremendous flexibility using the advanced FlexPipe™ technology, while maintaining the best-in-class latency and throughput demonstrated by the FM2000 and FM4000 families of the Intel® Switch Silicon product lines.

Intel® Ethernet Switch FM6000 Series

Features	Benefits
<ul style="list-style-type: none"> Up to 64 10 GbE ports <ul style="list-style-type: none"> Up to 16 40 GbE ports KR4, KR, XFI, XAUI or SGMII 	<ul style="list-style-type: none"> Flexible port configurations Can support 40 GbE uplinks
<ul style="list-style-type: none"> Integrated 10G PHYs <ul style="list-style-type: none"> KR and XFI compliant Drives up to 7m of DA copper 	<ul style="list-style-type: none"> Reduce system latency Reduce system cost Reduce system power
<ul style="list-style-type: none"> Low latency (400 nS) <ul style="list-style-type: none"> Cut-through or store and forward 	<ul style="list-style-type: none"> Improved data center performance
<ul style="list-style-type: none"> Intel® FlexPipe™ technology 	<ul style="list-style-type: none"> Up to 960 M frames per second Can adapt to changing standards
<ul style="list-style-type: none"> Flexible frame header processing <ul style="list-style-type: none"> 24 K x 36 b TCAM and 64 K BST 64 K Nexthop table Multi-stage TCAM architecture Ingress and egress ACL rule 	<ul style="list-style-type: none"> IPv4/IPv6 routing and IPinIP MPLS and NAT Hardware-based learning & aging Advanced load distribution Supports advanced ACL rules SDN and OpenFlow support
<ul style="list-style-type: none"> Output queued shared memory <ul style="list-style-type: none"> Eight MB supporting 8 traffic classes 8 shared memory partitions 8 CoS queues per egress port Multi-level egress scheduling 	<ul style="list-style-type: none"> Low cut-through latency Excellent multicast performance Logical traffic separation Per-port egress QoS provisioning
<ul style="list-style-type: none"> Data center bridging features <ul style="list-style-type: none"> Priority flow control Enhanced transmission selection 	<ul style="list-style-type: none"> Provides lossless operation Converged storage traffic FCoE, TRILL and SPB support
<ul style="list-style-type: none"> Network overlay features 	<ul style="list-style-type: none"> EVB, VxLAN and NVGRE
<ul style="list-style-type: none"> Management features <ul style="list-style-type: none"> PCIe* and Local bus 32K configurable frame counters 	<ul style="list-style-type: none"> Managed or unmanaged SFlow support Remote management



Part Numbers	Max Port BW	Max SGMII Ports	Max XAUI Ports	Max KR/ XFI Ports	Max KR4 Port
FM6324	240 G	72	24	24	6
FM6348	480 G	72	24	48	2
FM6364	640 G	72	24	64	16
FM6724 [†]	240 G	72	24	24	6
FM6764 [†]	640 G	72	24	64	16

[†]The FM6700 series provides all of the features of the FM6300 series plus support for SDN, OpenFlow, VB, VxLAN and NVGRE.

FM6000 Series Advances Datacenter Switching

Ethernet has evolved from the enterprise into applications that support virtualized servers, converged networking, and high-performance computing. The Intel® FM6000 series provides unparalleled levels of integration and performance for these applications while maintaining the cost advantage of Ethernet.

In virtualized data center applications, the FM6000 series provides advanced scaling features for multi-tiered fabrics allowing thousands of compute nodes to

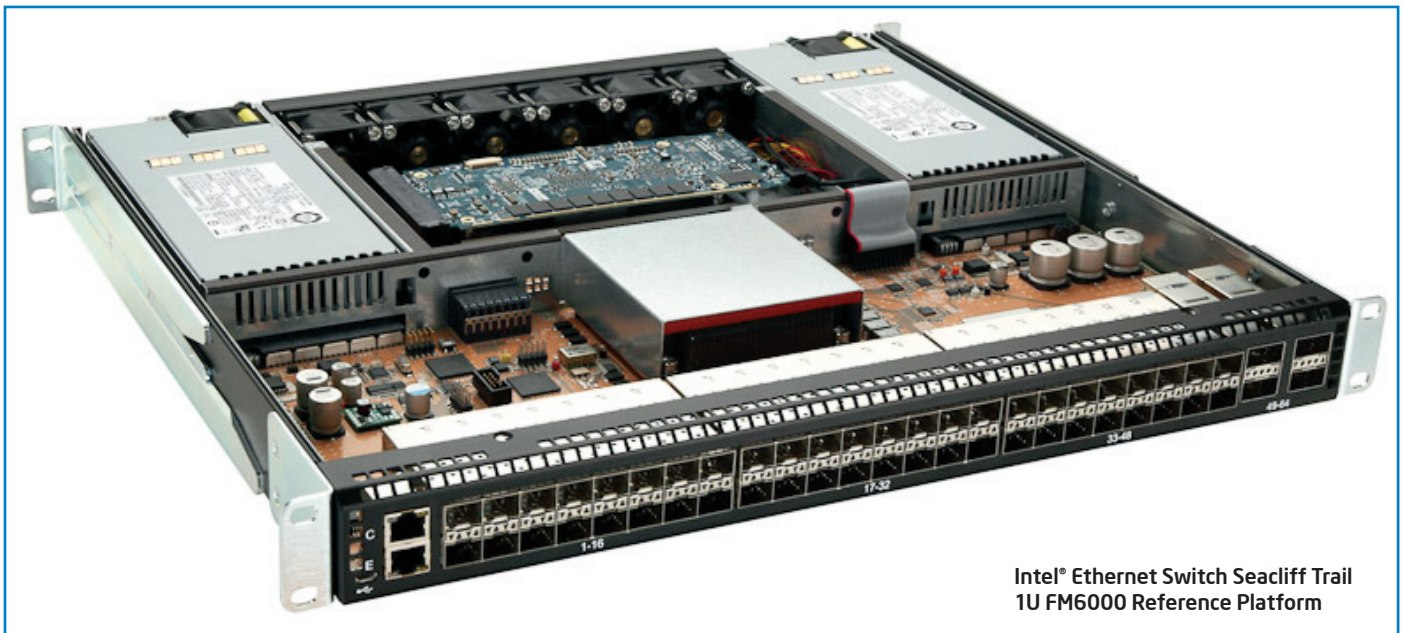
be interconnected with sub-microsecond latency. It also provides support for new data center interconnect topologies such as TRILL and SPB, along with new network overlay standards such as EVB VxLAN and NVGRE.

In order to support converged networking applications, the FM6000 series can isolate storage traffic from data traffic, and provide lossless operation with bounded latency along with features for server load balancing and network address translation. It also provides the features necessary to converge data, storage and HPC traffic into one fabric, eliminating the cost of multiple network

adapters, cables, and fabrics. It does this while maintaining compliance with new DCB standards such as PFC, ETS, DCBX, and FCoE along with new virtualization standards. It does this using FlexPipe™, a new microcode programmable pipeline than can maintain performance up to 1 Bpps under all conditions.

FM6000 Eases System Design

There are a range of FM6000 configurations, as shown in the table above. Each configuration provides a maximum port bandwidth. The ports can be allocated in any manner, as long as the maximum port bandwidth is not exceeded.



Intel® Ethernet Switch Seacliff Trail 1U FM6000 Reference Platform

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/

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For more information on the Intel® Ethernet Switch FM6000 Series of 10/40 GbE low-latency switching silicon, visit: www.intel.com/go/ethernet

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