

Power Matters.™

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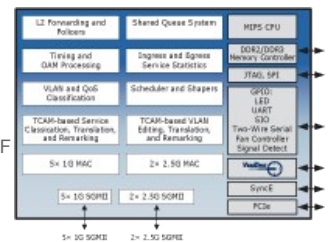
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6-Port Carrier Ethernet Switch Engine with ViSAA™, VeriTime™ and MPLS/MPLS-TP

VSC7416 Serval-Lite™ contains five 10/100/1000 Mbps SGMII/SerDes ports and two 2.5G SGMII/SerDes ports. VSC7416 is based on Virtualized Service Aware Architecture (ViSAA™), a silicon implementation that offers an unmatched level of Service Edge and Carrier Ethernet (CE) Networking features. ViSAA achieves wirespeed performance for even the most feature-rich CE services. The VSC7416 device provides a rich set of Carrier Ethernet switching features such as MPLS/MPLS-TP, MEF Ethernet services, hierarchical QoS scheduling, provider bridging, protection switching, OAM, and Synchronous Ethernet (SyncE).

For critical network timing applications, VSC7416 uses VeriTime™ IEEE 1588, Microsemi's patent-pending distributed timing technology that delivers the industry's most accurate IEEE 1588 network timing and synchronization implementation. VSC7416 supports advanced TCAM-based service SLA guarantees. Security is assured through frame processing using a TCAM-based content aware processor (VCAP). An embedded 416 MHz MIPS processor 32-bit CPU with DDR2/DDR3 external memory and DMA-based frame extraction and insertion supports VeriTime IEEE 1588 as well as injection of advanced data flows for service activation measurement (SAM) testing. VSC7416 is an excellent choice for Mobile backhaul and for service provider demarcation points in Edge and Access devices. A comprehensive application programming interface (API) and software package are provided for CE applications. The software package integrates easily with third-party software, preserving existing software investments while adding new, enhanced carrier functionality.



Product Variants	Status	Description
VSC7416XKT-01	Production	Latest generation 284-pin 24 x 24 mm TQFP lead-free

Related Products

- [10GE PHYs](#)
- [GE PHYs](#)
- [1588 software](#)
- [API & BSP](#)
- [CEServices \(SDK\)](#)

Key Features

- Ethernet, MPLS, and MPLS-TP
- MEF UNI and NNI functionality
- Hardware-based Ethernet OAM, performance monitoring, and service activation measurement (SAM)
- Network demarcation
- Hierarchical QoS priority for queuing and subscriber separation
- Service protection (linear, ring)
- Integrated timing: VeriTime™ and SyncE

Additional Resources

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Category	Title	Access	Version	Posted	Type	Size
Product Brief	VSC7416 Product Brief	🔒	1.1	05/31/2016	📄	309 kB
Product Brief	IEEE 1588v2 Reference Design Solution from Vitesse and Microsemi	🔒	1.0	11/26/2012	📄	1 MB
Datasheet	VSC7416-01 Datasheet	🔒	4.0	12/21/2012	📄	7 MB
Application Note	Distributed Transparent Clock over Microwave	🔒	1.0	11/01/2012	📄	193 kB
Application Note	ENT-AN1118 HQoS Configuration	🔒	1.5	07/20/2015	📄	1 MB
Application Note	Hardware-Based Up MEP OAM Support with ViSAA	🔒	1.0	11/18/2013	📄	221 kB
Application Note	IEEE1588v2 and SyncE - Applications and Operation Using Vitesse's Synchronization Solution	🔒	3.0	05/12/2014	📄	2 MB
Model	IBIS and AMI Models	🔒	0.60	01/08/2015	📄	600 kB
Model	VSC7416-01 BSDL Model	🔒	1.1	02/06/2013	📄	54 kB
Reference Design	Serval-1 Reference Design	🔒	1.04	12/02/2014	📄	27 MB
Reports	VSC7414XKT-01, VSC7416XKT-01 and VSC7418XKT-01 Material Composition	🔒	1.0	11/30/2012	📄	23 kB

Declaration						
Reports	First Level Product Qualification Report for VSC7416XKT-01 - Amkor K1		3.0	01/22/2016		89 kB
Reports	First Level Product Qualification Report for VSC7416XKT-01 - Amkor P1		1.0	07/23/2015		68 kB
White Paper	Challenges and Opportunities in the Emerging Small Cell Market		1.1	11/01/2012		378 kB
White Paper	Precise Timing for Base Stations in the Evolution to LTE		00-04	02/19/2013		4 MB
White Paper	The Vitesse Service Aware Architecture (ViSAA) for Carrier Ethernet Switches		1.0	05/30/2013		2 MB

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