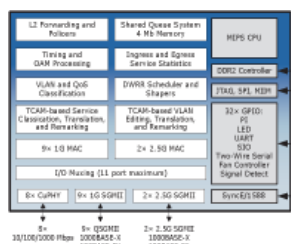




11-Port Carrier Ethernet Switch Engine with ViSAA™, VeriTime™ and PHYs



VSC7428 is the industry's most integrated 11-port Ethernet switch with SGMII ports, copper PHYs, and an embedded CPU in a single package. VSC7428 is based on [Vitesse Service Aware Architecture \(ViSAA™\)](#), a silicon implementation that offers an unmatched level of Service Edge and Carrier Ethernet Networking features. ViSAA achieves wirespeed performance for even the most feature-rich Carrier Ethernet (CE) services. VSC7428 is intended for Telecom and Carrier Ethernet applications, supporting MEF service delivery, network OAM, and timing over packet solutions for IEEE 1588v2 and Synchronous Ethernet.

VSC7428 uses [VeriTime™](#), Vitesse's patent-pending distributed timing technology that delivers the industry's most accurate IEEE 1588v2 timing implementation. The device supports combinations of SGMII ports, Cu PHYs, and SGMII uplink ports. One of the SGMII ports can be

dedicated to the CPU for packet insertion and extraction. VSC7428 meets the IEEE802.3az requirements for green energy efficient Ethernet through Vitesse's ActiPHY™ and PerfectReach™ energy efficient modes. A powerful embedded 416 MHz MIPS processor 32-bit CPU with DDR2 external memory and DMA-based frame extraction and insertion supports timing over packet, Ethernet OAM, and performance monitoring. VSC7428 is an excellent choice for Mobile backhaul and Microwave backhaul applications, and for provider service demarcation points in Edge and Access devices. A comprehensive [application programming interface \(API\) and software package](#) are provided for Carrier Ethernet applications. The software package integrates easily with third-party software, preserving existing software investments while adding new, enhanced carrier functionality.

VSC7428-02 has eight Gigabit Ethernet copper PHYs. The VSC7428-12 has eight Fast Ethernet copper PHYs.

Product Variants	Description
VSC7428XJG-02	Latest generation 672-pin 27 x 27 mm thermally enhanced BGA lead-free second-level interconnect
VSC7428XJG-12	Latest generation 672-pin 27 x 27 mm thermally enhanced BGA lead-free second-level interconnect
VSC7428XJG-01	[Obsolete] Second generation 672-pin 27 x 27 mm thermally enhanced BGA lead-free second-level interconnect
VSC7428XJG	[Obsolete] First generation 672-pin 27 x 27 mm thermally enhanced BGA lead-free second-level interconnect

Add to Cart	Category	Title	Access	Revision	Posted	Type	Size
☐	Product Brief	VSC6810 and VSC6840 Product Brief		1.3	07/30/2014		566 kB
☐	Product Brief	VSC6812 and VSC6813 Product Brief		1.5	07/29/2014		436 kB
☐	Product Brief	VSC7428 Product Brief		1.0	06/14/2010		820 kB
☐	Product Brief	VSC7428-12 Product Brief		1.0	06/11/2014		340 kB
☐	Datasheet	VSC7428 and VSC7429 Caracal Datasheet		4.0	10/28/2011		5 MB
☐	Datasheet	VSC7428-01 and VSC7429-01 Caracal Datasheet		4.0	08/16/2012		8 MB
☐	Datasheet	VSC7428-02 and VSC7429-02 Caracal Datasheet		4.0	10/12/2012		8 MB
☐	Application Note	Magnetics Guide		2.0	02/06/2014		626 kB
☐	Application Note	Distributed Transparent Clock over Microwave		1.0	11/01/2012		193 kB
☐	Application Note	IEEE1588 Configuration Guide		1.0	04/04/2011		473 kB
☐	Application Note	IEEE1588v2 and SyncE - Applications and Operation Using Vitesse's Synchronization Solution		3.0	05/12/2014		2 MB
☐	Application Note	PTP Clock Implementation Using the Caracal Switch		1.0	10/12/2011		223 kB

Quick Links

[Knowledge Base](#)
[Sales & Support](#)

Key Features

- Integrated Cu PHYs
- IEEE 1588 and Synchronous Ethernet network timing
- Supports IEEE802.3az and green energy efficiency modes with ActiPHY™ and PerfectReach™

Applications

- Carrier Ethernet switches
- Mobile backhaul
- Ethernet Access Devices (EAD): CPE, NTE, and MTU

Related Products

- [1GE-PHYs](#)
- [10GE-PHYs](#)
- [Software \(API/BSP\)](#)
- [Software \(Application\)](#)

Feedback on this product?

[Click here to comment](#)



☐	Application Note	Service OAM		1.0	11/18/2010		550 kB
☐	Application Note	Using the SparX-III Serial GPIO/LED Controller		1.0	08/02/2012		2 MB
☐	Reference Design	Reference Design 8 Cu ports + 2 SFP Managed Switch		2.2	09/21/2012		40 MB
☐	Software	Embedded Configurable Operating System (eCos-3.0) Vitesse repository and arm-elf tools		3.0	06/07/2012		66 MB
☐	Software	eCos Operating System		1.0	06/20/2013		21 MB
☐	White Paper	New Object-Oriented Paradigm Accelerates Storage Network Shift to Ethernet		1.0	07/21/2014		1 MB
☐	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 (MSAA) for Carrier Ethernet Switches		1.0	05/30/2013		2 MB
☐	Reports	VSC7423XJG-02, VSC7424XJG-02, VSC7425XJG-02, VSC7426XJG-02, VSC7427XJG-02, VSC7428XJG-02, VSC7428XJG-12, VSC7429XJG-02, VSC8512XJG-02 and VSC8512XJG-03 Material Composition Declaration - (Pd/Au Coated Cu Wire)		3.0	06/25/2014		21 kB
☐	Reports	VSC7423XJG-02, VSC7424XJG-02, VSC7425XJG-02, VSC7426XJG-02, VSC7427XJG-02, VSC7428XJG-02, VSC7429XJG-02, VSC8512XJG-02 and VSC8512XJG-03 Material Composition Declaration - Cu Wire		4.0	08/20/2013		22 kB
☐	Reports	VSC7424XJG-01, VSC7425XJG-01, VSC7426XJG-01, VSC7427XJG-01, VSC7428XJG-01, VSC7429XJG-01, VSC8512XJG-01 Material Composition Declaration - Au Wire		1.0	04/13/2012		22 kB
☐	Reports	First Level Product Qualification Report for VSC7428XJG-02 - Cu Wire		3.0	06/19/2013		88 kB
☐	Reports	First Level Product Qualification Report for VSC7428XJG-02 ASE (Pd/Au Coated Cu Wire)		1.0	04/10/2014		88 kB
☐	Reports	First Level Product Qualification Report for VSC7428XJG-02- Amkor		1.0	07/30/2014		72 kB
☐	Reports	First Level Product Qualification Report for VSC7428XJG-12		1.0	06/25/2014		73 kB
☐	Reports	First Level Product Qualification Report for VSC7428XJG-12- Amkor		1.0	08/05/2014		72 kB
☐	Reports	VSC7423XJG-02, VSC7424XJG-02, VSC7425XJG-02, VSC7426XJG-02, VSC7427XJG-02, VSC7428XJG-02, VSC7428XJG-12, VSC7429XJG-02, VSC8512XJG-02, VSC8512XJG-03 Material Composition Declaration - Amkor		1.0	08/06/2014		20 kB
☐	Software	API Release Notes		4.60	07/23/2014		-
☐	Software	WebStaX, SMBStaX, and CEServices Release Notes		3.60	07/23/2014		-