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OptiSwitch: OS-V Series of Programmable and NFV-Optimized 10GbE CPEs

OS-V8

OS-V8-M

OS-V20

Highlights

- Programmable and NFV-optimized 10GE CPEs
- Enables smooth migration from GE to 10GE (and sub rates) services without forklift upgrades
- Two fixed configuration devices: OS-V8 and OS-V20, and one modular platform: OS-V8-M
- OS-V8-M provides additional functionality and service offerings
  - VDSL/G.Fast uplink
  - Integrated LTE modem for wireless backup and rapid deployment turn- up
  - X86 server module for VNF hosting
- Layer 2 MEF certified CE 2.0, Layer 3*, and MPLS* in common hardware
- Provides per service OAM on all services (1,000s of concurrent OAM sessions) and traffic flows with SLA performance assurance
- Advanced traffic management with 1000s of queues and up to 5 levels of QoS hierarchies
- Hierarchical policing based on MEF 10.3 for enhanced BW optimization
- OpenFlow* and NETCONF* support
- Powered by MRV's field-proven Master-OS™ Linux-based operating system
- Fully integrated into MRV's advanced Pro-Vision® service orchestration and management software
  - Provides zero-touch service creation with extensive SLA reporting and web-based customer portals

Applications

- Layer 2 MEF CE2.0 for high-bandwidth capacity Business Ethernet services
- 4G/LTE mobile backhaul
- Bandwidth-on-demand access to cloud-based services
- E-Access service with scalable flow aggregation
- Broadband access with VDSL CPE
- Wireless backup

Overview

MRV's OS-V Series, a next generation portfolio of modular and compact 1RU 10GbE CPEs, is a new enhancement to the award-winning OptiSwitch® product line.

The OS-V devices expand MRV's highly successful and field-proven OptiSwitch 900 family, extending the benefits and offerings of MRV's certified Layer 2 MEF CE 2.0 access solutions.

Bandwidth scale on today's access networks alongside customer/enterprise premises is driven by increased broadband mobile traffic and access to cloud services which leads to massive traffic growth with enhanced quality of user experience. Communication service providers (CSPs) are looking for ways to deploy price competitive and high performance 10GbE (and sub rates) CPEs that offer higher bandwidth and scalable services to more customers at the edge of their networks.
The OS-V Series addresses the ongoing market demand for scalable 10GE services and allows CSPs to offer price competitive and high performance 10GE and fractional 10GbE access services. The OS-V Series is available in three form factor variants, OS-V8, OS-V8-M and OS-V20 to address the performance, intelligence and flexibility required for various applications at the network edge. The OS-V8-M modular platform has an optional expansion slot that offers additional, flexible functionality for providing enhanced service offerings including VDSL/G.Fast uplink, integrated LTE modem for wireless backup and rapid deployment turn-up, and X86 server module for VNF hosting.
The combination of the OS-V Series alongside the OptiPacket® Series of Metro Service Edge Platforms creates an ecosystem that enables the transformation of service providers' networks into dynamic, intelligent, highly flexible, orchestrated and virtualized networks for enriched service offerings and rapid service roll out.

The OS-V Series architecture is based on the newest generation of merchant silicon to optimize both performance and price. In addition to line rate CE 2.0, L3 routing*, and multiple tunneling options, the merchant silicon offers an advanced, programmable flow-aware engine, capable of supporting a massive amount of flows. When combined with our field-proven Linux-based modular operating system Master-OS, the OS-V Series provides the ultimate programmable OpenFlow* and NETCONF* flow-aware access solution that optimizes costs and functionality, without sacrificing performance.

(*) Future software release

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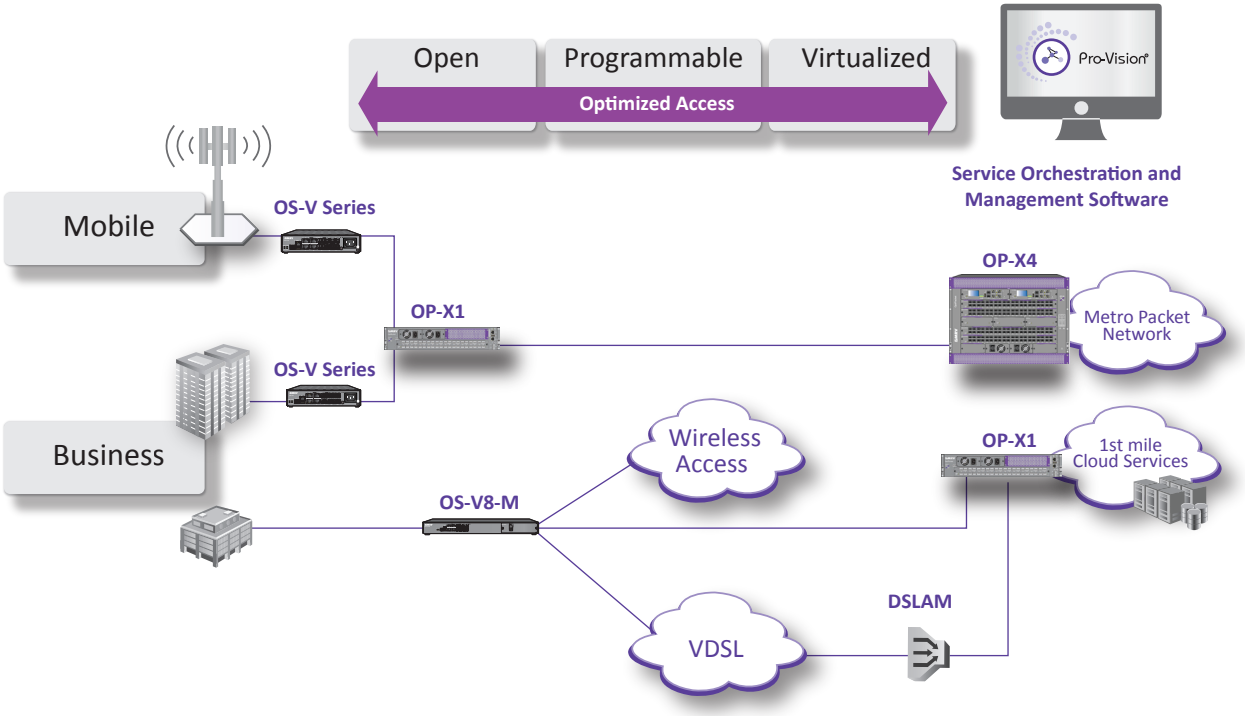
The OS-V Series supports standards-based multi-layer OAM tools (1,000's of concurrent OAM sessions) to meet carriers' stringent service availability requirements. Hardware-based SLA monitoring and assurance functions are performed on a per-application/flow to ensure reliable packet traffic transport for mission-critical applications.
OS-V Series provides advanced traffic management with 1,000's of queues and up to 5 levels of QoS hierarchies.
The combination of scalable OAM support with enhanced traffic management capabilities enables CSPs to offer lucrative and differentiated services with higher and consistent quality of experience.

OS-V Series supports a variety of applications including business Ethernet services with high bandwidth capacity, 4G/LTE mobile backhaul, bandwidth-on-demand access to cloud-based services, and E-Access services with scalable flow aggregation.

OS-V devices can be deployed as part of an end-to-end MRV metro network solution that include OptiPacket® pre-aggregation and metro service edge platforms,or as independent network elements as part of a large heterogeneous network.



OS-V Series Deployment Scenarios that Include OptiPacket, MRV's Metro Service Edge Platform

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Technical Specifications

Platform	OS-V8-M	OS-V8	OS-V20
Physical Specifications (Wx D x H)	438.66 x 325 x 44.45 mm (17.27 x 12.8 x 1.75 in) 19" rack mounting	217 x 200 x 44.45 mm (8.54 x 7.87 x 1.75 in) 19" rack mounting	438.66 x 325 x 44.45 mm (17.27 x 12.8 x 1.75 in) 19" rack mounting options
Weight (Kg)	5.5Kg / 12.1 lb (with 2 AC PS)	1.2 kg / 2.64 lb	6.4Kg / 14.1 lb (with 2 AC PS) 4.9Kg / 10.8 lb without power supply
Power feeding options	2 x hot swappable and redundant AC/ DC PS mustbe ordered separately	Internal PS + optional external PS	2 power supplies must be ordered separately
	AC Input Voltage Line (frequency 50 to 60Hz): 100 to 240 VAC DC Input Voltage: 18 to 60 VDC		
Interfaces	4 x 1/10GbE SFP+ ports (10GbE with SW license activation) 2 x GbE Combo ports 2 x 1GbE Copper ports 1 x Service slot	4 x 1/10GbE SFP+ ports (10GbE with SW license activation) 2 x GbE Combo ports 2 x 1GbE Copper ports	8 x 1/10GbE SFP+ ports 8 x GbE Combo ports 4 x 1GbE Copper ports
Power Consumption (max.)	33W (with VDSL/G.Fast module, excluding optics)	29.5W (excluding optics)	40W - 80W (depending on configuration and excluding optics)
Operating Temperature	0°C to 50°C (32°F to 122°F)		
Storage Temperature	-40°C to 70°C (-40°F to 158°F)		
Relative Humidity	85% maximum, non-condensing		
Standards Compliance	FCC Part 15 (class A); EMC Directive (class A emission, immunity); Low Voltage Directive (electrical safety); RoHS Directive; WEEE Directive; CE; TUV-R (USA, Canada); GOST (for selective products); REACH SVHC; ETSI (for selective products); C-Tick (for selective products); ICE-3. Class I laser products, Interanl lasers comply with IEC 60 825-1:1993 + A1: 1997 + A2:2001/EN60825-1:1994 + A1:1996 + A2:2001 CE2.0 Certified.		

MRV operates worldwide sales and service offices across four continents.

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