The Nokia 7750 Service Router (SR) and Nokia 7450 Ethernet Service Switch (ESS) Versatile Services Module-XP (VSM-XP) enables new service and application offerings by internally connecting services with centralized quality of service (QoS) enforcement.

The Nokia VSM-XP provides high-performance interservice connectivity within a single chassis, further enhancing the advanced QoS and accounting features of the Nokia 7750 SR and Nokia 7450 ESS. The VSM-XP is used to internally interconnect pairs of services, thus creating new service and application offerings. For example, interconnecting a Layer 2 and Layer 3 service creates a routed Layer 2 service. Another example is interconnecting upper and lower rings for a wholesale network operator with an ITU-T G.8032 ring topology network in a single node. The VSM-XP can aggregate traffic from each ring direction, allowing each retail customer to have an individual QoS policy applied, along with full accounting details.

Each Nokia VSM-XP interconnects up to 25 Gb/s (full duplex) of services in a half-slot, hot-swappable module. It is supported in a Nokia Input/Output Module 3-XP (IOM3-XP), with up to two adapter types, including the VSM-XP, in each IOM3-XP. Unidirectional traffic can peak to the half-duplex capacity through a VSM-XP with on-board logic, ensuring fair access to available bandwidth for bidirectional traffic patterns. Multiple VSM-XP modules can be installed in a chassis and logically grouped, increasing the overall interconnected capacity through load sharing across VSM-XPs in the group.

Features and benefits

- Create new services and applications by internally interconnecting services
- High-performance interconnected services, with up to 25 Gb/s (full duplex) throughput per VSM-XP
- Supports grouping multiple VSM-XP modules to redundantly scale interconnected bandwidth to more than 200 Gb/s per group
- Advanced Hierarchical QoS (H-QoS) for interconnected services or aggregated interconnected services, including QoS remapping, shaping and policing
- Comprehensive ingress and egress accounting for each interconnected service
- Management is provided by the Nokia Network Services Platform (NSP)
Technical specifications

**Dimensions and weight***

- **Height:** 3.6 cm (1.4 in)
- **Width:** 19 cm (7.5 in)
- **Depth:** 17.8 cm (7 in)
- **Weight:** 1.15 kg (2.5 lb)

* Dimensions and weight are approximate and subject to change. Refer to the appropriate Installation Guide for the current dimensions and weight.

Refer to the 7750 SR and 7450 ESS data sheets and product documentation for full system details on safety standards, compliance agency certifications and protocol support.