Nokia 7750 SR-a Service Router

Media Dependent Adapters

The Nokia 7750 SR-a Service Router (SR-a) Media Dependent Adapter (MDA)-a XP and MDA-a deliver high-performance Ethernet interfaces for highly scalable IP/MPLS routing and service applications.

With Gigabit Ethernet (GE), 10GE and 100GE interface options, the Nokia MDA-a XP and MDA-a provide the performance, flexibility and advanced service delivery capabilities to meet a full array of IP network functions, services and applications.

Nokia MDA-a XP variants deliver up to 100 Gb/s full duplex (FD) of throughput and provide physical layer termination, specific interface ports, physical media and optical functions over GE,10GE and 100GE interfaces.

The MDA-a variants deliver up to 25 Gb/s FD of throughput and provide physical layer termination, specific interface ports, physical media and optical functions over GE and 10GE interfaces.

The MDA-a XP and MDA-a types provide a wide range of optical modules for a high degree of configuration flexibility and service optimization. Up to four MDA-a XP and MDA-a types are supported by the 7750 SR-a Input/Output Module-a (IOM-a).

Using 7750 SR-a IOM-a FP3 technology, the MDA-a XP and MDA-a support processing-intensive routing applications without sacrificing performance. For service providers it is ideal for residential services, mobile backhaul and enterprise VPN/internet access services. For webscale companies and enterprises, it provides high-performance networking for cloud, data center and WAN applications.

44-port GE CSFP/SFP MDA-a

2-port 10GE SFP+
+ 12-port GE SFP MDA-a

10-port 10/1GE SFP+/SFP
(MACsec) MDA-a XP

10-port 10GE SFP+ MDA-a XP

1-port 100GE CFP2 MDA-a XP

Features and benefits

- High-speed 100 Gb/s FD and high-density 25 Gb/s FD adapter options make the MDAs ideal for subscribed and over-subscribed environments
- Nokia's FP3 silicon-based IOM-a provides both speed and functionality with low total cost of ownership
- Modular, compact Ethernet adapters and the IOM-a provide a flexible, mix-and-match approach to system configuration and also protect investments
- High-performance line-rate internet mix forwarding with advanced services enabled
- ITU-T Synchronous Ethernet (SyncE) and IEEE 1588v2 distribute precision network timing and synchronization over Ethernet
- Support for a wide range of pluggable optical modules, which support a variety of grey, black and white wavelengths and distances.
- Support for coarse wave division multiplexing (CWDM) and dense wave division multiplexing (DWDM) optical modules as well as copper media types for greater flexibility
- Pluggable optics with Digital Diagnostic Monitoring (DDM) are supported for extended operations, administration and maintenance (OAM) and improved installation, activation and troubleshooting
- Simplified field upgrades because hot-swappable MDA-a types can be exchanged in-service to change media type and physical interfaces as required
- Management provided by the Nokia Network Services Platform (NSP)

Table 1. Nokia 7750 SR-a MDA-a XP and MDA-a summary

MDA-a type	Ports	Connector type	Maximum density	
			7750 SR-a8	7750 SR-a4
MDA-a XP				
10/1GBASE (MACsec)	10	SFP+/SFP	80	40
10GBASE	10	SFP+	80	40
100GBASE	1	CFP2	8	4
MDA-a				
1000BASE	44 or 22	CSFP or SFP	352 or 176	176 or 88
10/100/1000BASE-TX	20	RJ-45	160	80
10GBASE/1000BASE (combination)	2/12	SFP+/SFP	16/96	8/48
10GBASE	4	SFP+	32	16

Technical specifications

Dimensions[1]

- Height: 3.56 cm (1.4 in)
- Width: 19.3cm (7.6 in)
- Depth: 22.86cm (9.0 in)

Weights[1]

- 10-port 10/1GE SFP+/SFP (MACsec) MDA-a XP: 0.96 kg (2.13 lb)
- 10-port 10GE SFP+ MDA-a XP: 0.96 kg (2.13 lb)
- 1-port 100GE CFP2 MDA-a XP: 1.03 kg (2.27 lb)
- 44/22-port GE CSFP/SFP MDA-a: 1.11 kg (2.45 lb)
- 20-port 10/100/1000BASE-TX RJ-45 MDA-a: 1.12 kg (2.46 lb)
- 12-port 10GE SFP/2-port 10GE SFP+ (combination) MDA-a: 0.92 kg (2.03 lb)
- 4-port 10GE SFP+ MDA-a: 0.86 kg (1.9 lb)

Refer to the 7750 SR-a data sheet and product documentation for full system details on safety standards, compliance agency certifications and protocol support.

1 Dimensions and weights are approximate and subject to change. Refer to the appropriate installation guide for the current dimensions and weights.

About Nokia

At Nokia, we create technology that helps the world act together.

As a B2B technology innovation leader, we are pioneering networks that sense, think and act by leveraging our work across mobile, fixed and cloud networks. In addition, we create value with intellectual property and long-term research, led by the award-winning Nokia Bell Labs.

Service providers, enterprises and partners worldwide trust Nokia to deliver secure, reliable and sustainable networks today – and work with us to create the digital services and applications of the future.

Nokia OYJ
Karakaari 7
02610 Espoo
Finland
Tel. +358 (0) 10 44 88 000

Document code: (June) CID194164