NetEngine 8000 M1A Access Router Port Density and Weight Dimensions - Official Technical Overview & Hardware Datasheet

PRODUCT IDENTIFICATION

The Huawei NetEngine 8000 M1A is a high-density, compact universal service router engineered for the cloud era. This fixed-configuration platform delivers a switching capacity of 352 Gbit/s and a forwarding performance of 72 Mpps, all within a 1U form factor . With a depth of 220 mm, it is optimized for space-constrained deployments, enabling flexible installation in 300 mm deep cabinets . The M1A is designed to support next-generation network architectures through native SRv6, EVPN, and Telemetry capabilities, making it an ideal solution for IP backbone, metro, mobile backhaul, and data center edge applications .



CORE INTERNAL TOPOLOGY

The NetEngine 8000 M1A integrates a fixed, non-modular chassis with a sophisticated internal architecture that maximizes port density while minimizing physical footprint. The platform's core is built around a programmable network processor (NP) that provides the flexibility to support evolving protocols such as SRv6 without hardware replacement . The system architecture is designed for high throughput, leveraging a 352 Gbit/s switching fabric to ensure line-rate performance across all active ports . This internal topology allows the device to function as a high-performance edge router, supporting complex service chains and network programmability.

SWITCHING SUBSYSTEM CAPABILITIES

The switching subsystem of the NetEngine 8000 M1A is defined by its high-density interface offerings and robust forwarding engine. The platform can be configured with a variety of port combinations, supporting up to 16 x 10GE ports or 32 x GE ports in its maximum density configuration . The system's switching capacity of 352 Gbit/s and forwarding performance of 72 Mpps ensure that even at full capacity, the router can handle demanding traffic loads with minimal latency . Key capabilities of the subsystem include:

- High-Density Port Configurations: Supports a wide array of fixed interface combinations including 10GE SFP+, GE optical, and GE electrical ports, catering to diverse access and aggregation requirements .

- Right-to-Use (RTU) Licensing: The port density is software-defined, allowing operators to activate additional ports on demand. By default, the system enables 2 x 10GE and 8 x GE ports, with higher capacities unlocked via RTU licenses .

- Versatile Interface Support: Full support for 10GE/GE/FE optical and electrical interfaces, enabling seamless integration with existing fiber and copper infrastructure .

OPERATIONAL ADVANTAGES

The NetEngine 8000 M1A provides significant operational advantages, particularly in terms of space efficiency, power consumption, and environmental resilience. Its compact 220 mm depth allows for deployment in shallow cabinets, a critical factor in space-constrained central offices and Points of Presence (PoPs) .

The platform is engineered for energy efficiency, with a typical power consumption of approximately 75W to 90W depending on the configuration . This low power draw, combined with an industrial-grade operating temperature

range of -40 ° C to +65 ° C, makes it suitable for deployment in harsh, un-airconditioned environments, such as outdoor cabinets and remote sites .

SPECIFICATION MATRIX

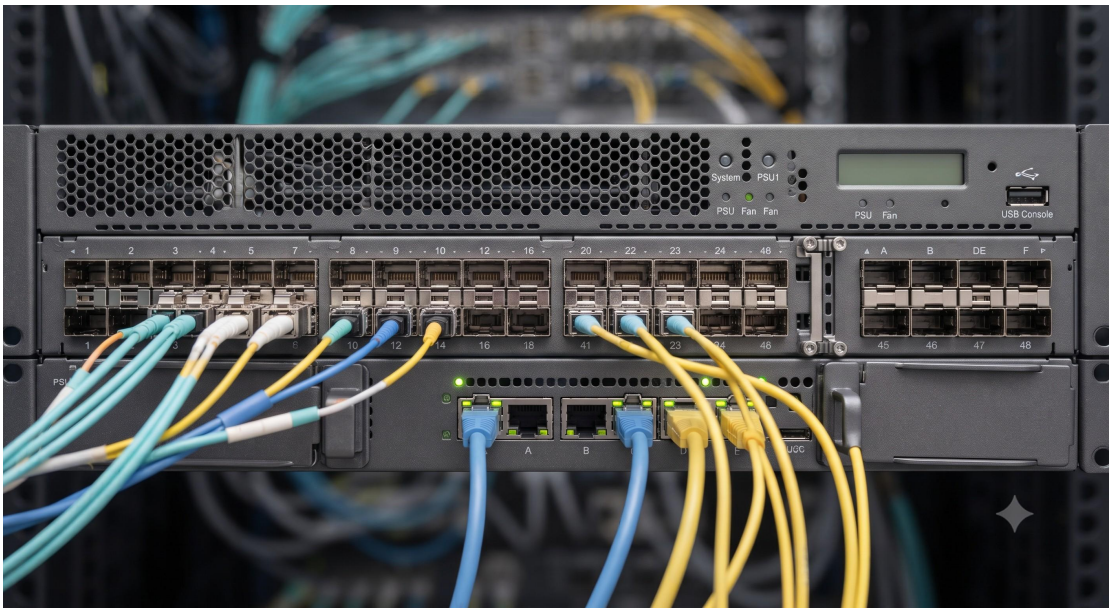
The following table provides a comprehensive summary of the physical and performance specifications for the NetEngine 8000 M1A, with a specific focus on its port density, weight, and dimensions .

Parameter	**Specification (NetEngine 8000 M1A)**
Form Factor	1RU Standard (Fixed Chassis)
Dimensions (H x W x D)	44.45 mm x 442 mm x 220 mm (1.75 in. x 17.40 in. x 8.66 in.)
Weight (Full Configuration)	DC: 3.85 kg (8.49 lb) / AC: 4.45 kg (9.81 lb)
Switching Capacity	352 Gbit/s
Forwarding Performance	72 Mpps
Port Density (Max)	Up to 16 x 10GE or 32 x GE
Power Supply	Dual Hot-Swappable Redundant (DC) / Single AC
Typical Power Consumption	DC: 78.84 W / AC: 74.7 W
Operating Temperature	-40°C to +65°C (-40°F to +149°F)

Redundant Fans	3 (Built-in, 2+1 Redundancy)
MTBF	35.99 years

REGULATORY COMPLIANCE

The NetEngine 8000 M1A adheres to a comprehensive set of international regulatory standards, ensuring its suitability for deployment in global telecommunications and enterprise networks. The platform meets stringent EMC requirements, including CISPR 32 and ANSI C63.4 standards . Its design emphasizes reliability, achieving a Mean Time Between Failures (MTBF) of 35.99 years and a system availability of 99.999% . The hardware is also built to withstand extreme environmental conditions, complying with wide-temperature and humidity specifications that certify its performance in diverse climates .


System
PSU1
PSU
Fan
Fan
PSU
Fan
USB Console
1
2
3
4
5
7
8
9
10
12
16
20
22
23
24
48
A
A
B
DE
F
45
46
47
48
A
B