10GE Access + 50GE High-Bandwidth Uplink Router on Base Station Side

NetEngine 8000 M1D−B

Compact size, 1U

300 mm deep

outdoor cabinet

Sustainable evolution

SRv6, FlexE, MACsec

- SRv6/EVPNFlexE network hard slicing isolation
- MACsec is supported to ensure network security.
- Industry-leading 10 ns high precision clock

High reliability

Redundancy backup of key components

- Power supply 1 + 1 protection
- Fan 2 + 1 protection
- Wide temperature design, -40°C to +65°C
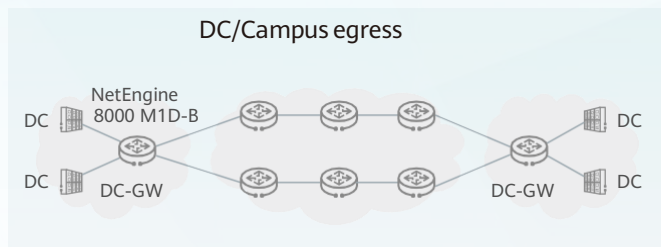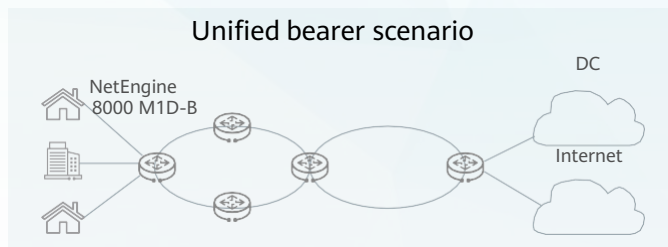
50 Gbit/s uplink

Max 184 Gbit/s

- Supports a maximum of 16*10GE, 2*25GE, and 2*50GE ports.

HUAWEI

Introduction to Concepts

The NetEngine 8000 M1D-B is a cost-effective 10GE access 50GE uplink access router. 1 U, 220 mm deep, small size, large capacity, and up to 184 ports, flexible adaptation to different services, 50GE/25GE/10GE/GE ports, and compact design, saving precious space resources and greatly reducing the Capex. Supports features such as SRv6/EVPN, FlexE, and 1588v2 high-precision clock.
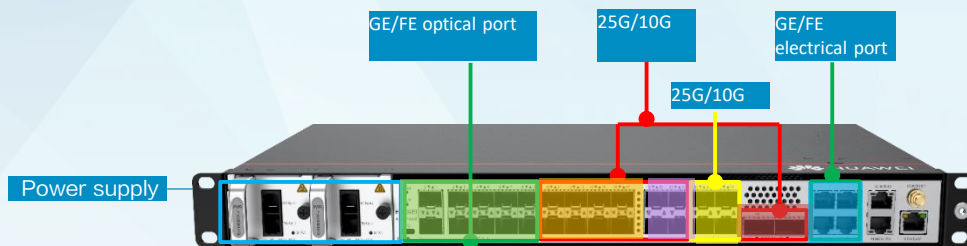
Application Scenario

Unified bearer scenario

DC/Campus egress

Product Specification

Properties	description
Dimensions (H x W x D)	44.5 mm (1U) x 442 mm x 220 mm
Cabinet	300 mm
Capacity	184 Gbit/s interface capacity
Input voltage	DC: −48V to −60V AC: 200 V to 240 V/100 V to 127 V dual-live wire, supporting 240 V HVDC
Typical power consumption	107 W (estimated)
MTBF [year]/MTTR [hour]	45.32 years/2 hours
Maximum number of supported ports	50GE: 2, 25GE: 2, 10GE: 16, GE:22 (optical) + 4 (electrical)
Fan	Three fans, wind from left to right.
L2 feature	IEEE802.1q, IEEE802.1p, IEEE 802.3ad, IEEE 802.1ab, STP/RSTP/MSTP
L3 feature	OSPF, RIP, IS-IS, BGP, ACL, IPv4, 6VPE, ARP, VLANIF, VxLAN
MPLS	LDP, RSVP-TE, L2VPN, L3VPN, seamless MPLS
SR/EVPN	SR/SRv6, EVPN L3VPN, EVPN VPWS, EVPN VPLS
FIBv4/FIBv6	512K/64K
ACL	2048
Multicast	IGMP, Static Multicast Routing, PIM-SM/SSM, MBGP, BIER
Clock	1588v2, G.8275.1, 1588 ACR, Synchronous Ethernet
OAM	Telemetry, IFIT, ETH OAM, BFD, NQA, RFC 2544, Y.1564, TWAMP
MACsec	Ports 22−27
Port slicing	Ports 26 and 27
Operating temperature	−40° C − +65° C
Operating humidity	Long term: 5% RH to 95% RH, non-condensing

Flexible Port Modes

Type 1

Default

1	3	5	7	9	11	13	15	17	19	21	23	25			29	31
GE	GE	GE	GE	GE						10GE/10GE	x	25GE/10GE			GE	GE
GE	GE	GE	GE	GE						10GE/GE	x	25GE/10GE	50GE	50GE	GE	GE
0	2	4	6	8	10	12	14	16	18	20	22	24	26	27	28	30

1	3	5	7	9	11	13	15	17	19	21	23	25			29	31
GE	GE	GE	GE	GE						10GE/GE	10GE/GE	10GE/GE			GE	GE
GE	GE	GE	GE	GE						10GE/GE	10GE/GE	10GE/GE	50GE	50GE	GE	GE
0	2	4	6	8	10	12	14	16	18	20	22	24	26	27	28	30

Type 2

1	3	5	7	9	11	13	15	17	19	21	23	25			29	31
GE	GE	GE	GE	GE	10GE/GE	10GE/GE	10GE/GE	10GE/GE	10GE/GE	10GE/GE	x	25GE			GE	GE
GE	GE	GE	GE	GE	10GE/GE	10GE/GE	10GE/GE	10GE/GE	10GE/GE	10GE/GE	x	25GE			GE	GE
0	2	4	6	8	10	12	14	16	18	20	22	24	26	27	28	30

1	3	5	7	9	11	13	15	17	19	21	23	25			29	31
GE	GE	GE	GE	GE	10GE/GE	10GE/GE	10GE/GE	10GE/GE	10GE/GE	10GE/GE	10GE/GE	10GE/GE			GE	GE
GE	GE	GE	GE	GE	10GE/GE	10GE/GE	10GE/GE	10GE/GE	10GE/GE	10GE/GE	10GE/GE	10GE/GE			GE	GE
0	2	4	6	8	10	12	14	16	18	20	22	24	26	27	28	30

1	3	5	7	9	11	13	15	17	19	21	23	25			29	31
GE	GE	GE	GE	GE	10GE/GE	10GE/GE	10GE/GE	10GE/GE	10GE/GE	10GE/GE	10GE/GE	10GE/GE			GE	GE
GE	GE	GE	GE	GE	10GE/GE	10GE/GE	10GE/GE	10GE/GE	10GE/GE	10GE/GE	10GE/GE	10GE/GE	50GE	50GE	GE	GE
0	2	4	6	8	10	12	14	16	18	20	22	24	26	27	28	30

76 GB, initial configuration

- By default, ports 22 to 25 are enabled.
- By default, all GE ports are enabled, including GE ports working in 10GE auto-sensing mode.

Port capacity expansion

- **GE-to-10GE expansion: ports 10 to 21. Each 10GE port requires one 10GE RTU.**
- **50G port enabling: Each port requires one 50G RTU.**

Port	Quantity
50GE	2
25GE	2
10GE	16
GE	22 optical; 8 electrical

Port	MACsec Port
50GE	Port 26, 27
25GE/10GE/GE	Port 24, 25
10GE/GE	Port 22, 23