ADTRAN

Data Sheet

Mobile Edge Gateway

Virtualised IP-Services Applications Gateway

The Mobile Edge Gateway is designed to support the following applications:

- **Wi-Fi Access Gateway (WAG): Homespot, Hotspot 2.0, and Roaming**
- **Trusted Wi-Fi Access Gateway (TWAG): Mobile Data Offload and 3GPP Interworking**
- **Virtual CPE (vCPE): Residential, SoHo/SMB, Multi-Dwelling Unit, Campus**
- **Dual-Stack Lite (DS-Lite) Address Family Transition Router (AFTR)**
- **B2B Static IP and IP VPN Router**
- **Provider Edge Router (6PE/PE)**
- **Carrier-grade NAT (CGN)**
- **Available as a virtualised software instance (vMEG) or an integrated hardware platform (xMEG)**

Deploy next generation IP services to the edge and core of their networks with the Mobile Edge Gateway (MEG) powered by Benu Networks.

Ideal for both fixed and mobile broadband service providers, the Mobile Edge Gateway provides new scale and economics for Benu Networks' virtualised-IP service and network applications, providing a virtualised platform for the most demanding networking and IP-service applications.

Network functions such as Wi-Fi Access Gateway, virtual CPE/Router and Service Edge Routing require predictable, reliable performance and scalability. IP service functions such as usage based monitoring, Carrier-Grade NAT, Service Function Chaining, and hierarchical QoS require both packet processing and service intelligence. Benu's virtualised IP service and networking solutions are integrated with high performance compute to provide an integrated solution for service providers to deploy in their infrastructure.

The solution is available either as a virtualised software solution (vMEG) or an integrated hardware and software solution (xMEG).

vMEG Overview

The vMEG is a software instance solution that leverages innovations in fast path processing, high-capacity x86 compute, carrier-grade Linux and Benu Networks IP services & networking software. The solution supports VMware and OpenStack virtual environments on standard Commercial-Off-The-Shelf (COTS) hardware. The BenuOS has been optimised to address low latency and bandwidth intensive IP services that require high performance packet processing, intelligent service control and policy enforcement.

xMEG Overview

The xMEG platform provides an integrated hardware and software solution that leverages innovations in fast path processing, high-capacity x86 processing, Carrier-Grade Linux and Benu's IP services and networking software. The platform can scale to small distributed applications with the xMEG-10, or large centralised applications with the xMEG-100. These platforms offer customers an alternative to a fully virtualised deployment for the most demanding networking and IP service applications.

BENU NETWORKS

MOBILE EDGE GATEWAY

vMEG Specifications

VMware

Description	System Specifications
VMware: Version 5.5 or later	Hypervisor
VMxNet3 (VMware) Intel i350-based* (PCI network pass-through or SR-IOV) Intel 82599-based* (PCI network pass-through or SR-IOV) Intel x710-based* (PCI network pass-through or SR-IOV)	Interfaces

OpenStack

Description	System Specifications
OpenStack/KVM: Version Liberty or later	Hypervisor
VirtIO (OpenStack/KVM) Intel i350-based* (PCI network pass-through or SR-IOV) Intel 82599-based* (PCI network pass-through or SR-IOV) Intel x710-based* (PCI network pass-through or SR-IOV)	Interfaces

* This is a guideline to what network cards are expected to work with the Benu vMEG software. Contact Benu Networks for more details and availability of specific network interface cards

Resource Requirements	Small Deployment	Large Deployment
Processor/Cores	3	14
RAM	12 GB	120 GB
Storage	24 GB	120 GB
Management Interfaces	1	1
Data Interfaces	1	2

vMEG Ordering Information

Description	Model Number
vMEG Operating System VMware Dual-Socket supports up to 44 cores	700-1310
vMEG Operating System VMware Single-Socket supports up to 12 cores	700-1311
vMEG Operating System Openstack Dual-Socket supports up to 44 cores	700-1320
vMEG Operating System Openstack Single-Socket supports up to 12 cores	700-1321

xMEG Specifications

Operating System

- BenuOS 5.0 (or greater)

Processor/Cores

- **xMEG-100:** Dual Intel E5-2699 v4, 22 cores per CPU
- **xMEG-10:** Intel E5-2650 v4, 12 cores per CPU

Memory Capacity

- **xMEG-100:** 512GB
- **xMEG-10:** 128GB

Storage

- **xMEG-100:** Dual 480GB SSD, Raid 1
- **xMEG-10:** Dual 120GB SSD, Raid 1

Management Interfaces

- DB-9 RS-232 (DTE) Console DB-15 VGA
- USB 3.0/2.0
- RJ-45 IPMI Dedicated LAN
- RJ-45 Ethernet Management 4 x 1GE
- SFP+ Fiber 2x 10 (xMEG-100 only)

Network Interfaces

- **xMEG-100:** SFP+ Fiber 8 x 10GE
  - 10GBASE-SR
  - 10GBASE-LR

OR

- QSFP28 Fiber 2 x 100 GE
  - 100GBASE-SR4
- **xMEG-10:** SFP+ Fiber 2 x 10GE
  - 10GBASE-SR
  - 10GBASE-LR
- RJ-45 Ethernet 4x 1GE

Physical and Power

Rack Units

- **xMEG-100:** 2RU (19 in. Rack)
- **xMEG-10:** 1RU (19 in. Rack)

Dimensions

- **xMEG-100:** 87.3mm x 444.25mm x 683.77mm (3.44 in. x 17.49 in. X 26.92 in.) (H x W x D)
- **xMEG-10:** 42.67 mm x 482.9mm x 700.28mm (1.68 in. x 18.98 in. X 27.57 in.) (H x W x D)

Weight

- **xMEG-100:** 31.4 kg. (69.23 lbs) shipping weight
- **xMEG-10:** 16.9 kg. (37.26 lbs) shipping weight

AC Power

- Dual, Hotplug, Redundant (1+1)
- **Input Voltage:** 100 - 240V AC auto-range
- **Rated Input Current:**
  xMEG-100: 12A – 6.7A max
  xMEG-10: 10.0A – 5.0A max
- **Rated Input Frequency:** 50 to 60 Hz

AC Power Supply

- **Rated Output Power:**
  xMEG-100: 1100W
  xMEG-10: 750W
- **Heat Dissipation Max:**
  xMEG-100: 4100 BTU/hr.
  xMEG-10: 2981 BTU/hr.

DC Power

- **DC Power:** Dual, Hotplug, Redundant (1+1)
- **DC Input Voltage:** -40VDC to -60VDC
- **Max DC Current:** 32.0A

DC Power Supply

- **Rated Output Power:** 1100W
- **Heat Dissipation Max:** 4416 BTU/hr.
- **Rated Output Power:** +12.2V at 91.6A, +12Vsb at 3.0A

xMEG Specifications

Regulatory Compliance

Electromagnetic Emissions

- FCC Class A, EN 55022 Class A, EN 61000-3-2/-3-3, CISPR 22 Class A

Electromagnetic Immunity

- EN 55024/CISPR 24, (EN 61000-4-2, EN 61000-4-3, EN 61000-4-4, EN 61000-4-5, EN 61000-4-6, EN 61000-4-8, EN 61000-4-11)

Safety

- CSA/EN/IEC/UL 60950-1 Compliant, UL or CSA Listed (USA and Canada), CE Marking (Europe)

RoHS

- RoHS 6 Compliant

Environment

- **Operating Temperature:** 10°C to 35°C (50°F to 95°F)
- **Expanded Operating Temperature:** 5°C to 40°C (41°F to 104°F)
- **Non-Operating Temperature:** –40°C to 65°C (–40°F to 149°F)
- **Operating Relative Humidity:** 8% to 90% (non-condensing)
- **Non-Operating Relative Humidity:** 5% to 95% (non-condensing)

xMEG Ordering Information

Description	Model Number
xMEG-10-AC 4 x 1GE RJ-45 plus 2x10GE SFP+	980-0007-00
xMEG-10-DC 4 x 1GE RJ-45 plus 2x10GE SFP+	980-0008-00
xMEG-100-AC 8 x 10GE SFP+	980-0009-00
xMEG-100-DC 8 x 10GE SFP+	980-0010-00
xMEG-100-AC 2x100GE QSFP28	980-0011-00
xMEG-100-DC 2x100GE QSFP28	980-0012-00
10GBASE-SR 300 m SFP+ OPTICAL TRANSCEIVER	921-0023
10GBASE-LR 10 km SFP+ OPTICAL TRANSCEIVER	921-0024
100GBASE-SR4: 100M QSFP28 OPTICAL TRANSCEIVER	921-0009
Spare - xMEG-10, HOT-PLUG, 1U, 750W, AC POWER SUPPLY	921-0017
Spare - xMEG-10, HOT-PLUG, 2.5 INCH, 120GB SOLID STATE SATA DRIVE	921-0018
Spare - xMEG-10, HOT-PLUG, 1U, 1100W, DC POWER SUPPLY	921-0019
Spare - xMEG-100, HOT-PLUG, 1U, 1100W, AC POWER SUPPLY	921-0020
Spare - xMEG-100, HOT-PLUG, 1U, 1100W, DC POWER SUPPLY	921-0021
Spare - xMEG-100, HOT-PLUG, 2.5 INCH, 480GB SOLID STATE SATA DRIVE	921-0022

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