

Mobile Edge Gateway 400

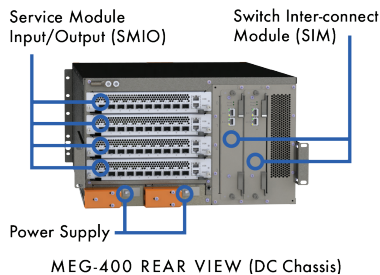
Advanced, intelligent subscriber session control to deliver a new broadband service experience for the deluge of Wi-Fi devices requiring seamless access and mobility.

Benu Networks' Mobile Edge Gateway 400 (MEG-400), designed for fixed and mobile broadband operators, integrates scalable and intelligent carrier Wi-Fi service offerings. The MEG-400 provides industry leading performance for subscriber session control and policy enforcement to address the growing need for higher degrees of intelligence, policy enforcement, and mobility. The MEG-400 is ideally suited for carrier Wi-Fi applications, such as community Wi-Fi (WISPr, HS 2.0) for large-scale residential and enterprise HotSpot services, and Wi-Fi integration into a 3G/LTE packet core.



MEG-400 OVERVIEW

Benu Networks' MEG-400 is a modular chassis design to run intelligent Service Modules which hardware accelerate the performance of Benu Networks' service applications, such as Wi-Fi Access Gateway (WAG), Trusted Wi-Fi Access Gateway (TWAG), and Programmable Data Plane (PDP).



The MEG-400 has a split chassis design consisting of service modules in the front, service module I/O cards, and switch Inter-connect modules in the rear. The chassis supports front to back cooling with per slot based by integrating fan assembly on each service module.

The Secure Fast Path (SeFP) module is Benu Networks' first intelligent service module. The SeFP module delivers highly optimized packet processing, tunnel processing, and intelligent service control functions that are required to run scalable subscriber session control services. The MEG-400 supports up to four Service Modules in the front slots.

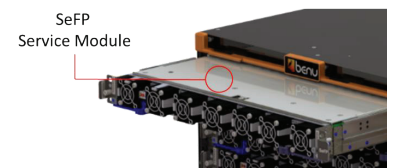
The Service Module I/O (SMIO) cards provide high density Ethernet interfaces for network connectivity. The SMIO cards are inserted in the rear of the chassis directly behind the Service Modules (up to 4 SMIO). The MEG-400 also supports 10x10GE interfaces using standard, small form-factor pluggable plus (SeFP+) connectors.

Switch Interconnect Modules (SIM) support high-speed and redundant interconnect between slots for traffic moving across Service Module slots. Additionally, they provide separate Ethernet management switch interconnect between slots.

To meet different facility requirements, the MEG-400 includes a power filter unit configuration for both AC and DC power supplies. All modules are hot-swappable and support full environmental monitoring.

SECURE FAST PATH MODULE

The Secure Fast Path (SeFP) module utilizes a state-of-the-art design and leverages multi-core Network Processors (NPU's), search processors, and traffic management engines. The SeFP design delivers the best performance, session intelligence, and packet processing per watt and per rack unit (RU) in the industry.



The SeFP hardware accelerates Benu Networks' software applications by integrating it into bare metal processing (Fast Path) to achieve massive scale in subscriber session control, tunnel processing, H-QoS, mobility, and Layer 3 services. The SeFP supports integrated intelligent network services such as CG-NAT, DHCP server and application steering functions to reduce the number of functional elements needed in Carrier Wi-Fi deployments. Each SeFP provides 100 Gb/s invariant performance characteristics even when intelligence, Quality of Service (QoS), and security features are applied to all subscriber sessions.

OPERATING SYSTEM

The MEG-400 features Benu Networks' operating system, the BenuOS, a highly modular software system that features a protected memory architecture to prevent processes from exceeding allocated resources, process and thread protection for integrity of critical applications, and automatic process restarts. The BenuOS is optimized to leverage Fast Path processing for superior subscriber session control.

MEG-400 SPECIFICATIONS

SYSTEM SPECIFICATIONS	
Operating System	BenuOS / Linux
System Throughput	Up to 400Gbps, 40x10GE SFP+ Ports
Service Module Slots	4 (Front)
Service Module I/O Slots	4 (Rear)
Capacity per Slot	100 Gb/s per slot
Scalability per Slot	Up to 100Gbps of IPv4/IPv6 Subscriber Session Control
Console Access	RJ-45 RS-232 Console / RJ-45 Ethernet Console
Rack Units (RU)	6 RU (19" Rack Mountable)
Cooling	Front-mounted fan and filter on each Service Module Slot (front to back air flow)
CHASSIS DIMENSIONS	
Height (H) / Width (W) / Depth (D)	H: 10.50" (266.7mm) / W: 28" (711.2mm) / D: 28" (711.2mm)
Weight	Approximately 80 lbs. (39.9 kg) / Approximately 120 lbs. (54.43 kg) shipping weight
SYSTEM POWER REQUIREMENTS	
Max Power Ratings	AC: 100-240V, 50/60 Hz, 700W, Redundant DC: -48V to -60V, 700W, Redundant 90A Max Current Draw / 3600W Max Power
REGULATORY COMPLIANCE	
Safety	EN 60950-1:2011 UL60950-1:2011-12 CAN/CSA-C22.2 No. 60950-1/A1:2011 UL 60950-1/R:2011-12 EN 60950-1/A12:2011
EMC Emissions	EN 55022:2010/AC:2011 Class A ICES-003 Issue 5 Class A CFR 47 FCC Part 15 Subpart B Class A VCCI Class A AS/NZS CISPR 22:2009/A1:2010 Class A EN 61000-3-2:2006/A1:2009/A2:2009 EN 61000-3-3:2008
EMC Immunity	EN 55024:1998/A1:2001/A2:2003
ENVIRONMENTAL SPECIFICATIONS	
Environmental	Operating Temperature: 0°C – 50°C Ambient Storage Temperature: -40°C to 70°C Above Sea Level: -200 to 10,000 feet Operating Humidity: 5% - 95% R.H. (Non-condensing)

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