

HG220 JUPITER™ Compact Gateway System

Hughes JUPITER™ System gateways are designed to operate on a powerful blade platform and leverage the latest in data center technologies to ensure maximum scalability. The power of the platform enables a complete Satellite Modem Cluster (SMC) to be configured as a single blade server with a powerful satellite modem on the PCI. One SMC occupies two slots in a blade chassis, and is able to support all of the forward traffic on a single outroute and the return traffic from multiple inroutes.

The HG220 compact gateway system is systematically designed and optimized to work with both conventional and high-throughput satellite networks. This highly redundant gateway system uses an in-house developed L-band matrix that connects the satellite modems to different satellites or different transponders on the same satellite, and also serves as a switch matrix for redundancy while operating satellite modems on hot-standby.

The HG220 compact gateway system is available in two variants: 3IF and 5IF, differentiated by the IF distribution systems that define the scalability of these systems. The 3IF variant supports up to three active SMCs and the 5IF variant supports up to five active SMCs or outroutes. Each SMC supports up to 96 inroutes, making it an ideal VSAT system for both large-scale and small-scale networks.

Both variants of the HG220 starter rack include an NMS/NAS array with abundant RAID storage, traffic switch, management switch and management firewall. All components are 1:N redundant with automatic fault detection and switchover. The JUPITER compact gateway system is easily managed using a comprehensive, easy-to-use, FCAPS-compliant network management system.



JUPITER System Features

Quality of Service

- On-demand Constant Bit Rate (CBR) services
- Adaptive CBR with custom step-sizes
- Committed Information Rate (CIR) with custom data rates
- Backlog-based dynamic stream with bandwidth allocation
- Class-based weighted prioritization
- Multicast data delivery
- Four levels of IP traffic prioritization
- Supports multiple configurations for traffic assignment

IP Features

- Integrated TCP spoofing
- Integrated HTTP acceleration with prefetch (optional)
- Integrated TCP and UDP compression
- Enterprise-grade IP routing and QoS
- Dual stack IPv4 and IPv6 support
- Static and dynamic IP addressing
- DHCP server or relay
- DNS caching
- RIPV1, RIPV2, BGP routing support
- VRRP
- Firewall support through access control lists

NMS/NAS Array Features

- 1:1 redundant, with abundant storage to capture network logs
- Graphical user interface able to manage multiple networks
- Distributed network management system
- Highly secure system providing encrypted links
- Traffic monitoring
- Terminal management
- Automated commissioning process
- RESTful-APIs for integration with external OSS/BSS
- Real-time remote diagnostics and troubleshooting
- Support for VNO

Technical Specifications

Forward Channel

DVB-S2X with Adaptive Coding and Modulation (ACM)

Modulation: QPSK, 8PSK, 16APSK, 32APSK, 64APSK

Coding rate: 1/2, 3/5, 2/3, 3/4, 5/6, 8/9, or 9/10

Code blocks: Normal and short frames

Forward Error Correction (FEC): LDPC/BCH

Carrier Roll-off: 5%, 10%, 15%, or 20%

Encapsulation: GSE

Symbol rates: Up to 70 Msps

Frequency: C-, Ku-, and Ka-band

Return Channel

Access scheme: MF-TDMA

Encoding: LDPC FEC with efficient variable block/burst sizes and burst-to-burst adaptive coding

Modulation: QPSK and 8PSK, 16APSK

Coding rate: 1/2, 2/3, 4/5, 8/9, or 9/10

Symbol rates: Up to 32 Msps

Aggregate inroute capacity per SMC: 96

Dynamic TDM Return Channels for nailed-up links*

Gateway Environmental Specifications

Operational temperature: 10° C to 35° C (50° F to 95° F)

Operational humidity: 15% to 80%, noncondensing

Operational altitude: 0 to 2,000 m (0 to 6,561 ft)

Gateway Power Specifications

Input voltage: 208–240 VAC

Frequency: 50/60 Hz

Gateway Interface

RFT input/output: L-band

WAN Interface: 10/100/1000 Ethernet, optical interface optional

Other Features

Security: Integrated conditional access and hardware-based 256-bit AES encryption (optional; subject to local government approval) (bidirectional)

Highly redundant and scalable architecture

FCAPS-compliant Web-based NMS

Deep packet inspection and traffic shaping*

Web Acceleration Server (WAS)

Up to 260 Mbps of IP processing supported

Remote Terminals Supported

HT2000

HT2200

HT2300

HT2500 Series

HT2600 Series

*Optional

For more information, please visit www.hughes.com or email globalsales@hughes.com.



www.hughes.com

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