



MISSION CRITICAL CONNECTIVITY AND PERFORMANCE

ASTRO® 25 GGM 8000 GATEWAY

Government and industrial organizations rely on ASTRO 25 systems for mission critical communications and to meet their demanding needs, the GGM 8000 gateway is built to deliver performance, capacity and security above and beyond the capabilities of traditional networking hardware.

Designed to provide a clear demarcation point between your existing IP network architecture and ASTRO 25 systems, the GGM 8000 Gateway is a multi-purpose network communications platform, constructed to interconnect devices and networks within ASTRO 25 systems. The need for special protocols, including multicast, are eliminated with static tunnels through your backhaul network.

The easy serviceable design allows all internal modules to be replaced without removing the chassis from the rack. Motorola manages the firmware, configurations and applications to ensure the highest levels of system integrity, performance, and information assurance compliance.

CONNECTIVITY PROVIDED

- ASTRO 25 Core
- ASTRO 25 Sites
 - Dispatch Consoles
 - Trunking
 - Conventional
 - High Performance Data (HPD)
 - SmartX
 - ISSI
- Customer Enterprise Network (CEN)

FUNCTIONS PERFORMED

- Radio system traffic call routing (voice and data)
- Packet duplication
- Rapid failure recovery
- Traffic Shaping (packet fragmentation, prioritization, and queuing)
- Dynamic System Resilience site routing
- IP simulcast traffic routing
- Zone Core Protection (ZCP)
- Conventional Channel Gateway
- Advanced Conventional Signaling (MDC1200 and ACIM)

PHYSICAL INTERFACES

- Ethernet and T1/E1 interfaces for WAN connectivity
- Ethernet for Site LAN including IP Station Interfaces
- Analog (2- or 4-wire) and V.24 digital conventional station interfaces
- FlexWAN interface for select legacy networks

PRODUCT DATA SHEET

ASTRO® 25 GGM 8000 GATEWAY

SECURITY FUNCTIONALITY

Supports data encryption over Ethernet and T1/E1 links using the IPSec and FRF.17 protocols. The GGM 8000 contains an embedded hardware encryption processor. To enable encryption, a properly signed encryption certificate must be loaded.

- Data encryption – Data Encryption Standard (DES), Triple DES (3DES) and 256-bit Advanced Encryption Standard (AES) algorithms
- Data authentication – Message Digest 5 (MD5) algorithm and Secure Hash Algorithm (SHA)
- Diffie-Hellman Group 1, Group 2, Group 5 and Group 14 negotiation
- SSH (secure shell) client/server architecture – secure encrypted communications between two trusted hosts over insecure networks
- Password Protection – Authorized users must supply credentials before access to device functionality will be allowed
- Zeroization of critical security parameters (CSPs) – Supports commands to zeroize all Key Encryption Key (KEK) related information and CSPs in the event of a security breach

CONFIGURATION

Base Platform Configuration	Enclosure; Power Subsystem (AC or DC); Base Module; Console Management Port (9 Pin); Four 10/100/100 Base-T Ethernet Ports; Two T1/E1 WAN Telecommunication Ports; Encryption Support (disabled)
Optional Modules	Encryption enabling certificate Analog 4 wire/v.24 Conventional Gateway Module: 4x4 wire with E&M analog ports, 4xv.24 digital ports Enhanced Low Density Conventional Gateway Module: 4x2 (or X4) wire with E&M analog/IO ports, 4xv.24 digital ports Enhanced High Density Conventional Gateway Module: 8x2 (or X4) wire with E&M analog/IO ports, 8xv.24 digital ports FlexWAN Module: 1 multipurpose port, typically used for v.35 interface

PHYSICAL SPECIFICATIONS

Dimensions	44 (w) x 4.3 (h) x 37 (d) cm
Weight	7.3 kg (16 lb)

ENVIRONMENTAL SPECIFICATIONS

Temperature	–30 °C to 60 °C (–22 °F to 140 °F) operating for base unit with or without encryption module 0 °C to 50 °C (32 °F to 122 °F) operating for base unit configured with optional interface modules –40 °C to 85 °C (–40 °F to 185 °F) non-operating
Humidity	5 to 95% (Non-Condensing)
Heat Dissipation	163 BTU/Hour (Maximum)
Power Consumption	48 Watts (Maximum)
AC Power Configuration	
Operating Range	100V to 240V, 50/60Hz
Current Draw	Less than 0.50A at 120VAC Less than 0.25A at 220VAC
DC Power Configuration	
Operating Range	20 to 60 VDC
Current Draw	Less than 2.0A at 24VDC Less than 1.0A at 48VDC

SECURITY CERTIFICATIONS

FIPS 140-2	Level 2
Common Criteria	EAL 2

SAFETY CERTIFICATIONS

North America	UL60950-1, CSA C22.2 No. 60950-1
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EMC/EMI CERTIFICATIONS

North America	FCC Part 15; Class A Industry Canada ICES-003; Class A
Europe (EU)	EN 55022 Radiated Emissions; Class A EN 55022 Conducted Emissions; Class A EN 61000-3-2 Harmonics EN 61000-3-3 Flicker EN 55024 Immunity EN 61000-4-2 ESD Immunity EN 61000-4-3 Radiated Immunity EN 61000-4-4 EFT/B Immunity EN 61000-4-5 Surge EN 61000-4-6 Conducted Immunity EN 61000-6-11 Voltage Interruption / Dips

Australia / New Zealand	AS/NZS CISPR 22; Class B
Japan	VCCI Class B

TELECOMMUNICATIONS APPROVALS

North America	FCC Part 68, IC CS-03
Europe (EU)	ETSI/TBR1, TBR2, TBR12, TBR13, TBR17
Australia / New Zealand	AS/ACIF S003, ACA TS016, TNA117

ENVIRONMENTAL REGULATORY

EU WEEE Directive	EN 50419 Compliant
China Management Methods (CMM)	Ministry Order #39

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