



Surveillance Gateway System

- LAN to LAN filtering and data formatting
- Serial to LAN/LAN to LAN protocol conversion
- Multiple message format capable
- 5U Rack Mountable chassis configuration
- 10Base-T/100/1000Base-TX (GbE) interfaces
- Hot-swappable interface cards on SGU
- Redundant power supplies for SGU
- Redundant RAID Hard Disk option for SGP
- Front panel indicators and monitoring
- TCP/IP and UDP/IP protocols
- Software controlled or stand-alone

The Surveillance Gateway System (SGS) is the combination of our gateway unit (SGU) and gateway processor (SGP). This powerful platform delivers unprecedented modularity and scalability for IP-based connectivity and bidirectional LAN-to-LAN and Serial-to-LAN surveillance sensor data formatting, filtering and protocol conversions. This versatile 5U form factor is highly reliable and redundant, providing the capability to incrementally add LAN and/or serial data interfaces as mission requirements dictate. In the SGS configuration, the SGP comes standard with six Ethernet ports while the SGU can be provisioned with up to 32 serial ports per chassis.



The SGS platform can be equipped with a router or switch delivering almost limitless connectivity options and extensibility.

The 4U SGU is a FPGA-based signal processing platform that enables synchronous, asynchronous, Bi-sync plus HDLC serial / LAN interconnectivity and can be programmed to perform essentially any data format conversion. Generally, the modules are pre-configured to your specifications at the factory. Common conversions performed by the SGU include message format transformations between surveillance data in CD-2, ASR, various ASTERIX categories (e.g., CAT 01, 02, 33, 34, 48, and others) in addition to sync serial and LAN formats.

The 1U SGP provides LAN connectivity as well as data conversions, filtering and message format transformations between surveillance data in CD-2, ASR, various ASTERIX categories (e.g., CAT 01, 02, 33, 34, 48, and others), ADS-B, MAR, TPS75, Mode 4, ARTS, SGF, AIRCAT-500, Mode S and other custom LAN formats.

Technical Specifications:

System Interface Characteristics				
SGU Serial Port Controls	SGU Ethernet	SGU Protocols	Message Format	Clock Sources
RS-232 (V.28) RS-422 X.21 (V.11) V.35 (V.35 & V.28) EIA-530A (V.10 & V.11) RS-449/V.36 (V.10 & V.11) RS-485	10BASE-T 100BASE-T IEEE-802.3 SGP Ethernet 10BASE-T 100BASE-TX 1000BASE-TX Gigabit Ethernet	Synchronous Asynchronous HDLC/SDLC Bi-Sync Mono-Sync TCP/IP UDP/IP	ASTERIX CD-2 / ASR-9/11 Radar Mode 4 / Mode S MAR / TPS75 / ARTS AIRCAT-500 SGF ADS-B Custom	DCE DTE Split Clock Note: SGU can generate and/or receive clock on each port

Power Requirements	
Primary/Secondary SGU DPS	+12 VDC, 5 Amp from redundant 100-240VAC Power Supplies
SGU-AR power consumption	+12 VDC, 400mA (13W per SGU-AR)
SGP AC power consumption	100-240VAC, 50-60Hz, 5 Amp

Specifications	SGU Chassis	SGU-AR	SGP	Power Distribution Panel	Dual Power Supply
Height	7in./178mm	7in./178mm	1.75in./45mm	1.75in./45mm	3.50in./89mm
Width	19in./483mm	4.25in./108mm	19in./483mm	19in./483mm	19in./483mm
Depth	13in./330mm	13in./330mm	1.5in./38mm	1.5in./38mm	4.25in./112mm

Description	Specifications	Standard Achieved
EMC Compliance	Federal Communications Commission (FCC)	Part 15, Class A
Safety Compliance	Underwriters Laboratories	(UL) 60950-1
Safety Compliance	Underwriters Laboratories (SGP Only)	(UL) 60950 / (CUL) listed
Conformity Compliance	EC-Declaration of Conformity (SGP Only)	CE Mark
Environmental Compliance	RoHS (Restriction of Hazardous Substance)	EU Directive 2002/95/EC

* The SGU complies with MIL-STD-810F. Refer to the SGU and SGP datasheet for specific operating parameters.

System Architecture:

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