Brigantine SGP

High-Speed Communications Platform

FIPS 140-3™

Features

- **LAN-to-LAN Communications Interface and Conversion Platform**
- **12 Ethernet LAN ports, 2 SFP+ ports**
- **Up to 8 ports of Power over Ethernet (PoE)**
- **Expansion bay for optional Data Diode Module**

Sunhillo's Brigantine Surveillance Gateway Processor (SGP) is a dedicated 1U communication platform running **Sunhillo's SureLine® software** and is designed for LAN to LAN surveillance sensor data formatting, content filtering, and protocol conversions. SureLine's web-based graphical data flow editor is capable of simple and complex configurations which bridge the gaps between dissimilar ATM systems, allow for content filtering based on geographical volume selection, and provide protocol specific refinements. The SureLine graphical interface provides local data monitoring features and tools which help to visualize the data flow through a real-time radar display. For remote monitoring, Simple Network Management Protocol (SNMPv2, SNMPv3) is supported.

Brigantine SGP Hardware provides a high-speed communication platform with a primary focus on LAN infrastructure. The Brigantine SGP supports twelve (12) 1Gb Ethernet Ports and two (2) Enhanced Small Form-factor Pluggable (SFP+) ports that provide up to 10Gb Ethernet over copper or single/ multi-mode fiber modules. Through configuration, the twelve (12) Ethernet ports can be used as individual interfaces, grouped into an Ethernet switch-like configuration, or combined into a logical access group (LAG) providing redundancy and extended throughput. Additionally, the Brigantine supports 802.1Q VLAN tagging to extend VLANS through external switches.

For additional customization, a **COM Express Single Board Computer module** is supported, which is coupled with SSD (M.2 SATA) storage and both internal and external Ethernet connectivity. COM Express provides robust expansion capabilities for specific customer applications while maintaining the advantage of a secure appliance package.

Brigantine SGP Security features are modeled after the Common Criteria (ISO/IEC 15408) Network Device Protection Profile (NDPP). These features are part of the standard offering for all Sunhillo platforms running the SureLine® core software. Additionally, the Brigantine SGP platform has an integrated encryption processor to streamline the demands inherent in today's mission-critical encryption tasks.

An optional **Data Diode Module,** which provides Uni-directional highly secured data flow, fits directly in the expansion bay of the Brigantine SGP.

Front and Rear Panels

Technical Specifications

Part Number
- 070-10-BSGP-S02

Description
Brigantine Surveillance Gateway Processor (SGP)
Dual Power Supplies

Processor
- NXP T2080 quad-core, dual-threaded PowerPC processor, 1.8 GHz, 4GB DDR3L, optional 120GB SATA SSD

Ethernet
- 10/100/1000BASE-T, 10GBASE (SFP+), Switch fabric is compatible with Deterministic Ethernet and supports 802.1 AVB/TSN Standards, 802.1AS - Precise Timing Protocol, 802.1Qat - Stream Reservation Protocol, 802.1Qav - Egress Pacing and Shaping, 802.1Qbv - Time Aware Shaping, 802.3az Energy Efficient Ethernet, IEEE 802.1p tagged frames, Frame and Queue priority overrides based on DA, SA, VID, Ethertype, BC, IP, PPPoE, ARP, or Snoop. Support IEEE 802.3af Power over Ethernet (15.4W per port)

Protocols
- SureLine Software Suite, TCP/IP, UDP/IP

Message Formats
- ASTERIX (e.g., CAT 01, 02, 33, 34, 48, and others), CD-2, ASR-9/11, Mode 4, Mode S, MAR, TPS75, ARTS, AIRCAT-500, ECGP, SGF, ADS-B, custom, and more

Front Panel Display
- 256x64 greyscale (yellow) OLED
- Menu and Select navigation buttons

Power
- Power usage: 300W Max
- 100-240VAC, 50-60Hz, 5A-3A
- 1U Modular AC Power Supply
- Dual Hot-swappable redundant configuration

Additional Ports and Features
- Mini USB for console

Dimensions
- Height: 1.61in / 41mm (Standard 1U)
- Width: 19in / 482mm
- Depth: 11.25in / 285.75mm

Environmental (Tested to MIL-STD-810G)
- Storage Temperature: -50°C to +60°C
- Operating Temperature: 0°C to +50°C
- Operating Relative Humidity Range: 10-95%, non-condensing
- Operating Altitude: -300 ft to 10,000 ft

Certifications and Compliance
- CE & UKCA Mark
- RoHS3 Directive EU 2015/863
- REACH
- FCC Part 15, Class B
- UL/CSA/IEC/EN 62368-1
- ETL for Canada and US, 3023031
- FAA-G-2100J: Power
- FIPS 140-3 Level 1 (Certificate 5394)

MTBF at 30°C
- Brigantine Dual Power Supply: 229,499 hours
- Brigantine COM Express Dual Power Supply: 182,639 hours

Optional Modules
- COM Express Module (Type 6)
  - Baseline: Intel i7-6820EQ, 2.8 GHz, 8GB DDR4, 240GB SATA SSD
- Data Diode
  - 100% hardware-enforced security protocol