SUNHILLO
Mission-Critical Data Interoperability

Margate I - M4I

Surveillance Conversion Platform

- M4I Interface
- Compact 1U size

- An ideal solution for networks requiring low-density, high-speed system interfacing to multiple serial ports
- CD-2 / M4IS Messaging
- TCP/IP and UDP/IP Serial to LAN Protocol Conversions.
- Redundant Power Supplies
- QUICC Engine™ technology for HDLC, Bisync, and Async serial Communications.

The Margate I - M4I is a Direct M4IS Replacement

Sunhillo's Margate is an EIA standard 19" rack mount platform designed for surveillance sensor data formatting, filtering and protocol conversions with built in M4I Interface. The M4I Interface accepts interrogation synchronously from a single 25 pin serial interface in the form of UDP packets from dual Ethernet interfaces. Interrogation requests can arrive in any order from either type of interface. The synchronous serial port handles CD-2 and M4IS-Simple Format, while the redundant Ethernet Ports handle strictly M4IS-Simple Format.

The Margate is a compact 1U form factor 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. Common conversions include converting TPS75 to SGF-IP, as well as message format transformations between surveillance data in ECGP, 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, in addition to sync, async serial and LAN formats.

Serial Data Interfaces

The Margate is built on FAA approved and deployed Sunhillo Software and Hardware, providing sensor interfacing capabilities for the FAA STARS, ASR11, as well as the military DASR program.

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MARGATE PRODUCT INFO SHEET front v102 FULL BLEED.indd 1 3/21/2013 4:25:36 PM

Technical Specifications:

Margate I System Interface Characteristics					
Serial Port Controls	Ethernet	Protocols	Message Format	Clock Sources	Mode 4 Interrogator
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	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: Unit can generate and/or receive clock on each port	RS-232 (V.28) RS-422 Cannon Connector 4Pin

Specifications	Inches	Metric	Power Requirements	Power Requirements
Height	1.75 in.	44 mm	North America - 110/120 VAC	European - 220/240 VAC
Width	19.00 in.	482 mm		
Depth	11.00 in.	279 mm		

Description	Specifications	Standard Achieved
Low Temperature Operating	0°F (-17°C), uncontrolled humidity	MIL-STD-810F – Method 502.4
High Temperature Operating	100°F (38°C), uncontrolled humidity	MIL-STD-810F – Method 501.4
Low Temperature Storage	Constant: -58°F (-50°C)	MIL-STD-810F – Method 502.4
High Temperature Storage	Cyclic: 115°F to 133°F (42°C to 56°C)	MIL-STD-810F – Method 501.4
Humidity Operating	55°F to 85°F, 85% Humidity (12°C to 30°C, 85% Humidity)	MIL-STD-810F – Method 507.4
Humidity Non-Operating	86°F to 133°F, 95% Humidity (30°C to 56°C, 95% Humidity)	MIL-STD-810F – Method 507.4
Altitude Operating	Low Pressure (Altitude) Operating/Air Carriage -200 to +10,000 feet	MIL-STD-810F – Method 500.4
Altitude Non-Operating	Low Pressure (Altitude) Storage/Air Transport +50,000 feet	MIL-STD-810F – Method 500.4
EMC Compliance	Federal Communications Commission (FCC)	Part 15, Class B
Safety Compliance	Underwriters Laboratories	(UL) 60950
Environmental Compliance	RoHS (Restriction of Hazardous Substance)	EU Directive 2002/95/EC

Product Overview:

Dual Power Supplies

M4I Interface

Serial Interface

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for more information visit us @ www.sunhillo.com