SECURE AUTONOMOUS MULTI-SENSOR UNIT

TELEGRID

- Secure multi-sensor unit for data collection, processing and networking in autonomous applications
- Rugged design for autonomous environments
  - Complete separation and insulation between all service interfaces
  - Automatic re-start in case of temporary power failure (Patent Pending)
  - Designed to meet MIL-STD 810G
- Additional service interfaces include serial port (balanced and un-balanced), CAN, GPIO
- Supports fiber or copper Ethernet connections to higher layer data and control planes
- Internal and remote sensors include Temperature/ Humidity sensors, Pressure sensors, Accelerometer, Gyroscope, and Liquid sensors. Additional sensors available upon request
- FIPS 140-2 Level 1 compliant
- Includes Internet Protocol Security (IPsec) for VPN connectivity
- Supports Authentication, Authorization and Accounting (AAA)
- Access control includes Role-Based (RBAC), Object-Base (OBAC) and Attribute-Base (ABAC)

The TELEGRID Secure Autonomous Multi-Sensor Unit (SAMSU) is a high-security, high-performance networked system designed to operate in an unmanned tactical environment. The SAMSU includes features that make it an ideal solution for autonomous vehicles including separation and insulation of interfaces and a patent pending restart circuit that automatically initiates a restart process based on predefined system operational parameters.

The flexible design allows custom application development and connectivity to multiple secure networks. Flexible design features includes additional service interfaces such as serial ports (both balanced and un-balanced), Controlled Area Network (CAN) bus, and direct GPIO interface lines to the internal Main Processor. Additionally the unit can connect to networks over fiber or copper Ethernet connections. Finally the unit allows connectivity to multiple sensor types including Temperature/ Humidity sensors, Pressure sensors, Accelerometer, Gyroscope and Liquid sensors. Custom sensors or other interfacing devices can also be accommodated.

The SAMSU software is based on TELEGRID's Embedded Security Framework. The ESF is a structured collection of encryption and authentication modules designed to accelerate the design and development of embedded systems in line with DISA Security Technical Implementation Guides (STIGs).

Embedded Security

Cryptography	
FIPS 140-2 Level 1 Compliance	Yes
Public / private key pair generation / certificate signing request	Yes
Symmetric Key Cryptography	Yes
Hashing	Yes
Random Number Generation	Yes
Protocols	
HTTPS	Yes
IPSec	Yes
TLS (version 1.1 minimum per NIST SP 800-52)	Yes
SSH (v2)	Yes
NTPv3 / v4 compliant	Yes
SNMPv3 / v2c	Yes
Syslog	Yes
Public Key Infrastructure (PKI)	
Supports Multiple Public Key Infrastructures	Yes
Certificate revocation checking (OCSP and CRL)	Yes
Supports PKI-based Two Factor authentication	Yes
Authentication, Authorization, Accounting (AAA)	
Supports Centralization Authentication and Authorization	Yes
802.1x Support	Yes
Auditing	
Audit log / trail	Yes

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