TransAir™ STS-1010

Intelligent Cloud-Enabled Mobile Gateway

- LTE-A with GPS
- Enterprise-grade Wi-Fi Access Point
- Compute and storage to host applications
- Vehicle interfaces to connect vehicular network to cloud
- Sensors to enable IOT applications

SKU	DESCRIPTION
STS-1010	Multi-service Mobile Gateway with 1 LTE-A (North America and Europe), 2 Wi-Fi (802.11a/b/g/n/ac), PoE+ and Application Engine
STS-1010-A	Multi-service Mobile Gateway with 1 LTE-A (APAC), 2 Wi-Fi (802.11a/b/g/n/ac), PoE+ and Application Engine

The LILEE Systems TransAir™ STS-1010 is an enterprise-class vehicle communications gateway that provides Internet connectivity to onboard applications. The STS-1020 provides wired and wireless connectivity to onboard devices, vehicle to ground, and ground to the back office. The built-in Wi-Fi Access Point provides dual band (2.4/5 GHz) 802.11ac connectivity and Power over Ethernet (PoE). In addition, it has Gigabit Ethernet (GbE) ports to provide wired connectivity to both passenger and operational devices.

LileeOS, software running on STS, provides Layer 2 functionality, security, Quality of Service (QoS), traffic segmentation and management, application isolation and link aggregation. The dynamic weighted load balancing (DWLB) aggregates bandwidth simultaneously across LTE, Wi-Fi, and Ethernet, allowing the highest amount of throughput at the lowest possible cost – ideal for running multiple onboard applications that demand high-throughput and reliable connectivity.

LILEE Systems T-Cloud, the simple, intuitive, flow-based and cloud-based management, provides monitoring, onboarding, and configuration of onboard devices, connectivity, and edge and cloud applications. A wide range of interface options combined with the flexibility to run applications directly on the STS accelerates custom application development. The open cloud platform enables easy integration of third-party cloud applications, such as CAD/AVL, e-log (electronic logging), and onboard entertainment.

STS-1010 Specifications

Processor / Memory / Storage

Intel Atom X-series Quad-Core Processor

4 GB on board memory

1 x SATA SSD 2.5″ disk bays (32 GB included in SATA0)

LTE Interfaces

1 x LTE CAT 6 (LTE-A) to support up to 300 Mbps

2 x SIM card slots

2 x LTE 4G antenna connectors

LTE Band Support in North America and Europe - B1,B2,B3,B4,B5,B7,B8,B12,B13,B20,B25,B26,B29,B30,B41

LTE Band Support in APAC - B1,B3,B5,B7,B8,B18,B19,B21,B28,B38,B39,B40,B41

Advanced Satellite System support - GPS (US), Glonass (Russia), Beidou (China), Galileo (EU)

1 x GPS antenna connector

Wi-Fi Interfaces

2 x 802.11 ac/a/n (5 GHz) b/g/n (2.4 GHz) interfaces support up to 1.3 Gbps

6 x WLAN antenna connectors (3 x 3 MIMO)

Support for up to 128 clients per radio

Up to 8 SSIDs per radio

Dual radio mode (AP or client)

Automatic or manual channels selection

Onboard Sensors

3-axis gyroscope and 3-axis accelerometer

Physical Interfaces

1 x HDMI connector (audio and video)

1 x DB15 connector to provide OBD-II (for small vehicles) and J1939 (for buses)

1 x Digital I/O connector (1 true ignition digital input, 3 digital-in, 2 digital-out, 6 GND)

1 x USB 2.0

1 x USB 3.0

6 x 10/100/1000 Mbps Ethernet ports – 4 of the ports PoE 802.3at Type 2

2 x RS-232/422/485 Serial port via DB-9

1 x Maintenance port (RJ45) for dedicated diagnostic connection

1 x Serial console port via RJ45

1 x Reset button

LED indicators: PWR, RDY, ALM, GPS, POE, LTE0, LTE1, WLAN0, WLAN1, AUX0, AUX1

Protocol Support

IP Routing, DHCP, SNMPv2, SMS (Short Message Service), NTP, NAT

QoS Priority queuing, classification, and marking

8 VLAN/TOS based queues for application prioritization

NAT (dNAT & sNAT)

IPSec Protocol

PPPoE

Link aggregation across LTE (different providers), Wi-Fi, and Ethernet

Security

IPsec, SSH, DTLS

Encryption: TKIP, AES/CCMP

Authentication

- 802.1X/EAP for WPA/WPA2 Enterprise
- PSK for WPA/WPA2 Personal
- On-device RADIUS Server

Firewall with port forwarding and filtering

Captive Web Portal

Content Filtering

Remote Management

Virtual IP KVM remote management

Centralized Management

- Cloud-based network, device, and client monitoring
- Guided network configuration

LILEE Mobility Controller (LMC) RESTful APIs, WebSocket APIs, and SNMP (host and interface MIBs) for commercial network management integration

Local Management

Serial console port

Ethernet maintenance port (CLI via SSH)

Physical Characteristics

Cooling design	Fanless
Housing	Metal housing
Dimensions (H x W x L)	2.6 x 7.1 x 11.7 in (67 x 181 x 298 mm)
Weight	6.61 lb. (3 kg)
Installation	Shelf and wall

Environmental Limits

Functional Operating Temperature	-40 to 70 °C (-40 to 158 °F)
Storage Temperature	-55 to 85 °C (-67 to 185 °F)
Ambient Relative Humidity	5% to 95% (non-condensing)

Power

Input Voltage	10 to 30 VDC	
Power Connector	4-pin terminal block header, male pin	
Power Consumption	4.8 W	Minimum (soft off)
	15 W	No external connections (idle)
	95 W	Maximum with PoE

Certifications

STS-1010	FCC, PTCRB, CE, EN 50155
STS-1010-A	CE, CB, EN 50155

For more information, contact your sales representative or email **sales@lileesystems.com**.

LILEE Systems
641 River Oaks Parkway
San Jose, CA 95134
+1 (408) 988-8672
www.lileesystems.com

REV 2018.03.08