



# TransAir™ STS-2025

Rugged Intelligent Cloud-Enabled Mobile Gateway

- AAR S9401 standard compliant for operations in extreme environments
- Dynamic load balancing and link aggregation for fast, reliable WAN connectivity
- Software configurable dual Wi-Fi AP for high-bandwidth applications
- Application containers running multiple independent applications
- Centralized cloud-based monitoring and management



The LILEE Systems TransAir™ STS-2025 is a ruggedized, intelligent cloud-enabled mobile gateway that delivers wireless connectivity and enables transportation operators to run operational and passenger applications.

STS-2025 comes with two 1.2Gbps 5Ge/LTE Cat. 18 WWAN interfaces, designed for a aggregation and dynamic load balancing for fast and reliable WAN connectivity. The built-in Wi-Fi Access Point provides dual band (2.4 and 5 GHz) 802.11ac connectivity and Power over Ethernet (PoE). It also supports FirstNet Band 14 for public safety communications.

AAR S9401 standards compliance and IP54 rating allows STS-2025 to operate in extreme environments and makes it suitable for onboard locomotives, hi-rail vehicles and remote wayside locations.

STS-2025 is a cloud-enabled platform that supports centralized monitoring and management of devices and applications. Remote deployment, zero-touch onboarding, group configurations and troubleshooting help organizations increases operational efficiency, reduce operating cost and optimize device uptime.

## SKU

STS-2025

## Description

Rugged Intelligent Mobile Gateway with 2 5Ge/LTE, 2 Wi-Fi (802.11a/b/g/n/ac), PoE+ and Application Containers

# STS-2025 Specifications

## Processor / Memory / Storage

Intel Atom Quad-Core Processor with IOMMU  
8 GB onboard memory  
2 \* mSATA slots (32GB SSD preinstalled at SATA0)

## Cellular Interfaces

2 \* 5Ge/LTE Cat. 18 up to 1.2 Gbps (4 x 4 MIMO with 5CA DL)  
4 \* SIM slot (2 4FF/Nano SIM slots for each LTE)  
8 \* SMA connector (4 x 4 MIMO for each LTE)  
Supported RF bands:  
- LTE FDD: B1, B3, B25(B2), B66(B4), B26(B5/B18/B19), B7, B8, B12(17), B13, B14, B20, B28, B29, B30, B32, B71  
- LTE TDD: B38, B39, B40, B41, B42, B43, B46, B48  
- 3G: B1, B2, B4, B5(B19), B8

## 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  
3 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

GNSS (GPS, GLONASS) receiver with dead reckoning  
3-axis gyro  
3-axis accelerometer  
2 \* CAN 2.0b bus

## Physical Interfaces

1 \* Power connector (M12 4+1PE K-Coded)  
1 \* HDMI (Circular connector)  
1 \* USB 3.0 (Circular connector)  
1 \* USB 2.0 (Circular connector)  
8 \* LTE antenna (SMA)  
1 \* Wheel tick input (SMA)  
1 \* GPS antenna (SMA)  
4 \* SIM slots (4FF/Nano SIM)  
3 \* WiFi antenna (RP-SMA)  
1 \* Maintenance port and Serial console (M12 12-pin A-Coded)  
2 \* RS-232/422/485 (M12 8-pin A-Coded)  
1 \* Digital Input connector (4 \* digital input, 4 \* ground, M12 8-pin A-Coded)  
1 \* Digital Output connector (4 \* digital output, 4 \* ground, M12 8-pin A-Coded)  
1 \* CAN bus connector (2 \* CAN-H/-L pairs, M12 8-pin A-Coded)  
4 \* 10/100/1000 Ethernet M12 X-Coded ports with 802.3at Type 2 support

## 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, DTLS, SSL  
Encryption: TKIP, AES/CCMP  
Authentication  
- 802.1X/EAP for WPA/WPA2 Enterprise  
- PSK for WPA/WPA2 Personal  
- RADIUS Server  
Port forwarding and filtering  
Captive Web Portal  
Content Filtering

## Remote Management

Centralized Management  
- Cloud-based network, device, and client monitoring  
- Network configuration

## Local Management

Serial console port  
Ethernet maintenance port

## Physical Characteristics

|                        |   |
|------------------------|---|
| Cooling design         | Fanless                                 |
| Housing                | Metal                                   |
| Dimensions (H x W x L) | 2.4 x 7.1 x 11.6 in (60 x 180 x 294 mm) |
| Weight                 | 7.72 lbs. (3.5 kg), estimated           |
| 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 – 30 VDC  
Shutdown threshold voltage: 9 VDC  
Consumption:  
- 200mW during soft off  
- 12W at idle, no external connections  
- 150W maximum with PoE (90W maximum to devices)

## Certifications

FCC, PTCRB, CE, CB, EN 50155, EN 45545, AAR S9401, IP54

## LILEE Systems

91 East Tasman Drive, Suite 150  
San Jose, CA 95134  
United States  
www.lileesystems.com



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