

## Features

- End-to-end IP layer routing transparent to carrier technologies
- Topology agnostic to hide the complexity of underlying layer 2 or layer 3 IP network. User traffic is tunneled from the remote wayside to the control center
- Seamless roaming to maintain continuous communications with the Internet host moving from one LTE base station to another
- Seamlessly maintains connectivity to remote stations across WLAN, WWAN, LAN, and WAN
- Comprehensive centralized management

### LILEE Mobility Controller Highlights

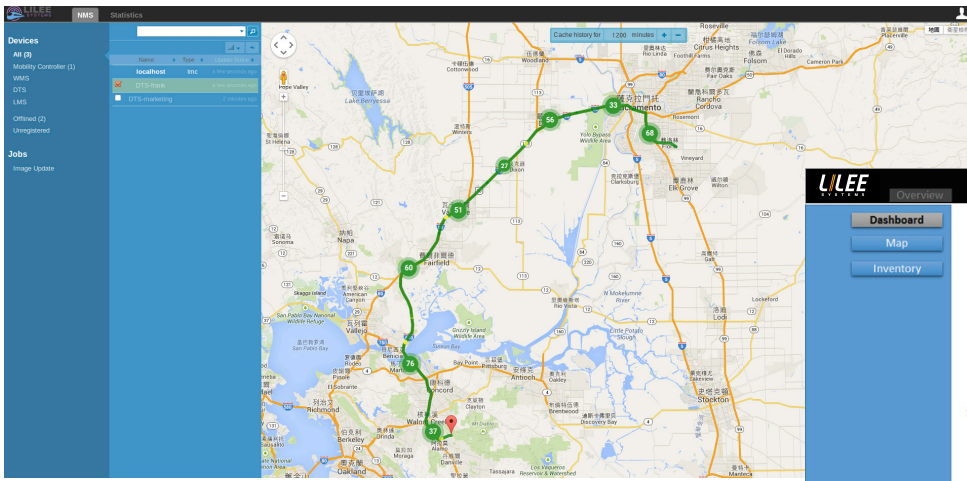
- Fast handover of less than 50 ms across base stations or roaming between radio interfaces
- Integrated network management system for centralized provisioning, monitoring, and management (including SNMP)
- Support for up to 200 remote devices per Mobility Controller
- Layer 2 tunneling with UDP and DTLS encapsulation
- Vertical roaming
- Tunnel link aggregation
- Link monitoring and dynamic weighted load balancing
- Failover design automatically switches between active and backup LMC

## Introduction

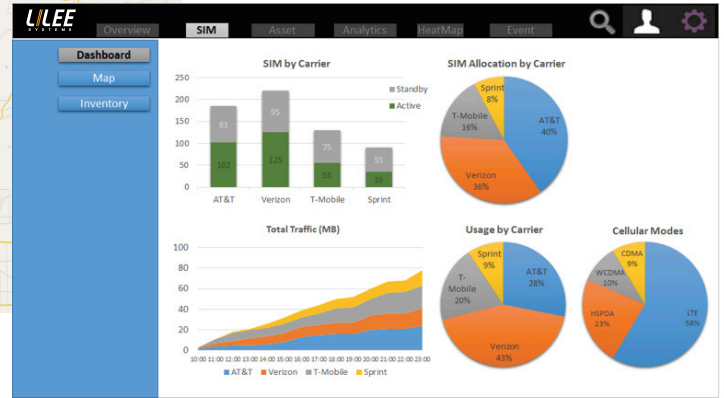
The LILEE Systems TransAir LMC-5500 Series Mobility Controller provides mobile asset connectivity for the management of remote devices such as the DTS-2000 Dynamic Telematics System, WMS-2000 Wayside Messaging Server, and LMS-2450 LILEE Messaging Server to enable applications such as passenger Wi-Fi, onboard information systems and surveillance, telematics and driver performance monitoring, and systems analytics.

Multiple tunnels can be grouped into a single logical link. Client traffic is distributed across tunnels in a group for load balancing and failover. Each tunnel monitors link quality (throughput, RSSI, latency) between the LMC-5500 and LMS-2450 to determine the weight for client traffic load balancing in the tunnel aggregation group. The weight changes dynamically when link quality changes.

In addition, the yard and base station radios establish tunnels with the LMC-5500 to allow locomotive radios to move across different segments of the network without having to be aware of the underlying network topology changes. The LMC also provides comprehensive web-based management to allow all remote devices to be managed centrally from a graphical console. It is a “one-stop shop” for all remote device management tasks.



LILEE Systems Network Management GUI enables GIS-based visibility and remote diagnostics of the TransAir products.



**Centralized Management GUI highlights:**

- Remote asset configuration and management
- SIM and client GUI management
- ITCM protocol support via firmware upgrade
- Profile-based configuration support

# LMC-5500 Specifications

Performance	
Remote base stations supported	200
L3 networks supported	800
IPv4 static routes supported	25,600
Locomotive/wayside stations supported	12,800
Aggregated tunnel throughput	800 Mbps
Encryption Types	AES, 3DES
Authentication Types	802.1X
Management Capabilities	SNMP, Web, CLI using SSH, Telnet and console port
Storage Devices	2 TB x 2 (RAID1, redundant, hot swappable)
Watchdog Timer	Hardware watchdog timer
Fans	Two hot swappable fans

I/O Interface	
Ethernet	Eight 10/100/1000Base-T Gigabit Ethernet ports via RJ45
Serial	One RS-232 System console port via RJ45
USB	One USB 2.0 port
LCD Panel	Serial LCD 16x2 characters with buttons
LED Indicators	Power Status, storage access, Ethernet status/speed

Power	
Power Input Voltage	100-240 VAC, 50-60 Hz
Power Supply Unit	Two hot swappable 250 W PSU
Power Supply Distributor	One hot swappable power supply distributor
Power Consumption (Typical)	160 W

Physical Characteristics	
Dimensions (H x W x L)	3.4 x 18 x 17.5 in (86 x 457 x 445 mm)
Weight	30 lbs. (13.6 kg)
Installation	2U standard 19 inch rack mount

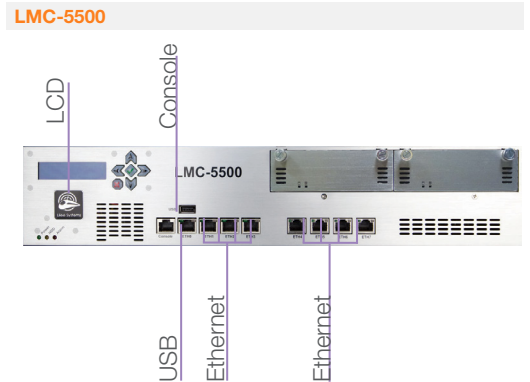
Environmental Limits	
Operating Temperature	5 to 40 °C (41 to 104 °F)
Operating Ambient Relative Humidity	10% to 85%, noncondensing at 35 °C (95 °F)
Storage Temperature	-40 to 70 °C (-40 to 158 °F)
Storage Ambient Relative Humidity	5% to 95%, noncondensing at 35 °C (95 °F)

**Certifications**

- CE
- FCC Part 15
- IC ICES-003
- EN 55022: 2006 + A1: 2007
- EN 61000-3-2: 2006 + A2: 2009
- EN 61000-3-3: 2008
- EN 55024: 1998 + A1, 2001 + A2: 2003
- EN 61000-4-2: 2008
- EN 61000-4-3: 2006 + A1: 2007
- EN 61000-4-4: 2004
- EN 61000-4-5: 2005
- EN 61000-4-6: 2008
- EN 61000-4-8: 2009
- EN 61000-4-11: 2004



# Interface



# Ordering Information

SKU	Description
LMC-5500-BASE	TransAir LILEE Mobility Controller Base Unit with no software support
LMC-5500-MIP	TransAir LILEE Mobility Controller with IP Mobility support
LMC-5500-2TB	Replacement 2 TB SAS disk
LMC-5500-PSU	Replacement power supply
LMC-5500-FAN	Replacement fan

