

SmartLV

Industrial Gateway



RUGGED LTE & 5G IOT CELLULAR GATEWAY



SmartLV is the Next-Generation IoT Cellular Gateway Designed for Low Voltage Sub-Stations and Industrial Applications

The SmartLV offers LTE and 5G cellular gateways to protect your long-term application investment. Designed for the next generation smart grid with built-in security to help prevent cyber-attacks, the SmartLV delivers a robust and reliable solution for the most mission-critical applications.

The SmartLV comes pre-enabled with the easy-to-use PercepXion™ IoT Edge Platform and cellular Connectivity Services cloud platform applications to increase operational efficiency directly. The rugged, compact, highly secure, industrial-grade cellular gateway address the demands of application-specific use cases.

The SmartLV

The SmartLV IoT cellular gateway provides a robust solution for the low-voltage distribution grid as well as other utilities and industrial applications.

Smart Grid

- Cellular, Ethernet, Serial, I/O, GNSS, Wi-Fi, BT, Fieldbus conversion and other industrial protocols
- Transformer, Feeder, Concentrator monitoring & control
- External sensor monitor & report
- Optional expansion capabilities

High-Speed Cellular Communication

With high-speed LTE uplink and downlink, the SmartLV Gateway is ideal for high throughput mission critical applications. The SmartLV provides a future migration path with 5G for your longer-term deployments.

Built-in Security Framework with Lantronix InfiniShield™

The highest level of security for mission-critical applications is key to preventing growing cyber security threats. InfiniShield™ Security is a comprehensive suite of built-in device security, including a secure element chip to prevent unauthorized access of confidential information.

Industrial Design and Protocols

The SmartLV Series is designed specifically for industrial applications with Ethernet, Serial, I/O, and a protocol conversion suite. Connect virtually any industrial equipment or sensor using fieldbus protocols or wireless interfaces.

Lantronix Software Services

PercepXion - This secure cloud platform provides comprehensive, ready-to-use device life cycle management, application integration and analytics through a single pane of glass.

<https://www.lantronix.com/percepXion/>

Connectivity Services - North American and global cellular data plans and VPN security with an easy-to-use cloud platform to manage your SIMs and services.

<https://www.lantronix.com/connectivity-services/>

Perfect For:



Smart Grid



Industry 4.0



Utilities



Smart City

SmartLV Highlights

- Pre-configured with PercepXion IoT Edge solution platform
- High-speed LTE and 5G support
- Fieldbus protocols conversion suite
- Industrial-grade design
- Secure crypto element

InfiniShield™ Security

- Secure boot
- Secure firmware updates
- Secure storage
- Secure communications
- Secure network attach

Hardware

CPU

- Qualcomm® QCS615, Kryo™ 300 octa-core CPU
- Qualcomm® Hexagon™ V66 DSP

Memory & Data Storage Security Chip

RAM

- 8GB LPDDR4X, 2133 MHz

Flash Memory

- 128GB UFS

User Data Storage

- Internal: via the UFS Flash memory
- External: via a user-accessible microSD card (not provided), and USB Flash drive (not provided)
- Secure Element

Cellular

- LTE with 3G with 2G fall-back modes
- 5G, Sub-6 GHz with both LTE and 3G fall-back mode

Dual SIM

- Dual SIM / Single standby; via two **mechanically secure mini-SIM holders**

Location Services & 3 Axis Accelerometer

- GNSS location services
- Concurrent GPS and GLONASS
- 3-axis accelerometer

Wi-Fi & Bluetooth Operation

- Wi-Fi via an RP-SMA antenna connectors
- Bluetooth via RP-SMA antenna connector

Ethernet

- 10/100/1000 base Ethernet: Two LAN port and one WAN port
- SFP for FiberWAN WWAN

PSE-PoE+

- Optional 30 W per LAN port – requires additional accessory

Serial Communication

- RS-232
- RS-485

USB

- USB host port
- USB-C port

I/Os

- Isolated I/O
- User-configurable, as (i) analogue input; or (ii) digital input or (iii) digital output

Power

- Input voltage: 10.8 ~ 60 V DC
- Last Gasp: 100-second long, approximately
- Digital Input (Ignition): One (1) digital input, on the third pin of the 3-pin header
- Power off Timekeeping. Dedicated RTC with approximate 100-day data retention period

Physical Description

- Brushed aluminum alloy
- Size: 150 x 85 x 30mm
- Weight: approximately 300g
- Operating Status LEDs

Temperature & Humidity Ranges

- Operating: -30 °C ~ +70 °C; up to 95% RH
- Storage: -40 °C ~ +85 °C; up to 95% RH

Software Suite

OS & SDK

- Linux OS (Yocto)
- Container support; Docker, snapd
- Use SmartLV SDK to create custom packages and build custom firmware images

Device Management Services

- Lantronix PercepXion™ platform or third-party platforms

Administration & Network Protocols

- Web-based user interface, setup wizard, console log viewer, save / load configuration, NTP, SMS / OTA remote configuration, TR-069-capable

Redundancy

- Ethernet, Cellular, Wi-Fi – configurable as failover or load balancing

Resilience

- Network connectivity watchdog (configurable), internal application watchdog

Wi-Fi

- Client or Access point, WEP, WPA, WPA-PSK / WPA2-PSK security modes

Performance & Fault Management

- Real time processor load and interface (WAN / LAN / Wi-Fi), traffic analysis, ICMP, trace-route, NS lookup

Routing

- DHCP, static routing, port forwarding, traffic routing, static /dynamic DNS, DNS proxy, NAT, STP

VPN & Tunneling Protocols

- PPTP client, L2TP, OpenVPN client / server / passthrough, GRE, IPsec up to 4 channels

Security

- Zone-based firewall, VLAN, DMZ, HTTPS local and remote connection, SIM PIN

Industrial Protocols

The SmartLV supports a wide range of industrial protocols:

- EtherCAT
- DLMS client
- DNP3 Outstation
- Modbus master
- IEC104 slave and IEC 101 master

And more protocols to come. Contact us for the most up-to-date product specifications.

Providing Visibility to LV Substations

