**G520 Series is the Next-Generation IoT Cellular Gateways Designed for Industry 4.0, Security and Transport Applications.**

The G520 series offers LTE Cat 4 and 5G cellular gateways to protect your long-term IoT application investment. Designed for industrial applications with built-in security to help prevent cyber-attacks, the G520 delivers a robust and reliable solution for the most mission-critical applications.

The G520 series devices come pre-enabled with the easy-to-use ConsoleFlow™ device management and cellular Connectivity Services cloud platform applications to increase operational efficiency directly. The rugged, compact, highly secure, industrial-grade cellular IoT gateways address the demands of application-specific use cases.

**The G520 Series**
The G520 series IoT cellular gateways provide a robust solution for many industrial applications and are available in three application-specific SKUs.

- **G526 Industrial Gateway**
  - LTE Cat 4 Ethernet, Serial, I/O, Fieldbus conversion and other industrial protocols
- **G527/G528 Security Gateway**
  - LTE Cat 13 & 5G, Built-in cryptographic secure element and PSE-PoE
- **G526 Transportation Gateway**
  - LTE Cat 4, GNSS, accelerometer, CAN Bus reading, and other tracking features

**High-Speed Cellular Communication**
With LTE Category 13 uplink and Cat 7 downlink, the G527 Security Gateway is ideal for high throughput CCTV applications. The G528 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 G520 Series is designed specifically for industrial applications with Ethernet, Serial, I/O, and a protocol conversion suite. Connect virtually any factory equipment or vehicle using fieldbus protocols and CAN Bus.

**Lantronix Software Services**
ConsoleFlow - secure cloud platform to manage remote IoT gateways through a single pane of glass. https://www.lantronix.com/consoleflow/

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:**
- Industry 4.0
- Security
- Transport & Mobility
- Smart City

**G520 Series Highlights**
- High-speed LTE and 5G support
- Fieldbus protocols conversion suite
- Industrial-grade design
- Secure crypto element
- Secure boot
- Secure firmware updates
- Secure storage
- Secure communications
- Secure network attach
Hardware

**Cellular**
- LTE Cat 4 with 3G and 2G fallback modes on industrial pack
- LTE Cat 13 (uplink) / 7 (downlink) with 3G fallback mode on security pack only
  - 5G, Sub-6 GHz with both LTE Cat 13 (uplink) / Cat 20 (downlink) and 3G fallback mode

**Wi-Fi & Bluetooth Operation**
- 2T2R Wi-Fi, via an RP-SMA antenna/connector
- Bluetooth 5.1, via Wi-Fi's rightmost RP-SMA antenna connector
- Optional 2T2R Wi-Fi/6E

**Ethernet**
- 10/100 base Ethernet: One LAN port and one WAN port, user-reconfigurable as second LAN port; via RJ-45 headers fitted with two LEDs

**PSE-PoE+**
- Security gateway only - 30 W per LAN port – requires U301 accessory

**Serial Communication**
- RS-232 Full implementation, via a 9-pin sub-D header
- RS-485 via 5-pin COMBICON header
- One (1) USB host port; via a Type-A header

**I/Os**
- I/O (2) with common ground, via a 3-pin COMBICON header and a tool-less plug (I/O header and plugs are not provided)
- User-configurable, each one independently from the other; as (i) analogue input; or (ii) analogue input suited to current loop (aka 4 mA ~ 20 mA) sensors; or (iii) digital output
- INPUT: 0 V dc ~ 2.5 V dc ~ 0 to ZERO; 3 V ~ 50 V dc → ONE
- OUTPUT: open collector; 200 mA max.; 50 V dc max.

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

**Location Services & 3 Axis Accelerometer**
- Qualcomm® Qat+ location services, gen. 8c/9c or u-blox M8 (transport pack)
- Concurrent GPS and GLONASS (security gateway 5G model)
- 3-axis accelerometer from STMicroelectronics LIS331DLH

**Memory & Data Storage Security Chip**
- DDR2 SDRAM 256MB
- 8MB

**User Data Storage**
- Internal: via the 256 MB of parallel NAND Flash memory
- External: via a user-accessible microSD card (not provided), and USB Flash drive (not provided)
- Secure Element from MICROCHIP ATECC608 on security variant

**MFF SIM(s)**
- Combination of (i) ‘MFF + mini’; or (ii) ‘mini + MFF’; or (iii) ‘MFF + MFF’ SIMs, substituted for the standard two mini-SIM trays. Contact us for the options.

**Physical Description**
- Brushed aluminium alloy
- Size (mm): 131.5 x 81.27 x 25 without connectors
- Weight: approximately 300g
- Operating Status LEDs: Nine as green for (i) POWER; blue for (ii) SIM; (iii) Wi-Fi amber for (iv) Activity; (v) Network; (vi) Signal yellow for user-programmable (vii) LED #1; (vii) LED #2; red for (ix) ALERT

**Temperature & Humidity Ranges**
- Operating: ~ -30°C ~ +70°C, up to 95% RH
- Storage: -40°C ~ +85°C, up to 95% RH
- Input voltage: 10.8 ~ 60 V DC
- 3-pin Nano-Fit™ header
- Last Gasp: 100-second long, ~ 50 V DC => ONE
- Power off Timekeeping: Dedicated RTC with 100-day data retention period, approximately 15 mWh lithium manganese battery (not functional below -20°C)

**CPU**
- ARM926EJ-S-based CPU running at 600 MHz
- 96 mWh Li-ion batteries
- Last Gasp: 100-second long, ~ 50 V DC => ONE
- 3-pin Nano-Fit™ header
- Digital Input (Ignition): One (1) digital input, on the third pin of the 3-pin header
- Built-in 32 kB instruction cache and 32 KB data cache

**Power**
- Input voltage: 10.8 ~ 60 V DC
- Power off Timekeeping: Dedicated RTC with 100-day data retention period, approximately 15 mWh lithium manganese battery (not functional below -20°C)

**Software Suite**

**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 (approx. 12 users), WEP, WPA, WPA-PSK / WPA2-PSK security modes

**Device Management Services**
- Lantronix ConsoleFlow platform or third-party platforms

**SDK**
- Use G520 SDK to create custom packages and build custom firmware images.

**Performance & Fault Management**
- Real-time processor load and interface (LAN / LAN / Wi-Fi), traffic analysis, ICMP, trace-route, NS lookup

**VPN & Tunneling Protocols**
- PPTP client, L2TP, OpenVPN client / server / pass-through, GRE, IPsec up to 4 channel

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

**Industrial Protocols**
- Following industry protocols supported on MH.
  - EtherCAT
  - DLM/C client
  - DNP3 Outstation
  - Modbus master
  - IEC104 slave and IEC 101 master
  - And more protocols to come. Contact us or visit our website for the most up-to-date product specifications. www.lantronix.com/products/g520

**Essential Accessories**
- Visit the www.lantronix.com/products/G520 for a full listing of Accessories and Ordering Information
  - Power Supply
    - POE+Power Supply 5 W industrial power supply
  - Power Cord
    - Power Cord - KDC32 (provided) or KDC33 (with one more stripped wire for ignition)
    - Din Rail Clip
  - Pins
    - 3 Pin Pluggable Terminal Blocks: Fmc 0,5/3-St2,54
    - 5 Pin Pluggable Terminal Blocks Fmc 0,5/5-St2,54
    - SnapCap Converter
    - 31.5 mm-wide, 17 mm-high, 9-pin sub-D plugs that convert G520 series’ RS-232, DB9F serial port
    - 4G & GNSS Antennas
  - Remote (3m), adhesive, IP67-rated
  - ‘3-in-1 LTE + LTE + GNSS A33MD or A33H
  - ‘2-in-1 LTE + LTE A32MD or A32H, if GNSS were deemed unnecessary

**Product Offering**

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Description</th>
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<tbody>
<tr>
<td>G526GP12S</td>
<td>Industry Pack LTE CAT 4 Router For EMEA, Asia Pacific</td>
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<tr>
<td>G526GP1A5</td>
<td>Industry Pack LTE CAT 4 Router For Canada, USA</td>
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<tr>
<td>G526GP1T5</td>
<td>Industry Pack LTE CAT 4 Router For Japan, South Korea</td>
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<tr>
<td>G526GP1C5</td>
<td>Industry Pack LTE CAT 4 Router For China, Thailand, Indonesia, India</td>
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<td>G527GP22S</td>
<td>Security Pack LTE CAT 7-13 Router For EMEA, Asia Pacific</td>
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<td>G527GP22S</td>
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<td>G528GP2FS</td>
<td>Security Pack 5g Sub 6ghz Worldwide</td>
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