THE SOLUTION TO TRANSFORM YOUR MACHINES INTO SMART CONNECTED DEVICES

[Your Machine] + Lantronix® SGX 5150 = Industrial IoT...Accelerated

For systems integrators, building out an industrial IoT solution involves transforming a wide range of new and legacy machines into a cohesive network of smart connected devices.

Building an Industrial IoT solution demands several elements for success:

- Having the right hardware to connect your devices to the enterprise network.
- Making sure your connectivity solution can withstand rugged industrial conditions.
- Establishing the correct configuration for each device in your connected solution.
- Ensuring the highest levels of data encryption and security.
- Handling and integrating multiple proprietary and legacy protocols for device communication.
- Building and deploying the right analytics and applications to integrate machine data with existing enterprise applications.

Lantronix SGX 5150 offers system integrators a flexible platform for faster IoT deployment process with:

- Multiple interface support (Serial, Ethernet and USB) providing one wireless solution for a wide range of new and existing legacy devices.
- High performance certified 802.11ac Wi-Fi that delivers robust, reliable wireless connectivity, reducing the need for additional access points.
- Lantronix essential IoT applications enable quick configuration and deployment of one or many devices via your smartphone or tablet.
- Industrial-grade security features that safeguards authorized access and data transmission.
- Durable design assuring operation in the harshest industrial environments.
- Integrated soft access point connections for wireless service and maintenance without disrupting the device’s current operations.
- Linux SDK and Python runtime services allow for quick development and deployment of custom applications.
- TruPort® Serial technology that supports industry-standard and proprietary machine protocols for seamless data pass-through to local or remote applications.
- Out-of-the-box extensible device management with Lantronix Global Device Manager and Lantronix Gateway Central powered by MACH10.*
- Pre-integration with the Lantronix MACH10™ IoT application development and deployment platform, simplifying the delivery of custom web-scale services and applications.

*Future Release
SGX 5150

Features and Specifications

**Wireless Specifications**
- 5G Wi-Fi (IEEE 802.11a/b/g/n/AC)
- 1x1 ac (MC50 - MC59), 20, 40 and 80 MHz Channels with optional SGI
- IEEE 802.11 n
  - 1x1 n (MC50 - MC57), 20 MHz and 40 MHz channel width with optional SGI
- Advanced 802.11 n/ac Features
  - Transmit Beamforming
  - Tx/Rx Low Density Parity Check (LDPC)
  - Rx Space Time Block Coding (STBC)
- Bluetooth/WiLAN Coexistence
- Compatible with IEEE 802.11 a/b/g and Supports IEEE 802.11 d/h/j/i
- Dual band 2.4 GHz and 5 GHz, regional restrictions controlled by part number
  - 2.412 GHz - 2.484 GHz - Channels 1 - 14
  - 5.15 - 5.825 GHz: U-Ni1-1, U-Ni2-2, U-Ni2e-U-Ni3
- Ethernet Specifications
  - IEEE 802.3 MAC and PHY, 10BaseT and 100BaseT
  - 802.3at Class 2 Powered Device
- Auto-Negotiation/ Auto MDIX, Full-duplex and Half-duplex

**USB Specifications**
- Configurable USB 2.0 HS/FS port with USB type C connector
- USB Device (default setting) powered by a VBUS 5V
- USB configurable host can provide VBUS 5V 0.5A (power supply or PoE)

**Serial Port Specifications**
- RS-232 or Multi-protocol RS 232/422/485 (depends on model)

**Physical Interface**
- (1 or 2) RJ-45 Serial Ports, 8KV ESD Protection
- (1) USB port – Type C Host / Device Connector
- (1) RJ-45 Ethernet port, 10/100Mbps, 1.5 KV rms Isolation
- (1) Reset Button, (1) WPS Button
- (1) Barrel jack for 9-30VDC power input

**Protocols**
- DHCP Client, DHCP Server, DHCPv6 Client
- uPnP (Discovery), LCAP (7FFE), Telnet (FTP, HTTP(S)
- IPv4/IPv6, TCP , UDP , ICMP , ARP , Auto-IP , DNS, SNMP v2/v3
- uPnP (Discovery), LCAP (7FFE), Telnet (FTP, HTTP(S)
- EAP-FAST
- EAP-PEAPv0, v1/EAP-MS-CHAP v2
- EAP-MS-CHAPv2
- EAP-TLS
- EAP-TTLS (MS-CHAPv2)
- EAP-PEAPv0, v1/EAP-MS-CHAP v2
- EAP-Smartcard
- EAP-SIM
- EAP-FAST
- EPS1 140-2 Level 1 Certification*

**InfiniShield™ Security**
- Wireless LAN Security
  - AES/CCMP and TKIP encryption, 802.11i
  - WPA/WPA2 Pre-Shared Key (PSK) or IEEE 802.1X, AES-CCMP
  - Enterprise Security (WPA2-Enterprise)
  - EAP-TLS, EAP-TTLS (MS-CHAPv2)
  - EAP-PEAPv0, v1/EAP-MS-CHAP v2
- EAP-Fast
- FIPS 140-2 Level 1 Certification*

**TruPort® Serial**
- Serial Tunneling to Wi-Fi Client, Wi-Fi AP or Ethernet concurrently
- USB (Serial Tunneling) to Wi-Fi Client, Wi-Fi AP or Ethernet concurrently

**Management Interfaces**
- DeviceInstaller™ Windows-based GUI
- Web Manager (HTML5 Browseer HTTP/HTTPS)
- CLI (over serial ports, telnet or SSH)
- OTA Field upgradeable | Supports SNMP v3, V4
- XML Configuration records via CLI or FTP

**Wireless Features**
- Up to 4 Soft Access Point (AP) Connections, Simultaneous Soft AP & Client Mode
- Wi-Fi Direct, Ethernet to Wi-Fi bridging
- Secure Com Port Redirector™

**LED Indicators**
- System Status / Wi-Fi Wireless Signal Strength / Green/Red Simplified Diagnostics
- RJ-45 Ethernet (Activity/Link) – status handled through ports

**Physical Dimensions**
- Dimensions: 10.8 cm (4.3 in) x 7.2 cm (2.8 in) x 3.3 cm (1.3 in)
- Weight: 0.35 kg (0.77 lb)

**Environmental**
- Extended Operating Temp: -40° to 70° C (-40° to 158° F)
- Extended Storage Temp: -40° to 85° C
- Storage Humidity 10 to 97% - Relative Humidity 5 to 95%, Non-condensing
- ESD tolerance: Contact Discharge= 4kV; Air Discharge=15kV
- IP Rating: 30

**Power**
- Input: Power over Ethernet (optional)
- Input: DC barrel, 9-30 VDC
- Input: USB Type C I/O connector
- Power Consumption = 1.9 W typical without USB Load, 5.5 W max with USB Load
- Optional Power Supply – (100-240 VAC, 50-60 Hz, 12 VDC @ 1A) with regional adapters
- Output: 5V / 500 mA via USB Type C connector (in Host mode) when used with Optional Power Supply

**Certifications**
- ICES-003 2012 Issue 5, Class A, Issue 4; ICSS-02, Issue 5, RSS-247, Issue 1
- AS/NZS 3268, AS/NZS 2772.2.1
- ABN ROR STS-33, ST-T66, ARIB ST-T71
- China SRRC CMIT, Mexico NOM-121-SCT1-2009
- EN 55024, EN 55032, CISPR 22 Class B, CISPR 16-1-4, ICES-003 Issue 6
- UL / EN 60950-1, CSA C22.2 60950-1-07, VCCI, VCCI V-3
- RED 2014/53/EU, EN 300 328, EN 301 489-1, EN301 489-17, EN 301 893-1, EN 62311
- EN 61000-4-2, EN 61000-4-3, EN 61000-4-4, EN 61000-4-5, EN 61000-4-6, EN 61000-4-8, EN 61000-4-11

**Ordering Information**

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Description</th>
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</thead>
<tbody>
<tr>
<td>SGX515000xS</td>
<td>SGX 5150 Wireless IoT Gateway, 802.11 a/b/g/n/ac, USB, 10/100 Ethernet</td>
</tr>
<tr>
<td>SGX5150102xS</td>
<td>SGX 5150 Wireless IoT Gateway 802.11a/b/g/n/ac, 1xRJ45 (RJ45), USB, 10/100, Ethernet</td>
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<tr>
<td>SGX5150103xS</td>
<td>SGX 5150 Wireless IoT Gateway 802.11a/b/g/n/ac, 2xRJ45 (RJ45), USB, 10/100 Ethernet, PoE</td>
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<tr>
<td>SGX5150202xS</td>
<td>SGX 5150 Wireless IoT Gateway 802.11a/b/g/n/ac, 1xRJ45 (RJ45), USB, 10/100 Ethernet, PoE</td>
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<tr>
<td>SGX5150205xS</td>
<td>SGX 5150 Wireless IoT Gateway 802.11a/b/g/n/ac, 2xRJ45 (RJ45), USB, 10/100 Ethernet, PoE</td>
</tr>
</tbody>
</table>

**Part Number**
- x = Regional Model
- U = United States | E = Europe | J = Japan

**Accessories**
- SGX5150BKT
- SGX 5150 Mounting Bracket
- 520-154-R
  - Power Supply, Wall Cube, 12VDC 10W, 2.1mm Barrel Connector, 4AC Plugs, Efficiency Level VI, PSE, RoHS
- 500-247-R
  - Cable, USB, Type C to USB-A Male 2.0, 1000mm, Black, RoHS
- 500-110-R
  - Cable, CAT5E Ethernet, 10'
- 500-101
  - Cable, RJ45 to DB9M DTE, 6’ for Connection to a DB9F DCE Device
- 200-2071
  - Adapter, RJ45 to DB9M DTE, for Connection to a DB9F DCE Device

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