[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.
SGX 5150

Features and Specifications

Wireless Specifications
- 5G Wi-Fi (IEEE 802.11a/b/g/n/ac)
- 1x1 ac (MC50 - MCS9), 20, 40 and 80 MHz Channels with optional SGI
- IEEE 802.11 n - 1x1 n (MC50 - MCS7), 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/WLAN Coexistence
- Compatible with IEEE 802.11 a/b/g and Supports IEEE 802.11 d/h/n
- 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-NII-1, U-NII-2, U-NII-2e, U-NII-3
- Tx/Rx Low Density Parity Check (LDPC)
- Serial, USB and Ethernet to Wi-Fi Client
- WPA/WPA2 Pre-Shared Key (PSK) or IEEE 802.1X, AES-CCMP
- SGX 5150 Mounting Bracket
- SGX 5150 Wireless IoT Gateway, 802.11 a/b/g/n/ac,
- FIPS 140-2 Level 1 Certification*
- USB (Serial Tunneling) to Wi-Fi Client, Wi-Fi AP or Ethernet concurrently
- Dual band 2.4 Ghz - 2.484 Ghz - Channels 1 - 14
- 5.15 - 5.825 GHz - U-NII-1, U-NII-2, U-NII-2e, U-NII-3

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 SVBUS BV
- USB configurable host can provide SVBUS BV 0.5A (power supply or PoE)

Serial Port Specifications
- RS-232 or Multi-protocol RS 232/422/485 (depends on model)
- Data rates up to 921 Kbps

Physical Interface
- (1 or 2) RJ-45 Serial Ports, BKV ESD Protection
- (1) USB port - Type C Host / Device Connector
- (1) RJ-45 Ethernet port, 10/100 Mbps, 1.5KV 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

InfiniShield Security
- Wireless LAN Security
  - AES/CCMP and TKIP encryption, 802.11
  - WPA/WPA2 Pre-Shared Key (PSK) or IEEE 802.1X, AES-CCMP
- Enterprise Security (WPA2-Enterprise)
  - EAP-TLS, EAP-TTLS (MS-CHAPv2)
  - EAP-PEAP (EAP-MPPE-Chap), 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 Interface
- DeviceInstaller* Windows-based GUI
- Web Manager (HTTPS/HTTP)
- CLI (over serial/ports, telnet or SSH)
- OTA Field upgradable (Supports SNMP v2, v3)
- XML Configuration records via CLI or FTP

Wireless Features
- Up to 14 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 95% - Relative Humidity: 5 to 95%, Non-condensing
- ESD tolerance: Contact Discharge- 4kV, Air Discharge-15kV
- IP Rating: 30

Operating Modes
- Bridging Mode
  - Ethernet to Wi-Fi Client (Transparent Bridge, Dual-Hosted)
  - Ethernet to Wi-Fi Client and Soft AP concurrently
  - Soft AP to Ethernet Host
  - USB (RNDIS) to Wi-Fi Client, Wi-Fi AP or Ethernet concurrently
- Gateway Mode
  - Serial, USB and Ethernet to Wi-Fi Client

Power
- Input: Power over Ethernet (optional)
- Input: DC barrel, 9-30 VDC
- Input: USB Type C I/O connector

Ordering Information

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<th>Part Number</th>
<th>Description</th>
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<tr>
<td>SGX5150000xS</td>
<td>SGX 5150 Wireless IoT Gateway, 802.11 a/b/g/n/ac, USB, 10/100 Ethernet</td>
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<td>SGX5150102xS</td>
<td>SGX 5150 Wireless IoT Gateway 802.11a/b/g/n/ac, 1xRS232 (RJ-45), USB, 10/100, Ethernet</td>
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<td>SGX 5150 Wireless IoT Gateway 802.11a/b/g/n/ac, 2xRS232/RS485 (RJ-45), USB, 10/100 Ethernet, PoE</td>
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* = Future Features

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<th>E = Europe</th>
<th>J = Japan</th>
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Accessories

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<th>Part Number</th>
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<tr>
<td>SGX5150BKT</td>
<td>SGX 5150 Mounting Bracket</td>
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520-154-R | Power Supply, Wall Cube, 12/20V 10W, 2.1mm Barrel Connector, 4-AC 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 |
200-207J | Adapter, RJ45 to DB9M DTE, for Connection to a DB9F DCE Device |

Contact Information

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<tr>
<th>Americas</th>
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<tbody>
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