



# SGX 5150

IoT Device Gateway

## 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.



## Features and Specifications

### Wireless Specifications

- 5G Wi-Fi (IEEE 802.11 a/b/g/n/AC)
- 1x1 ac (MCS0 - MCS9), 20, 40 and 80 MHz Channels with optional SGI
- IEEE 802.11-n
  - 1x1 n (MCS0 - MCS7), 20 MHz and 40 MHz channel width with optional SGI
- Advanced 802.11 n/ac Features
  - Transit 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/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-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 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)
- Data rates up to 921 Kbps

### 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 (77FE), 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, 802.11i
  - 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 Browser HTTP/HTTPS)
- CLI (over serial ports, telnet or SSH)
- OTA Field upgradeable | 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 97% - 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

- Power Consumption = 1.9W typical without USB Load, 5.5W 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

- FCC Part 15 Subpart B, Class B, Subpart C 15.247, Subpart E 15.407
- ICES-003:2012 Issue 5, Class B; RSS-Gen, Issue 4; RSS-102, Issue 5; RSS-247, Issue 1
- AS/NZS 4268, AS/NZS 2772.2 | ARIB RCR STS-33, STD-T66, ARIB STD-T71
- China SRRC CMIIT, Mexico NOM-121-SCT1-22009
- EN 55024, EN 55022/55032, 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

### Warranty

- Industry-leading 5-Year Limited Warranty

## Ordering Information

\* Future Features

Part Number	Description
SGX5150000xS	SGX 5150 Wireless IoT Gateway, 802.11 a/b/g/n/ac, USB, 10/100 Ethernet
SGX5150102xS	SGX 5150 Wireless IoT Gateway 802.11a/b/g/n/ac, 1xRS232 (RJ45), USB, 10/100, Ethernet
SGX5150103xS	SGX 5150 Wireless IoT Gateway, 802.11 a/b/g/n/ac, 1xRS232 (RJ45) USB, 10/100 Ethernet, PoE
SGX5150202xS	SGX 5150 Wireless IoT Gateway, 802.11 a/b/g/n/ac, 2xRS232 (RJ45), USB, 10/100 Ethernet
SGX5150205xS	SGX 5150 Wireless IoT Gateway, 802.11 a/b/g/n/ac, 2xRS232/RS485 (RJ45), USB, 10/100 Ethernet, PoE

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, 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
200.2071	Adapter, RJ45 to DB9M DTE, for Connection to a DB9F DCE Device

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