SGX™ 5150

IoT Device Gateway



CONNECT YOUR **BUSINESS-CRITICAL** ASSETS AND DATA securely to your enterprise network.

Lantronix SGX™ 5150 is a next generation IoT device gateway that allows you to connect your business-critical assets and data securely to your enterprise network. Its advanced turnkey design provides everything you need to secure wireless connectivity.

High-Performance Wi-Fi®

IoT devices require trustworthy wireless connections. The SGX 5150 is equipped with industry-leading high-performance 5GHz (802.11ac) Wi-Fi® which ensures reliable and persistent wireless enterprise connections and bandwidth for high-speed data processing.

Enterprise Class Security

InfiniShield™ security offers a comprehensive suite of built-in device security software with minimal integration effort for designers and developers. Secure data communications is provided through features such as secure boot, secure firmware updates, secure communications, data-at-rest protection and role-based access control.

Essential IoT Applications

Accelerate your IoT business solutions with IoT applications that deliver multi-interface connectivity, full networking, industry-leading device configuration management and with our newest addition to the SGX family the XL version, meets the needs of customers looking for increased storage of valuable data, without the need to buy flash storage with an external USB flash drive for purposes of data collection locally to the SGX 5150 XL.

Multi-Interface Access

The SGX 5150 provides an elegant and robust solution for customers seeking compatibility with multiple devices. Utilizing singular or dual RS-232/485 serial ports, USB 2.0 with host and device modes or Ethernet interface options are available.

Centralized Device Management Platform

Monitor, manage, and control your devices from anywhere, at any time with the ready-to-use software platform web application, providing software-defined automation with zero-touch provisioning across all of your devices and the capture of device telemetry data for event management and analysis.

Perfect For:



Energy



Cities



Medical



Industrial



Retail



Transportation

Benefits Beyond Connectivity

- **Edge-to-Cloud Integration** – the SGX 5150 is Microsoft Azure certified and can be integrated with 3rd party cloud services such as Amazon Web Services (AWS)
- **Government and Regulated Industry Ready** – the FIPS 140-2 compliance ensures the SGX 5150 is certified for government, financial and healthcare industry standards
- **Reduce Development Time** – while increasing time to revenue by using Linux SDK, Python & Java runtime services for quicker development and deployment of custom applications
- **Out-of-Box Ease** – configure and connect to the enterprise network quickly with our advanced turnkey design

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Features and Specifications

Wireless Specifications

5G Wi-Fi (IEEE 802.11ac)
- 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 and 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
- 2.412 GHz - 2.484 GHz - Channels 1 - 14
- U-NII-1 (5.15 – 5.25 GHz) Channels 36, 40, 44, 48
- U-NII-2 (5.25 – 5.35 GHz) Channels 52, 56, 60, 64
- U-NII-2e (5.47 – 5.725 GHz) Channels 100 – 140
- U-NII-3 (5.725 – 5.825 GHz) Channels 149 - 165

Ethernet Specifications

- IEEE 802.3 MAC and PHY, 10BaseT and 100BaseT
- Auto-Negotiation/Auto MDIX, Full-duplex and Half-duplex

USB Specifications

- Configurable Host/Device USB 2.0 HS/FS port with USB type C connector
- USB configurable host can provide VBUS 5V 0.5A

Physical Interface

- (1 or 2) RJ-45 RS232 Serial Ports, with Baud rate up to 921 Kbps
- 15 KV ESD Protection
- (1) USB port – Type C Host / Device Connector
- (1) RJ-45 Ethernet port, 10/100Mbps, 1.5 KV Surge Isolation
- (1) Reset-to-default Button
- (1) WPS Button
- (1) Barrel jack for 12 VDC power input

LED Indicators

- System Status LED
- WLAN Status LED
- Wi-Fi Receive Signal Strength Indicator
- LEDs
- Ethernet Link/Activity LEDs (on RJ45)
- Serial Port TX/RX LEDs (on RJ45)

Protocols

- DHCP Client, DHCP Server, DHCPv6 Client
- uPnP (Discovery), LCAP (77FE), Telnet, (S)FTP, HTTP(S)
- IPv4/IPv6, TCP, UDP, ICMP, ARP, Auto-IP, DNS, SNMP v2/v3

InfiniShield™ Security

- FIPS 140-2 Level 1 Certification

WLAN 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/EAP-MS-CHAP v2)
- EAP-PEAPv1
- EAP-FAST
- IPSec

Firmware Authentication and Secure Data Storage

- ECDSA 256-bit verification

Management Interfaces

- *DeviceInstaller™* utility
- Web Manager (HTML5 Browser HTTP/HTTPS)
- CLI (over serial ports, telnet or SSH)
- OTA Field upgradeable
- Supports SNMP v2
- XML Configuration records via CLI or FTP

Wireless Features

- Soft Access Point
- Wi-Fi Direct
- Multiple Soft AP Connections
- Simultaneous Soft AP and Client mode
- *Secure Com Port Redirector™* software

Environmental

- Operating Temp: -40° C to +70° C (-40° F to 158° F)
- Extended Storage Temp: -40° to 85° C (-40° to 185° F)
- IP Rating: 20
- Relative Humidity: 10% to 95%, Noncondensing
- ESD tolerance: Contact Discharge= 4KV; Air Discharge=8KV

Power

- Input: DC barrel, 9-30 VDC (standard)
- Input: Power over Ethernet (optional)
- Input: USB Type C I/O connector
- Power Consumption = 1.9W typical without USB Load
- Power Consumption = 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 the Optional Power Supply

Certifications

- US (FCC), Canada (IC), EU (Red), Japan, UAE (TRA)
- For a complete list of compliance details, refer to the SGX 5150 User Guide

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)

Warranty

- Industry-leading 5-Year Limited Warranty

Product Models and Features

Model #	10/100 Ethernet & Wi-Fi	USB 2.0	Serial 1	Serial 2	POE	8 GB eUSB Flash
SGX51500x0	✓	✓	---	---	---	---
SGX51501x2	✓	✓	RS232	---	---	---
SGX51501x3	✓	✓	RS232	---	✓	---
SGX51502x2	✓	✓	RS232	RS232	---	---
SGX51502x5	✓	✓	RS232 RS485	RS232 RS485	✓	---
SGX5150xN2	✓	✓	RS232	RS232	---	✓
SGX5150xN5	✓	✓	RS232 RS485	RS232 RS485	✓	✓

Visit the SGX5150 product page for a complete list of part numbers.

Accessories

Part Number	Description
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
520-141-R	Power Supply, Desktop, 60601-1, 100-240VAC, 12VDC 10W, 2.1mm Barrel Connector, 150cm Cord, C14 AC Input, 0-40C, Efficiency Level V, 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

Ordering Information

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