THE SOLUTION TO TRANSFORM YOUR MEDICAL DEVICES INTO SMART CONNECTED MACHINES

[Your Machine] + Lantronix® SGX 5150 MD = MEDICAL IoT...OPTIMIZED

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

Building Medical IoT solutions demands several elements for success:

- Having the right hardware to connect your devices to a secure enterprise network.
- Making sure your connectivity solution can withstand demanding healthcare conditions.
- Establishing the correct configuration for each device in your connected solution.
- Ensuring the highest levels of enterprise grade 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.

SGX 5150 MD offers system integrators a secure platform for faster IoT deployment 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.
- Enterprise-grade security features that safeguard authorized access and data transmission.
- Durable design assuring operation in the harshest medical 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
Features and Specifications

Wireless Specifications
- 5G Wi-Fi (IEEE 802.11a/b/g/n/AC)
- 1x1 ac (MCSD - MCS9), 20, 40 and 80 MHz Channels with optional SGI
- IEEE 802.11 n/a/ac
  - 1x1 n (MCSD - MCST), 20 MHz and 40 MHz channel width with optional SGI
  - Advanced 802.11 n/ac Features
  - Transist Beamforming
  - Tx/Rx Low Density Parity Check (LDPC)
  - Rx Space Time Block Coding (STBC)
  - Transist Beamng
- Bluetooth/WLAN Coexistence
- Compatible with IEEE 802.11 a/b/g and Supports IEEE 802.11 d/h/j
- Dual band 2.4 GHz and 5 GHz, regional restrictions controlled by part number
  - 2.412 GHz - 2.484 GHz - Channels 1 - 14

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 (default setting) powered by a USB bus 5V
- USB configurable host can provide USB 5V 0.5A (power supply or PoE)

Serial Port Specifications
- RS232 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 5-35VDC power input

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

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-CHAP V2)
- 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

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) / Orange 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: 0° to 90% Relative Humidity
- Storage Humidity: 10% to 95%, Non-condensing
- ESD Tolerance: Contact Discharge 1500V, Air Discharge 3000V
- 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, 9-30VDC

Ordering Information

SGX1501M2US
SGX 5150 MD Wi-Fi IoT Device Gateway, 1 Serial Ports, 802.11a/ac/10/100 Ethernet, USB with Power Supply Level 6 (520-160-R), and 2 antennas included in the box. North America Version.

SGX1502M2US
SGX 5150 MD Wireless IoT Gateway only, with antenna and level 6 medical grade power cord and power supply included in the box. North America Version.

SGX1501M2ES
SGX 5150 MD Wireless IoT Device Gateway, 802.11a/b/g/n/ac, 10/100 Ethernet, 26MHz flash included in the box. European and WW Version.

SGX1502M2ES
SGX 5150 MD Wireless IoT Device Gateway, 802.11a/b/g/n/ac, 10/100 Ethernet, 26MHz flash included in the box. Japan ONLY.

Accessories
- Description
  - SGX150BKT
  - SGX 5150 Mounting Bracket
  - SGX-144-R
  - Power Supply, Wall Cube, 12/24VDC, 2.1mm Barrel Connector, 4 AC Plugs, Efficiency Level VI, PSE, RoHS
  - SGX-141-R
  - Power Supply, Desktop, 6001-1, 100-240VAC, 12VDC @ 2W, 2.1mm Barrel Connector, 185cm Cord, C14 AC Input, 0-40C, Efficiency Level IV, PSE, RoHS
  - 50-247-R
  - Cable, USB Type C to USB-A Male 2.0, 100mm, Black, RoHS
  - 50-110-R
  - Cable, CAT5E Ethernet, 10’
  - 209-01
  - Cable, RJ45 to DB9M DTE, 6’ for Connection to a DB9F DCE Device
  - 209-071
  - Adapter, RJ45 to DB9M DTE, for Connection to a DB9F DCE Device

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