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 safeguards 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 (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)
  - Transmit Beamforming
- 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-2eU-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 Hi/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, HTTPS)
- IPv4/IPv6, TCP, UDP, ICMP, ARP, Auto-IP, DNS, SNMP v2/v3
- uPnP (Discovery), LCAP (77FE), Telnet, (FTP, HTTPS)
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**InfiniShield™ Security**
- Wireless LAN Security
  - AES/CCMP and TKIP encryption, 802.11i
  - WPA/WPA2 Pre-Shared Key (PSK)
  - Enterprise Security (WPA2-Enterprise)
  - EAP-TLS, EAP-FAST, EAP-TTLS (MS-CHAPv2)
  - EAP-PEAPv0, EAP-MS-CHAP v2
  - 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 TCP/HTTPS)
- CLI (over serial ports, telnet or SSH)
- OTA Field upgradeable | Supports SNMP v2/v3
- XML Configuration packages 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: -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

**Ordering Information**

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>SGX5150BM0US</td>
<td>SGX 5150 MD Wi-Fi IoT Device Gateway, 1 Serial Ports, 802.11ac/160-MHz and 2 antennas included in the box. North America Version.</td>
</tr>
<tr>
<td>SGX5150AM0US</td>
<td>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.</td>
</tr>
<tr>
<td>SGX5150BM0EIS</td>
<td>SGX 5150 MD Wireless IoT Device Gateway, 802.11ac/160-MHz, USB, 10/100 Ethernet, 256MB flash included in the box. European and WW Version.</td>
</tr>
<tr>
<td>SGX5150BM20ES</td>
<td>SGX 5150 MD Wireless IoT Device Gateway, 802.11ac/160-MHz, USB, 10/100 Ethernet, 256MB flash included in the box. Japan ONLY.</td>
</tr>
</tbody>
</table>

**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, 5.5W 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**
- IEC/EN60601-1-2 4th edition, FCC, IC, EU RED, UL/CE, ANSI/AAMI ES60601-1, CISPR32, UL/IEC60605 (see SGX user guide for full list)

**Warranty**
- Industry-Leading 5-Year Limited Warranty

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**Accessories**
- SGX5150BKT: SGX 5150 Mounting Bracket
- SGX5150BR: Power Supply, Wall Cube, 12VDC 10W, 2.1 mm Barrel Connector, 4 AC Plugs, Efficiency Level VI, PSE, RoHS
- SGX5150AR: Power Supply, Desktop, 12VDC 10W, 2.1 mm Barrel Connector, C14 AC Input, 100-240VAC, 80% Efficiency Level V, RoHS
- SGX5150CAB: Cable, USB Type C to USB-A Male 2.0, 1000mm, Black, RoHS
- SGX5150HDB: Cable, CAT5E Ethernet, 1000mm
- SGX5150MD: Cable, USB Type C to USB-A Male 2.0, 1000mm, Black, RoHS
- SGX5150MD: Adapter, USB Type C to USB-A Male 2.0, 1000mm, Black, RoHS

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