Client

A leader in medical technology, services, and solutions with a comprehensive product portfolio and broad global reach. They address universal healthcare needs and improve clinical outcomes through meaningful innovation; and deliver innovative, strategic and cost-effective IT solutions and services that drive business growth.

Business Need

The customer wanted a communication module that would receive and store locally the live data streams from surgical devices and simultaneously display the live data on the LCD monitors placed in the operation theatres for the benefit of surgeons for the surgical procedures. The data also need to be streamed to the cloud server over the wifi/Ethernet.

Business Impact

Our solution helped the customer achieve productivity improvements, cost containment, Secure data access via cloud server.

Components and Technologies

a) Hardware

- MCU - Freescale i.mx6Q

b) Technology

- Embedded Linux Platform
- WiFi 802.11 a/b/g/n standards
- Bluetooth 3.0
- Zigbee
- GPRS /EDGE
- HTML, Javascript, CSS
- Cloud Interface

c) Compliance

- ISO 13485 compliance

Solution

SFO developed and manufactured a device with the ability to receive and process real-time data from Wi-Fi enabled surgical devices. The realtime data is displayed on monitor or LCD, and transfered to a cloud server.

Keys to Success

- System architecture design and Hardware development
- Platform Software and Application development.
- Boot loader and Linux Kernel customization.
- Creation of desktop applications for configuration.

Highlights

- Dual WiFi modes as Access Point and Station Mode
- Collects data from surgical devices over secured TCP connection over WiFi.
- Establishes secured connection with cloud server through hospital network
- Uploads collected data to a cloud server
- LCD and OR monitor display
- Bluetooth and Zigbee Interfaces
- Software Upgrade over USB
- System Configuration over USB
- Error logs
- Cyber security Implementations

About SFO

SFO Technologies Pvt Ltd, the flagship arm of the diversified conglomerate, the NeST Group provides end-to-end design-engineering-software-manufacturing solutions to clients across geographies such as the USA, Canada, Europe, Middle East, South East Asia, Japan, Australia, and India. SFO has invested in building competence, scale and standards compliant process framework, in PCBA, fibre optics, Cable & wire Harness, Magnetics, High Level Assembly, VLSI design, embedded software development, etc. SFO's capabilities transcend the plain vanilla "Build-to-Spec or Build-to-Print" EMS and our ODM+ solutions are rapidly re-defining standards for the OEMs across Aerospace & Defence, Communications, Transportation, Healthcare and Energy & Industrial domains. .

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