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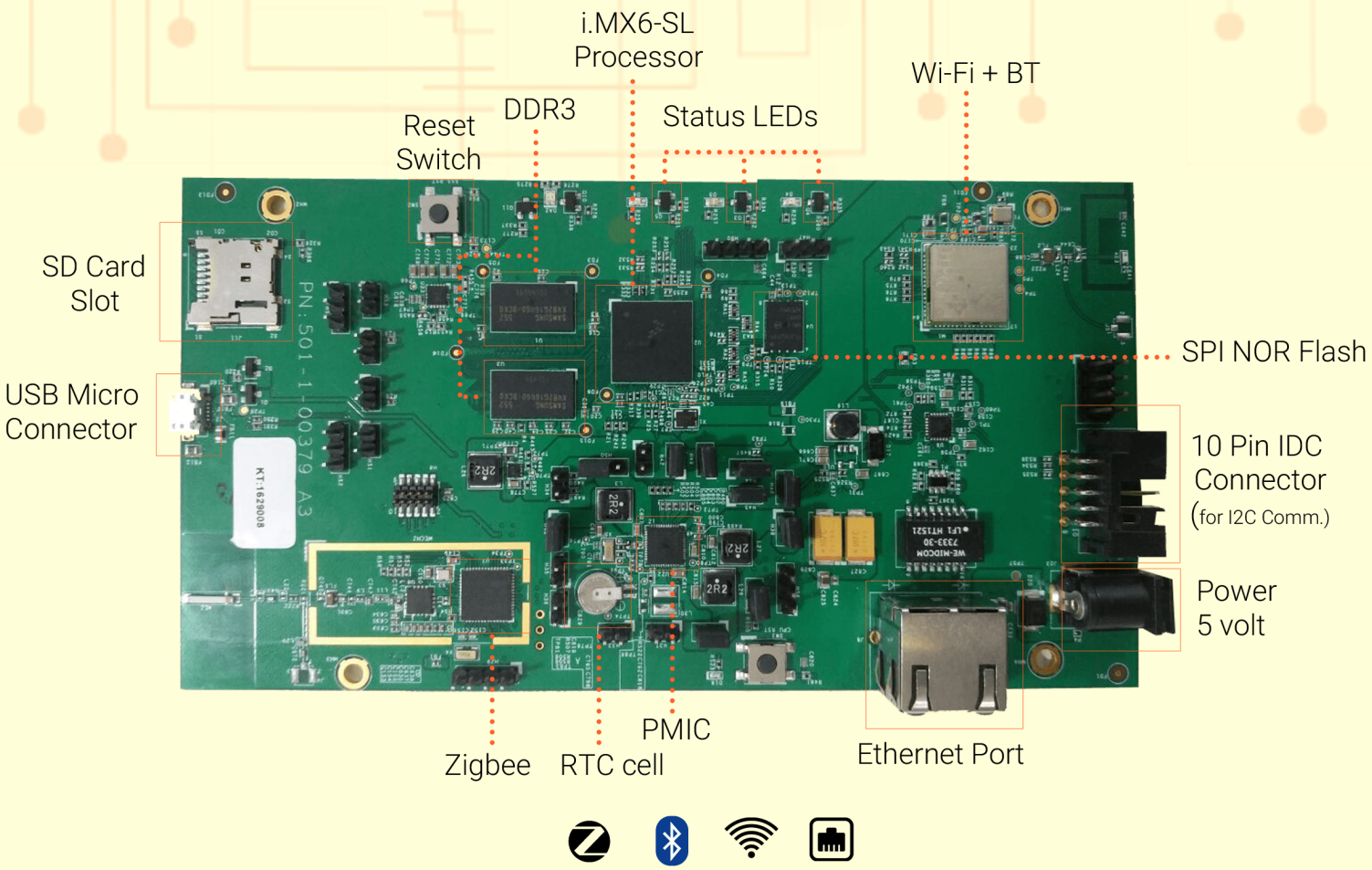
TPS65910 BASED IOT GATEWAY



OVERVIEW

TPS65910 based IOT gateway is a low cost, full featured, open source next generation IOT gateway reference design which functions as a gateway between a ZigBee network and an IP network through Ethernet and Wi-Fi. With TI's TPS65910 PMIC integrated on the i.mx6SLbased solution, this IOT gateway is an ideal fit for the industry offering high efficiency, high performance management and low power consumption.

This power optimized IOT Gateway is capable of optimum integration/ interacting with ZigBee enabled smart edge devices such as light plugs, sensors etc. Not only does it controls the edge devices but also receives power consumption measurement data from ZigBee enabled power meter.

TPS65910 offers very wide voltage range (DVS) capability. To optimize power efficiency on gateway board, the voltage domain of i.MX6-SL uses the DVFS feature provided by PMIC. This board supports Dynamic Voltage Frequency Scaling operations with below given frequencies:

- **396 MHz**
- **792 MHz**
- **996 MHz**

This board also supports low-power modes via standby, MEM (Suspend to RAM), Freeze (low-power idle).

KEY FEATURES

- i.MX6-SL Application Processor
- TPS65910 PMIC
- Wi-Fi and BT –using WL1831
- ZigBee – using CC2538 and CC2592 PA
- Ethernet – Using LAN8720A
- USB
- UART
- Micro SD/MMC interface as the primary boot mode
- 512MB DDR3
- 32MB NOR Flash
- LED status indicators
- SMT test points and shunts for power measurements
- Standard 5VIN DIN for a wall wart power supply
- In –circuit USB-2 ANY I2C header for communication access to TPS65910

TECHNICAL SPECIFICATIONS

CHIPSET i.MX6 SOLOLITE:

- DDR3 Memory : 512MB
- Data Storage : 64 MB Serial Flash
- USB Interface : USB Client for programming
- Supports UART and USB Interface
- RTC enabled

SOFTWARE & FEATURES :

- Supports Linux Operating System
- ARM Cortex-A9 @ 1 GHz
- CC2530 powerful System-on-chip for 2.4-GHz IEEE 802.15.4, 6Low PAN and ZigBee Applications
- WLAN baseband processor & RF transceiver supports IEEE Standard 802.11b/g/n
- Wi-Fi Bridging
- WLAN: Zigbee Bridging
- PMIC: TPS65910 supports Dynamic Voltage and Frequency Scaling, Low Power Modes
- RTC Wakeup from PMIC RTC

NETWORK CHIP SET :

- Single Chip Ethernet physical layer transceiver (PHY)
- 2.4GHz , WL1831 Wi-Fi combo module
- Supports Bluetooth 4.0
- CC2530 system-on-chip ZigBee
- On board Wi-Fi and ZigBee Antenna

OPERATING VOLTAGE:

- DC: 5V

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