IOT BOX CUBE

Shiratech Company Launches the "IOT BOX CUBE". The First IOT gateway which enables to connect your sensors and devices directly to the IOT Cloud.

- Build in LTE & WIFI connectivity
- Based on STM32MP157 MPU
- Operating system – Linux (Linaro Debian)

KEY FEATURES

1. CPU - STM32MP157 MPU
2. LTE - Quectel BG96
3. WIFI/BT – Murata LBEE5KL1DX RF TXRX MOD BLUETOOTH/WIFI
4. Gas sensor – CCS811 – (By AMS) - Ultra-Low Power Digital Gas Sensor for Monitoring Indoor Air Quality
5. 2 X Microphones IM69D130 (Infineon) High performance digital XENSIVTM MEMS microphone
6. Build in chargeable battery Li-Iion 1AH
7. 1 x USB OTG interface (For charging and communication)
8. 2 X DI (OPTOISOLATOR 3.75KV)
9. 2 X DO (250VAC, 220VDC – Max, 1A)
10. 2 X AI (4mA-20Ma)
11. External sensor interface
12. 1 X I2C
13. 1 X SPI (4 Wire)
14. 1 X UART
15. Optional wall mount accessory

APPLICATIONS

1. **Home appliance**
2. **Air quality monitoring**
3. **Safe city/Smart city application**
4. **IOT solutions**
5. **Voice sensing applications**

STM32MP157 MAIN FEATURES

CORE

- 32-bit dual-core Arm® Cortex®-A7
  – Up to 650 MHz (Up to 4158 CoreMark®)
  – L1 32 Kbyte I / 32 Kbyte D for each core
  – 256 Kbyte unified level 2 cache
  – Arm® NEON™ and Arm® TrustZone®
- 32-bit Arm® Cortex®-M4 with FPU/MPU
  – Up to 200 MHz (Up to 673 CoreMark®)

MEMORIES

- External DDR memory – DDR3 – 64M X 32Bit (2G bit)
- 708 Kbyte of internal SRAM: 256 KB of AXI SYSRAM + 384 KB of AHB SRAM + 64 KB of AHB SRAM in backup domain and 4 KB of SRAM in backup domain
- NAND Flash - SLC NAND Flash Parallel 1.8V 8Gbit 1G x 8Bit 63-Pin VFBGA

SECURITY

- Secure boot, TrustZone® IPs, active tamper

BG96 MAIN FEATURES

- Quectel BG96 LTE CAT-M1 Modem
- Modem speed 300Kbps DL / 375Kbps UL
- Built in GPS

- Industrial grade
- Low Power
- Compatible with 96Boards CE and EE boards
- I2C, UART, GPIO for modem operation

LBEE5KL1DX (WIFI/BT Module)
Main features

- Interface   SDIO (WLAN), UART (BT)
- IC/Firmware   Cypress/CYW4343W
- Reference Clock   Reference clock is embedded
- Frequency   2.4GHz
- Frequency MHz (min)   2400
- Frequency MHz (max)   2483.5
- Modulation   DSSS / CCK / OFDM
- Transmit Power   +17dBm / 11Mbps
- Data Rate WLAN   11, 54, 65 Mbps
- Data Rate Bluetooth   3Mbps
- WLAN   802.11b/g/n
- Bluetooth   v4.1+EDR
- Power Class   Class 1 (10 dBm max)
- Technology   Wi-Fi + Bluetooth 4.1 EDR
- Network   AP & STA dual mode
- Host Interface   SDIO

MECHANICAL

- 97mm x 97mm x14.5mm

OPERATING SYSTEM

- LINUX - Linaro Debian

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