



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 XENSIV™ MEMS microphone
6. Build in chargeable battery Li-lion 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 VFPGA

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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