Vensi Gateway

Company Name: Vensi,Inc.

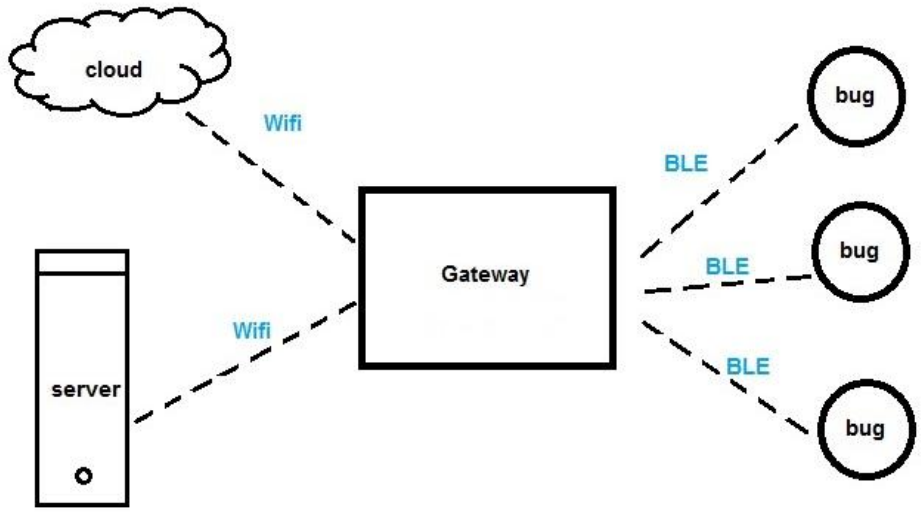
Product Name: Gateway

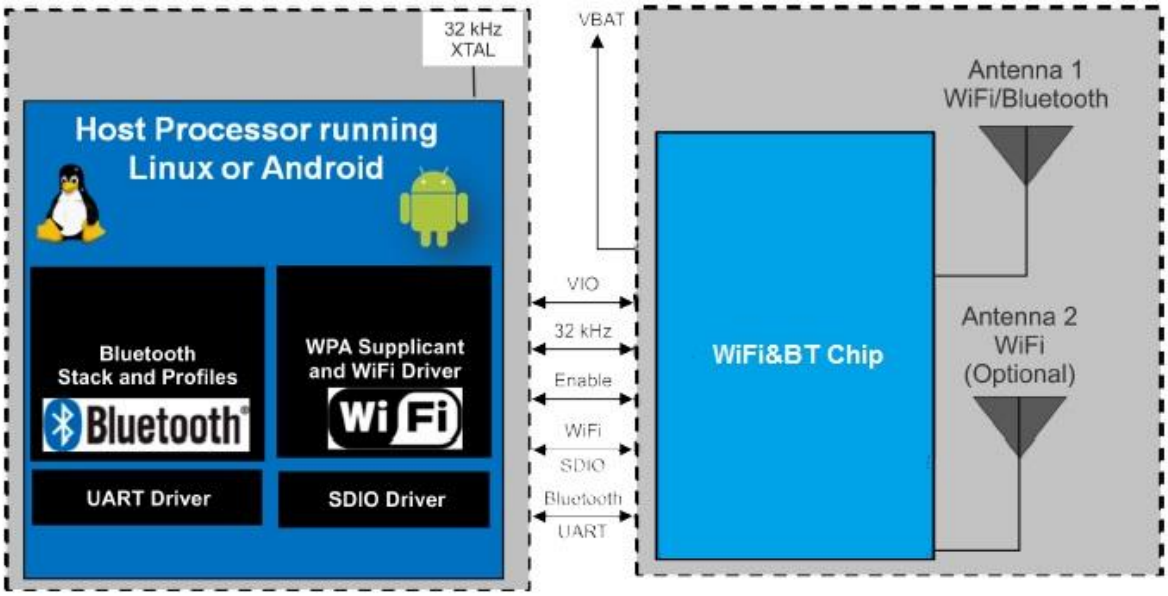
Model No.:VCG001

Contents

1. Gateway Overview

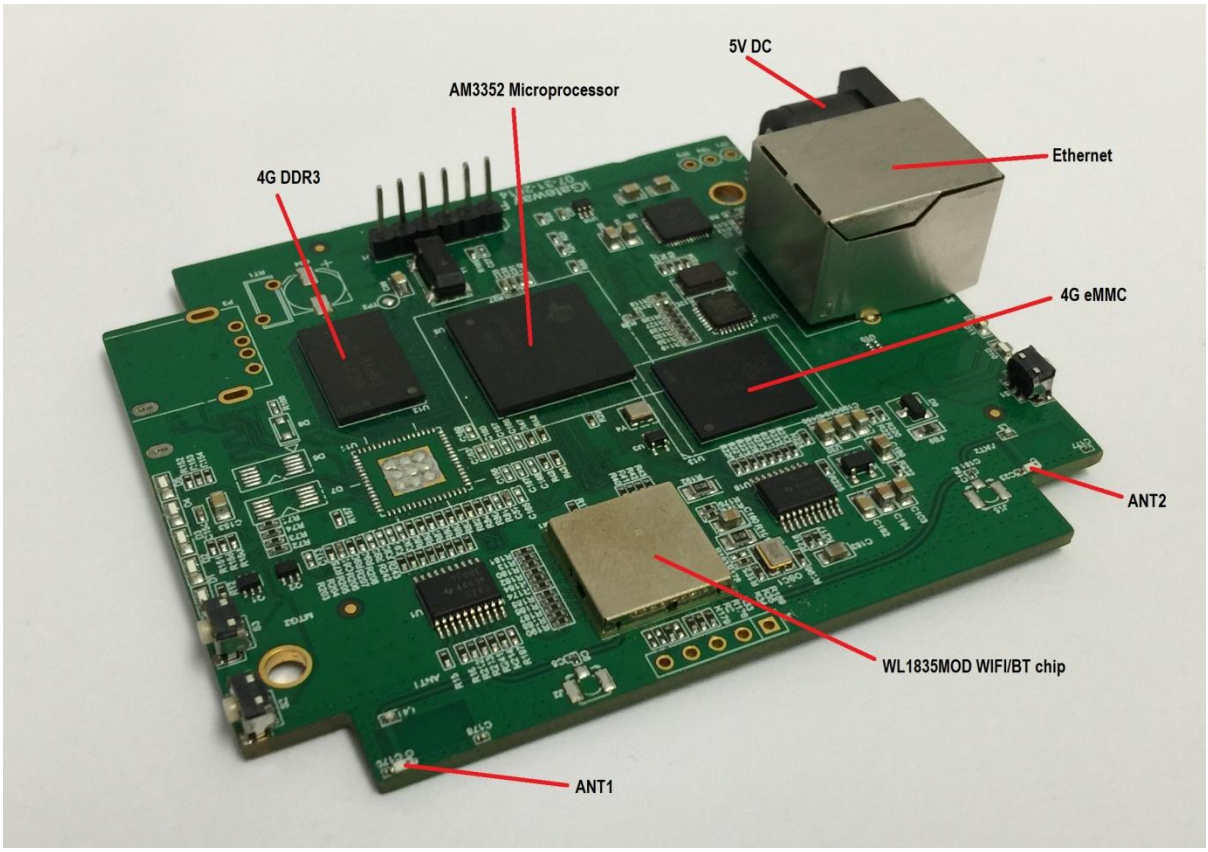
This product is an embedded computer with WIFI and Bluetooth functionalities.





2. Hardware

	Features
Processor	Sitara AM3352 300MHz
SDRAM Memory	4G DDR3L 800MHz
Onboard Flash	4GB, 8bit Embedded MMC
Debug Support	Optional Onboard 20 pin JTAG, Serial Header
Power Source	5V DC Jack
PCB Size	3.83” x 3.40”(86.4 X 70 mm)
Wifi	2.4GHz 802.11b/g/n
Bluetooth	Bluetooth 4.0 (Classic and BLE)
Indicators	1-Power, 1-Bluetooth, 1-Wifi, 2-Ethernet, 4 User Controllable LEDs
Serial Port	UART0 access via 6 pin 3.3V TTL Header
Ethernet	10/100, RJ45
SD/MMC connector	microSD, 3.3V
User Input	Reset Button(S1), Boot Button(S2), Power Button(S3)
Weight	1.76 oz (49.5 grams)
Power	290-540 mA @ 5V


5V DC
AM3352 Microprocessor
Ethernet
4G DDR3
4G eMMC
ANT2
WL1835MOD WIFI/BT chip
ANT1

3. Design Specification

3.1 Processor

The board currently uses AM3352 processor in the 15x15 package. Actual processor speed will be determined by the actual devices supplied. The board is being released prior to the processor being in full production and as a result, has the AM3352 due to availability of those parts at this time.

3.2 Memory

As single x16 bit 4GB DDR3 memory device is used.

A single 32KB EEPROM is provided on I2C0 that holds the board information. This information includes board name, serial number, and revision information. Unused areas can be used by SW applications if desired.

3.3 Power Management

The **TPS65127C** power management device is used along with TL1936A and TPS73618BVR LDOs to provide power to the system.

3. 4.1 Serial Debug Port

Serial debug is provided via UART0 on the processor using a dual channel FT2232H USB to serial device from FTDI to connect these signals to the USB port. Serial signals include Tx, Rx, RTS, and CTS.

3.4.2 JTAG Port

The second port on the FT2232H will be used for the JTAG port. Direct connection to the processor is made from the FT2232H.

3.5 MicroSD Connector

The board is equipped with a single microSD connector to act as the primary boot source for the board. A 4GB microSD card is supplied with each board. The connector will support larger capacity SD cards.

3.6 Power Sources

The board can be powered from an optional 5VDC power supply. The power supply is not provided with the board and must be a grounded power supply.

3.7 Reset Button

When pressed and released, causes a reset of the board. Due to the small size of the switch, you will not experience a lot of travel when pushing the switch.

3.8 Indicators

There are seven LEDs on the board. Four can be controlled by the user and one static LED.

One power LED indicates that power is applied.

Four blue LEDs that can be controlled via the SW by setting GPIOs.

One white LED indicates that WIFI is up. One blue LED next to the white LED indicates that Bluetooth is up.

3.9 WIFI/BT chip

The board uses TI WL1835MOD chipset.

WIFI: WLAN Baseband Processor and RF Transceiver Support of IEEE Std 802.11b, 802.11g, and 802.11n. 4-bit SDIO Host Interface Support. 20-MHz 2 x 2 MIMO and 20- or 40- MHz SISO Channels for High Throughput: 80 Mbps (TCP), 100 Mbps (UDP).

Bluetooth and BLE: Bluetooth 4.0 and CSA2 Support.

4. Product Appearance

5. Interfaces

A. Ethernet : You can use an Ethernet cable to connect the Gateway to a local network

B. uSD card slot : is where a uSD card can be installed

   Gateways can access uSD cards via the MMC interface.

FCC statements:

This device complies with part 15 of the FCC rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

NOTE: The manufacturer is not responsible for any radio or TV interference caused by unauthorized modifications or changes to this equipment. Such modifications or changes could void the user's authority to operate the equipment.

NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
-Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
-Consult the dealer or an experienced radio/TV technician for help.

FCC Radiation Exposure Statement:

When using the product, maintain a distance of 20cm from the body to ensure compliance with RF exposure requirements.