

VALTRACK-V4-VTS-IO-INT-LTE Specifications

Cellular Connectivity (SIM7600x):

- 4G LTE module with 3G/2G fallback whichever is available and connects via a Flexible antenna with U.FL connector.
- Supports GNSS also with external antenna via U.FL connector (Not enabled by default - For future purpose)

MCU and Bluetooth 5.0 Connectivity (STM32WB55Cx):

- Device uses a STM32WB55Cx series 48 pin MCU with Cortex-M4 core and an independent Cortex-M0 core for running Bluetooth stack.
- Bluetooth connectivity is available for parameter configuration like Ping Interval, Motion Alerts, Contact number configuration for SMS alerts

GPS/GNSS chipset with built in Patch antenna(SE868K3AL) :

- GNSS module which supports GPS/GLONASS satellites for location tracking with inbuilt patch antenna.

Motion sensor (MMA8652):

- 3-axis, 12-bit accelerometer for motion sensing. Can help in keeping hardware in low power mode and wakeup on movement

SIM connector :

- Nano SIM connector (Push pull type)

Power input (TPS54240 frontend):

- Supports 12VDC input from vehicle battery

Backup battery :

- Supports 3.7V Li-Ion or Li-Po battery (> 500mAh)

Backup Battery charger(MP2617):

- Has internal backup battery charging support with power path management.

Indicators (RGB LED):

- Has RGB LED indicators for Power status, Network status and Location sync status.

SOS switch :

- A tactile switch is provided which can be used for custom requirements like sending emergency alerts.

Storage :

- A small 128KB EEPROM is provided for storage of parameters.

JTAG connector :

- A TE connectivity 10 pin Flex connector is provided which can be used to connect to a JTAG like ST-LINK/J-LINK via an adapter PCB.
- SMD pads with SWD lines available for pogo pin programming

PCB Dimensions :

- 34mm x 43mm

Enclosure Dimensions :

- 52mm x 25mm x 27mm

Casing :

The device comes in an IP67 rated enclosure with 2 wires coming out for 12V battery connection via an IP68 rated cable gland.

Firmware : Device comes with multiple firmware types based on FreeRTOS (Under development)

- Long interval firmware where device stays in sleep mode for long intervals and wakes up less often like once per hour or once per day.
- Continuous mode where device keeps sending location until power is available to it. Used when the tracker is connected to the Ignition key and gets power only when vehicle ignition is turned ON.
- Motion triggered mode where device keeps sending data continuously at set intervals and goes to sleep on no activity/motion for certain period and wakes up on movement.