

SMARTank ST90 LTE Uplink

Monitoring Solution

The ST90 LTE Uplink is an adapted version of our ST90 integrated Tank Monitoring system with the ability to connect to existing or new Third-party sensors via a 4-20mA input. The device can also support up to 32 additional ST90 client devices to allow for true flexibility in monitoring multiple sensors such as in Tank Farms.

Bring IoT Connectivity to Your Sensors

At SkyBitz, we understand the need for using existing sensor systems such as those plugged into infrastructure systems while still allowing you to bring them into the IoT webspace. They have varying tank sizes, products and distances between them. Many have hazardous location restrictions as well. These variables can make monitoring in a cost-effective way a challenge for customers still looking to adapt these different sensors for telemetry.

The ST90 Uplink is capable of working with multiple sensor types including Float, Ultrasonic, Optical, Microwave Radar, Conductivity or Pressure Transducer among others. The ST90 Uplink can also serve as a central connection point for ST90 or ST95 client monitors on up to 32 individual tanks within 300 feet. However, sight line distances and obstructions may necessitate more than one host. By using clients to leverage the host's single point cellular connection, the customer can reduce the number of individual cellular connections required thereby reducing their total monthly service cost for the site.

Up-to-the Minute Reporting

The uplink consists of a head telemetry unit with the radio components with two 4-20mA inputs available at the bottom of the unit. The unit can connect via a prewired 50-foot cable which allows the ST90 Unit to be placed in a non-hazardous location while the wiring can connect to a sensor located in a hazardous location. This also can enable connecting the telemetry unit to the pre-existing wiring or junction box so that the head unit can be placed high for optimal line-of-sight communication path with area cell towers and the connecting client devices.

Multiple mounting options are available. If the remote mount option is utilized, it may be advantageous to mount the host at the same level as the remotely mounted clients. The service request magnetic switch remains accessible for easy update of all clients reporting through the host. Technicians can configure the host-client setup in exactly the same way as existing ST90 hosts. The junction box also provides easy access to the 4-20mA connection terminals for wiring directly to existing sensor systems.

Once installed and configured, site managers and drivers can easily request an update from the host and all connected clients using the magnetic switch on the lid of the ST90 Uplink to get an up-to-the minute reading.

The ST90 Uplink Host has all of the same features as the Battery powered ST90 Host including a compact rugged design, durable rating, reliable radio communication on either ATT or Verizon networks, GPS and temperature sensors, and accessory options for an easy to install solution.



Key Features

Designed to work with third party sensors using a 4-20mA input

Capable of taking 2 sensor inputs allowing for greater flexibility in connectivity setups.

By using clients to leverage the host's single point cellular connection, the customer can reduce the number of individual cellular connections required thereby reducing their total monthly service cost for the site.

Once installed and configured, site managers and drivers can easily request an update from the host and all connected clients by pressing the button on the junction box to get an up-to-the minute reading.

Future-ready – Operates on AT&T LTE or Verizon LTE cellular networks with 3G backup available.

A compact rugged design, durable rating, reliable LTE connectivity on either ATT or Verizon networks, GPS and temperature sensors, and accessory options for an easy to install solution.

Hardware Specifications

Physical

Construction: ROHS Compliant
Enclosure: CPVC w/ Lexan Cover, Weatherproof, NEMA 4X, UL94V-0

Wireless Communications

Mode: LTE Digital Wireless Radio / 900MHz Wideband WLAN
RF Approval: FCC Part 15 Bapproved
Frequency bands: GSM 850/1900MHZ, WLAN 900 MHZ
GPS Receiver: Internal Antenna, Optional External GSM Antenna

Performance

Output Voltage: Nominally 14V/24V
Output Current: Rated from 0-50mA
Load Regulation: 0.5% from 30mAload
Ripple: 50mV Peak-to-Peak
Output Short Circuit Protection:

Environmental

Operating Temperature: -13°F to 158°F (-25°C to 70°C)
Storage Temperature: -40°F to 185°F (-40°C to 85°C)

Key Benefits of the SMARTank ST90 Uplink

- Capable of connecting to most third part level sensors via 4-20mA input
- Ability to support up to 32 additional client monitors via WLAN connectivity
- Up-to-the minute reading
- Low cost cellular technology
- Secure, reliable access to tank information when and where you need it
- Reliable radio communication on either ATT or Verizon networks