

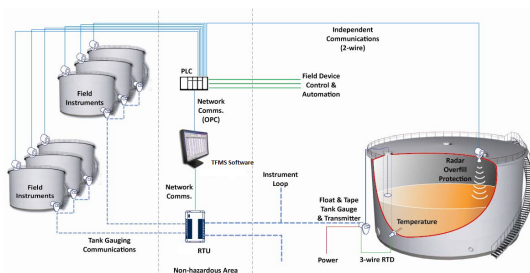
Silo & Hopper Management

Vari-Trac is a global provider of innovative solutions for real-time conditioning monitoring of power and bulk assets and the control and performance status of equipment & machinery.

A global business needs the ability to remotely monitor the condition of the power and bulk being stored. Level, moisture and temperature sensors allow for user to have real-time access. From the APP based solution the user has the ability to remote control to enable chillers, fans and heaters to maintain the ideal storage conditions. Alternatively the user can define systems thresholds to active functions.

Sectors

- Silo & Hopper Management
- Level control management
- Power & bulk asset management and status
- Security and protection services



Solution

Our fully integrated and flexible solution provides a tamper prove system, with a cloud based stand-alone system that does not require a complicated SCADA system and can be retro fitted to existing storage facilities.

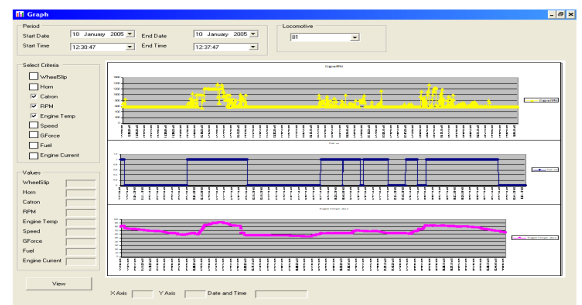
Advanced data transmission compression algorithms provides for bi-directional data options for GSM, Satcom, WiFi and Bluetooth. Providing the connection of multiple silo's and tanks for complete view or all assets. External silo and tank weight sensors for a fully integrated single system.

Ref: VT_Silo_Oct_18



Applications

- Silo and tank status and level
- Temperature monitoring
- Vibration monitoring
- Auxiliary sensor input
- Weight sensor input
- Over fill and empty silo alarm
- Theft protection / alarm
- E-mail and text reporting
- Real time analysis
- Weather sensor monitoring
- Remote control of valves, heaters, chillers, agitators
- Auto stop / start of valves
- GPS tracking and tagging of loading and unloading vehicles
- ATEX compliance
- APP based solution, with cloud storage





Data sheet and performance

Environmental	Temperature:	Storage: -55°C to + 125°C Ambient Operating: -40°C to +85°C Ambient
GSM/GPRS	GSM/GPRS Bands: SIM form factor:	Quad Band Nano SIM (4FF, ETSI TS 102 221 V9.0.0, Mini-UICC)
GPS	Tracking capability: SBAS type: GPS accuracy: GLONASS accuracy: Velocity accuracy: Heading accuracy: Anti-jamming:	72 channels WAAS, EGNOS, MSAS, QZSS, GAGAN 2.5 m Autonomous, 2.0 m SBAS (CEP, 50%, -130 dBm, > 6 4.0 m CEP, 50% 0.05 m/s 0.3 degrees Active CW detection and removal, on-board 2x SAW filter
Bluetooth LE v5.0	Type:	v5.0 BLE (compatible with 4.0 - 4.2)
SD Memory Card	Type: Max capacity:	Micro Secure Digital HC (microSDHC) 32 GB
Input / Output Interface	Digital I/O:	4 x Digital Inputs 4 x Digital outputs
Encryption	AES:	AES HW encryption
Accelerometer	Type: Sensitivity: G Range: Free fall detection:	3-axis MEMS linear accelerometer 1 mg/LSB (12bit ADC) @2G range 2/4/8 G Yes
Heading sensor	Type: Sensitivity: Full Range:	3-axis MEMS magnetometer 0.10 μ T/LSB \pm 1000 μ T
Temperature sensor	Type: Range: Accuracy: Max resolution:	Digital Thermometer -40°C to +125°C \pm 0.1°C 0.01°C (14 bit)
Level sensor	Type: Max depth: Compensated: Accuracy:	Capacitive level sensor 5 m Temperature, air K, liquid K 0.10%
Power	Power supply / battery:	5-14 VDC



<http://www.vari-trac.com>

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