



# TBox for Oil & Gas

Faced with the challenge of expanding operational goals while staying within unpredictable budget limitations, oil & gas operators must find faster and more efficient means of increasing production levels. Innovative and cost effective solutions allow companies to achieve these goals by saving money on equipment, maintenance, manpower and overall install costs.

TBox and TFlo Solutions help oil and gas companies worldwide conquer these challenges with superior performance, flexibility, reliability, and overall install costs.



## Powerful, Flexible and Affordable RTU and EFM Solutions from Semaphore

### TBox General Purpose RTU



TBox LT2 Series RTU's combine alarm notification, data logging, integral web server, IP telemetry and programmable automation in a single, rugged package. TBox uniquely supports a broad range of core functionality:

- High-performance 400MHz CPU with up to 32GB Expandable Memory
- 40+ Industrial Protocols supported including, Modbus RTU, Enron Modbus, Modbus TCP/IP, Fisher ROC, and more
- Cyber-Security Suite including Encryption, Firewall, HTTPS, FTPS, Authentication, VPN, and more
- IEC-61131 Ladder, Structured Text (Basic) and Function Block Programming
- Integrated HMI works on any smart phone, tablet or PC
- Alarm Notification via email and SMS/Text
- Data Logging, Forwarding, Reporting, etc.
- Class I, Division 2 Groups A – D approved
- -40° to 70° C operating temperature range
- Rugged aluminum package and compact footprint
- Optional Integrated 3G cellular communications
- Low Power for Solar Applications

### TFlo Flow Computer Powered by TBox



Based on the proven TBox LT2 Hardware Platform, TFlo takes Natural Gas Measurement to the next generation. In addition to the rich feature set included in the TBox platform, TFlo adds an easy to configure and maintain Natural Gas Flow Computer.

- Up to 4 Runs per device
- API 21.1 and AER Directive 17 compliant
- Supports AGA3, AGA5, AGA7, AGA8, AGA9, AGA11, V-Cone and Wafer Cone
- Standard Templates for common Multivariable Transmitters:
  - Invensys Foxboro IMV25
  - Emerson Rosemount 3095FB
  - Schneider Electric SCADAPack 4102
  - Or connect to virtually any other Modbus device
- Future-proof solution designed to exceed asset life

For more than 25 years and with over 150,000 RTU installations worldwide,



Semaphore's TBox solutions are proven high performance and cost effective solutions for a variety of applications for the Upstream, Midstream and Downstream Oil & Gas



#### TBox Model LT2-532-3 as shown:

- 16 Digital In/Out (configurable) with 3 High Speed Counters
- 8 Analog Inputs
- 2 Analog Outputs
- 1 Ethernet
- 2 Serial (RS232/485)
- Optional 3G Cellular Modem
- Class 1, Div 2 Certified
- Optional TFlo Installed

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