



Automatic Tank Gauging



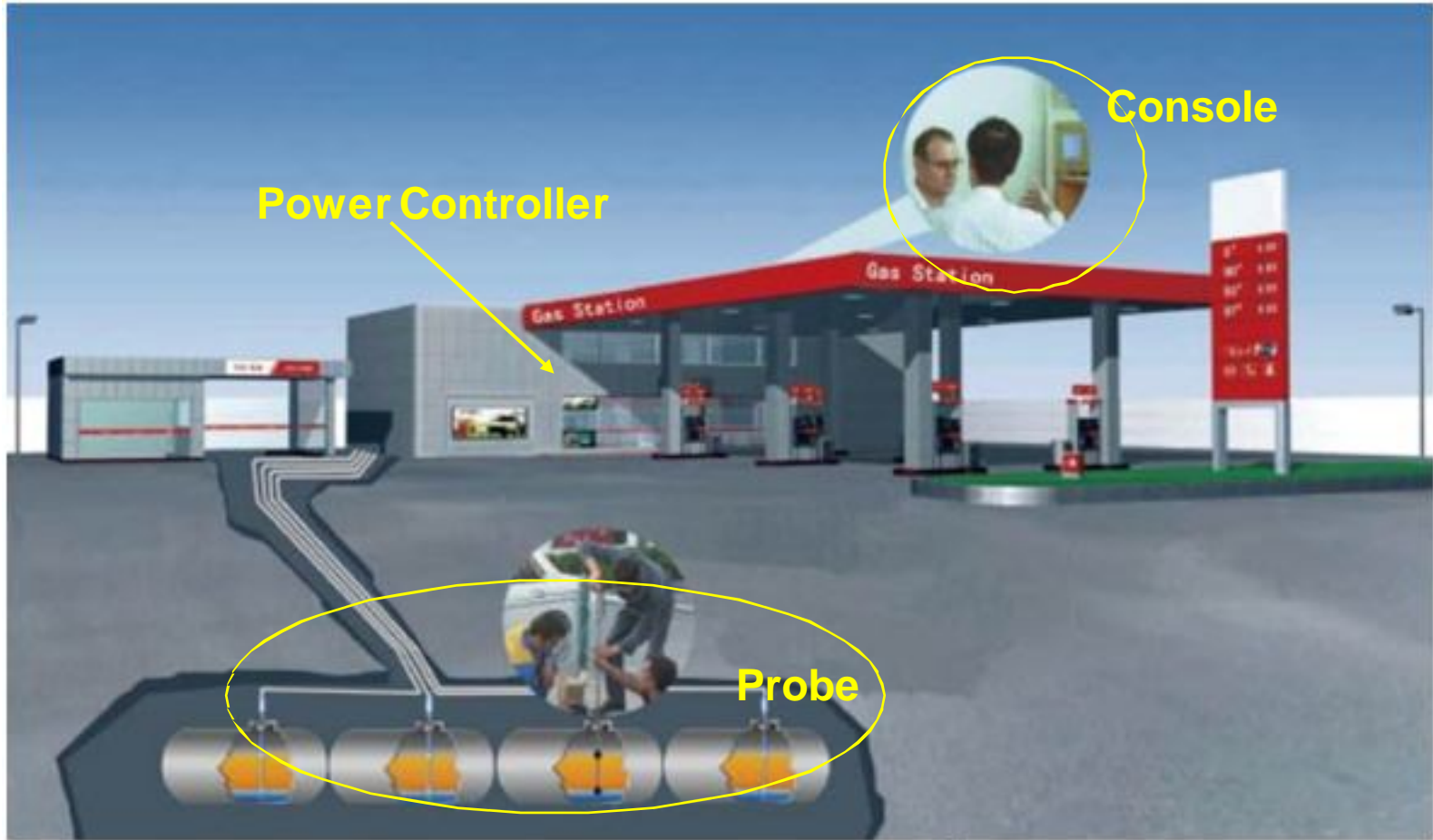
Introduction

- In many markets fuel management needs are straightforward
- At site:
 - Quick easy access to inventory and delivery information
 - Accurate inventory and delivery information
 - Clear warning if tank runs low or if there is chance of overfill
 - Protection against environmental spillage, leaks and pilferage
- At the central office:
 - Remote access to accurate site inventory and delivery information
 - to support fuel delivery scheduling
 - to provide delivery verification
 - Warning if site unexpectedly runs low on fuel

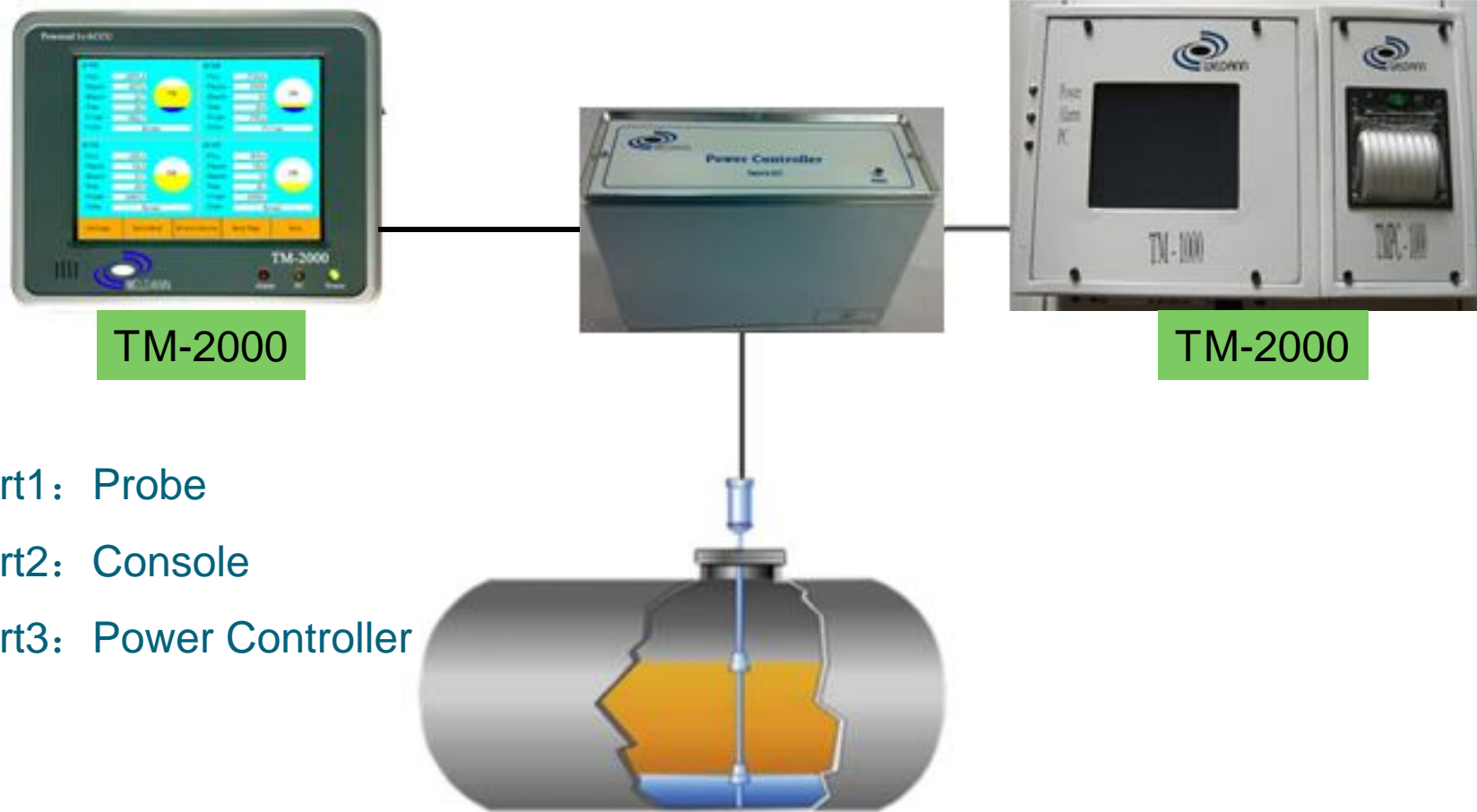


Application of ATG

- Tank Gauging is required for the assessment of tank contents, tank inventory control and fuel management.
- In particular ATG provides:
 - Real Time, Accurate Inventory control
 - Fuel movement & operations
 - Leak control & reconciliation



Schematic Diagram for the Connection of ATG and UST



Part1: Probe

Part2: Console

Part3: Power Controller

Introduction of PLS -5A Probe

- PLS-5A probes are basic monitoring and data collection tools at gas station. During oil measurement of UST, product level, water level, temperature and volume can be read real time. PLS probes also have leak detection function helping improve environment quality around station.

PLS-5A



PLS-5A Technical Specification:

0.5mm Accuracy

0.01mm Resolution

0.125 mm Repeatability

0.2 ° C Temperature Accuracy

Operative temperature: from -35 to +70 ° C

Water detection

Leak detection ability, can realize 0.38L/h static leak test

999 tank table interpolated points provide the best accuracy ever.

Intrinsically safe and explosion proof (ATEX Certified)

Introducing ATG *TM-1000*

- Up to 8 tanks can be expanded up to 16 tanks monitoring capability
- 1/4 VGA touch screen graphics display
- Audible alarm and visual alarm - bicolor front panel LED
- 1 RS-232 serial communication ports
- 1 TCP/IP LAN port
- One parallel printer port
- High reading speed (< 3 sec)
- Real time clock
- Universal power supply
- Compatible with Internet communication method



- High reliability and low maintenance: over 10,000 units installed in China for Sinopec, Petro China and other, approx 300 sites installed in Iran, Egypt, Tanzania & India. Gained over 25% of China Market in the last 2 years

TM-2000 Console Introduction





Introduction

- Display in graph and English text on 7.5' colorful touch screen;
- Faster test and can monitor up to 16 magnetostrictive probes simultaneously. Display visually product depth, interface depth, temperature and product volume. Besides, PM-1 can display standard volume, product quality and water volume. Much more accurate measurement with internal integration of patented density algorithm;
- Implementation of User-Privilege management based on role-based access control module;
- **Sound & Light** Alarm function & can be set on or off
- Using point-to-point method for inputting tank table which can also be edited on TM-2000;
- Powerful online help function makes users easy to learn to operate it;
- Power Supply: AC220 \pm 10%V



Basic function

- Inquiry of various records such as alarm records, inventory records, delivery records and leak detection records, besides, users can inquire records' detail information;
- Auto delivery monitoring as well as delivery reports generated by inputting sales during delivery, TM-2000 can also be set to generate delivery reports automatically ;
- Automatically four shift reports generating as well as manual shifts, TM-2000 can realize shifts of a single tank ;



Advanced function and port

- **Two leak detection styles of static leak test and CSLD, and leak detection standard can be chosen from 0.38L/H, 0.76L/H or user-defined**
- **tank tilt compensation supported, which** makes measurement much more accurate.
- Connected to fuel dispenser and collect data from the dispenser to realize tank table calibration;
- Provides Ethernet interface for ADSL access to the site network;
- Online Web Reporting system available. Just subscribe and you are ready to go. With a simple Web Browser you will be able access your site inventory data from anywhere in the world (available for single site and for Oil Company Retail Outlets)
- Two RS-232 serial Port, Ethernet, USB, mini USB and SD card interface;
- Two output relay.

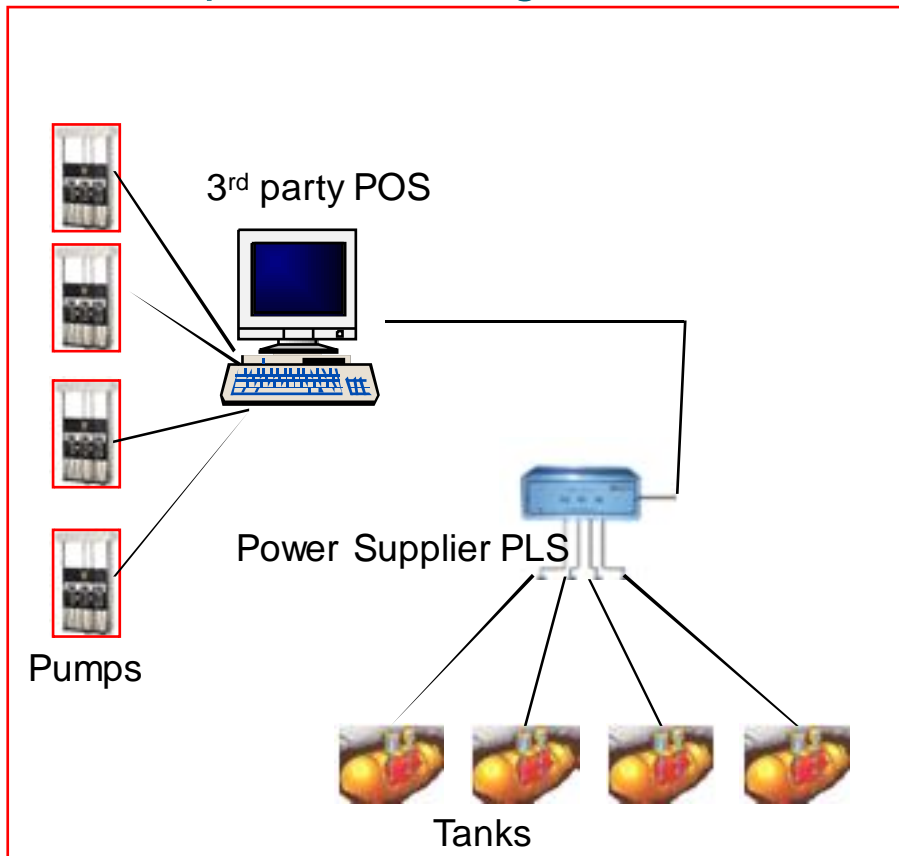
Component Design

- Power controller unit supply stabilized voltage and intrinsically safe power for tank Gauge probes, with safety barriers and opto-electronic isolator in it.

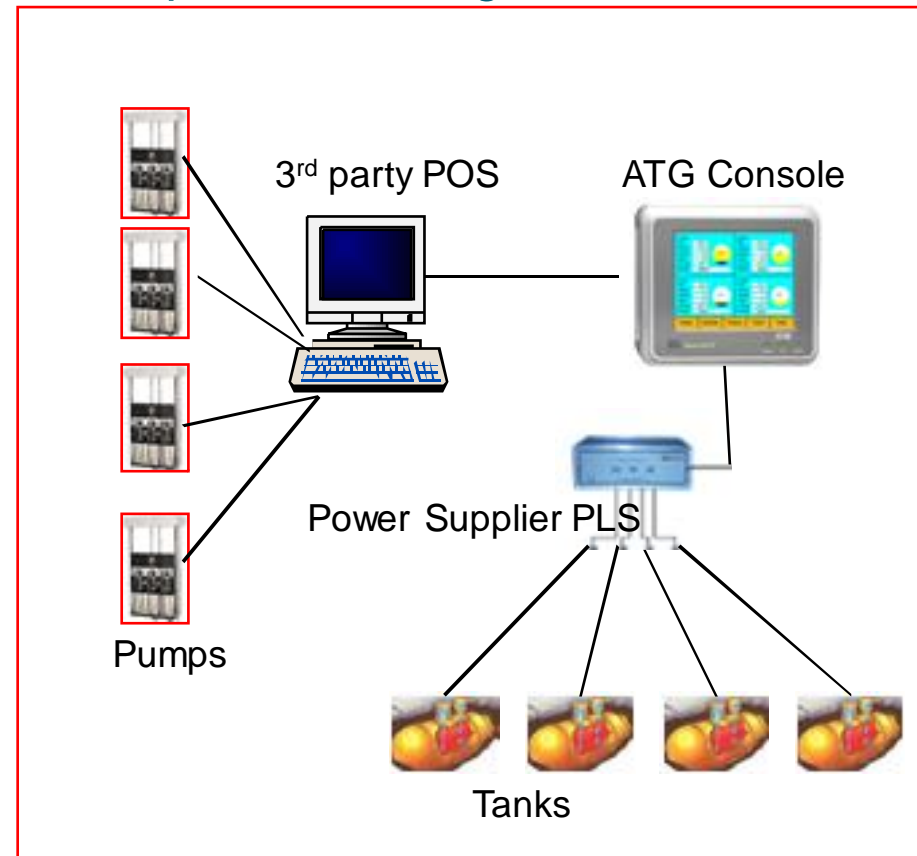


Integration with 3rd party POS/Forecourt Controller

Option 1 – Integration to Probe



Option 2 – Integration to Console



Conclusion



Having a tank gauge at your site is the difference between **guessing** and **knowing** what is going on at your sites.