

# Acumen

## Multiwell Total Production Surveillance (MWTPS) System For Multiphase Flows

The Multiwell Total Production Surveillance (MWTPS) System is a control room located platform providing gas, oil/condensate and water rates at standard conditions for up to eight wells, using sonar flow meter, line pressure and line temperature measurements, combined with customer-supplied compositional/PVT and watercut/WGR information.

The MWTPS System interfaces to the Expro ActiveSONAR™ and Expro PassiveSONAR™ flow meters, and acquires pressure and temperature readings via Modbus interface to the customer's DCS or SCADA. The optional Analog Data Acquisition Module (ADAM) is used to allow for direct input of 4-20mA signals from field pressure and temperature transmitters.

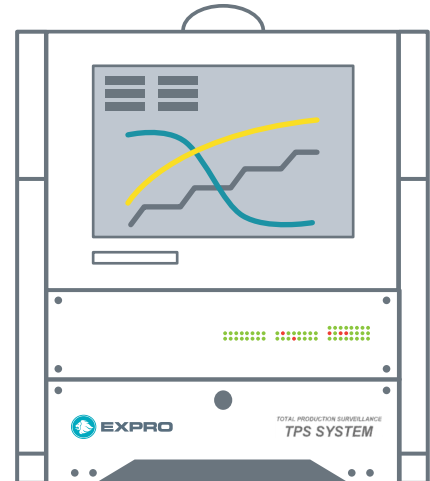
All measured values and calculated results are logged to the internal solid state disk and can be retrieved using a USB flash drive or transmitted directly to the customer's DCS or SCADA system using Modbus RS-485 serial or Modbus TCP communication protocols.

### Features and Benefits

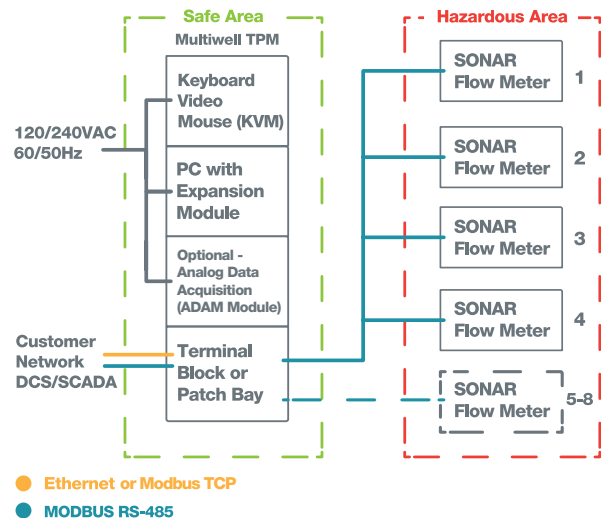
- Real-time reporting of up to eight wells
- Interfaces with ActiveSONAR or PassiveSONAR flow meters
- Industry standard communications protocols

### Applications

- Production surveillance
- Production optimisation
- Suitable for: wet gas; gas condensate wells; black oil wells and gas wells



### Typical System Configuration



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<b>Technical specifications</b>		
Parameter	Specifications	Comments
Number of wells/meters	One to eight wells/meters	
Customer interface	Modbus Ethernet TCP / Modbus RS-485 serial	Modbus master or slave
Pressure/temperature inputs	Up to eight pressure / eight temperature supplied via customer interface	From customer DCS or SCADA via Modbus link or Field Transmitters via 4-20mA using the ADAM module
Multiphase processing computer	Intel i7-2610UE processor, 4GB SDRAM, 128GB SSD, fanless	
Display	19" colour TFT LCD, 1366x768	
Keyboard	Standard layout with touchpad	
Operating system	Windows 7, embedded	
Supported software	TPS1800 Multiphase Processing Software	
Operating temperature	0°C to +40°C (32°F to 104°F)	
Storage temperature	-15°C to +60°C (5°F to 140°F)	
Humidity	0% to 80% RH, non-condensing	
Power requirements	100-240VAC, 60/50Hz (60 watts max)	
Dimensions (H x W x D)		
	Computer	90mm x 440mm x 315mm (3.54" x 17.32" x 12.40")
	Keyboard/display	43.18mm x 482.6mm x 711.2mm (1.7" x 19.0" x 28.0")
	ADAM Unit	266.7mm x 481.81mm x 252.13mm (10.5" x 18.97" x 9.93")
	Wiring panel	133.4mm x 481.8mm x 252.1mm (5.25" x 19.0" x 9.9")
Mounting	19" rack mount, 6U total height minimum, 30" depth	
Weight	61.1 lbs (27.7 kg)	
Certifications (safety, EMC)	CE, US, Canada	
<b>Modbus RS-485 serial ports</b>		
	RS-485 port type	2-wire, half-duplex
	Modbus type	Master or slave
	Max baud rate	921.6kbps
	Format	RTU (default) or ASCII
	Connector	Pluggable screw terminal block
<b>Modbus TCP Ethernet ports</b>		
	Port type	TCP (10/100 Ethernet)
	Modbus type	Master or slave
	Format	RTU
	Connector	RJ45

Note: For more information contact your local Expro representative or email [acumen@exprogroup.com](mailto:acumen@exprogroup.com)