



## Water Quality – Rugged, Reliable and Deployable



*The Water Quality QuB Monitoring System by Eyasco.*

Everything you need to measure the most critical parameters for water quality.

- Completely self-contained
- Data acquisition and communications built-in
- Connectors for power, water supply, drain and antenna
- Turbidity, pH, conductivity, temperature and corrosion
- Scalable for hosting a variety of additional sensors
- Fully-automated, hooks up in minutes
- Runs on AC or DC power
- Reliable for challenging or remote locations
- Radio or cellular telemetry for remote communication
- Durable stainless steel waterproof housing
- Data viewable in web browser
- Integrates with SCADA systems

### Deploying the Water Quality QuB is the first step to being a better water quality manager.

The QuB Monitoring System is easily deployed for drinking water, watershed, flood protection, irrigation and agricultural use to improve your water resource management.

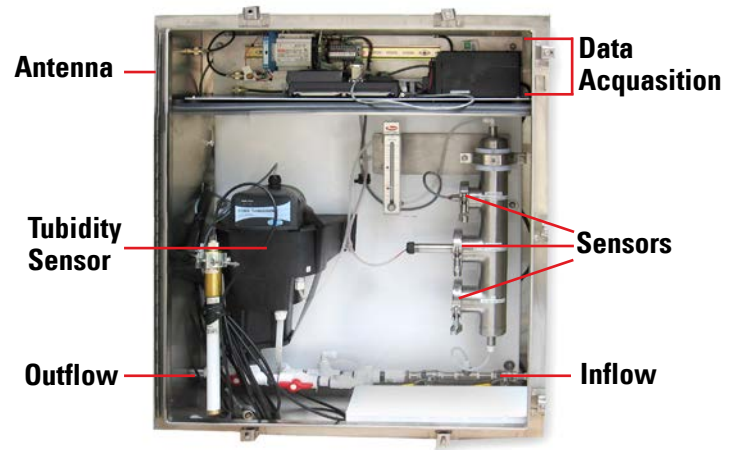
The QuB is self-contained, complete with sensors, data acquisition and communications built-in. Connectors for power, water supply, drain and antenna are already included. This unique, all-in-one design means QuBs can be deployed anywhere water quality is critical. Just hook up and in minutes the important water quality data you need can be available.

#### Power management is a priority

The QuB can run on either AC or DC power, so even monitoring water resources in the most remote locations using solar power is easier than ever before. Plus, battery life is preserved by auto-switching from “power off” to “power on” only when critical measurements are required.

#### Developed and field-tested to monitor water quality in the most challenging locations

With a focus on durability and value, the highest quality components are housed in a waterproof stainless steel enclosure, providing trouble-free operation even under the harshest conditions.



*Inside, the QuB includes data acquisition and communications, plus connectors for power, water supply, drain and antenna (QuB unit shown is 24” x 20” x 9”).*

#### Get results fast, minimize your learning curve

Either using your own data center, or Eyasco’s optional web-delivery services, you can quickly analyze water quality data from monitoring stations, right from your own web browser or delivered to your email, no matter where you are.



Model	Options	Description	Sensors For Parameters
QuB-WQ-OF		Off-line instruments standard	Turbidity, conductivity, pH, temperature
QuB-WQ-IN		In-line instruments standard	Turbidity, conductivity, pH, temperature
QuB-WQ-CT		Custom options	Call for quote
	-CV	AMT Data corrosion sensor	
	-RV	Raven-X cellular modem	
	-RF	Spread spectrum radio	
	-LL	Landline modem	

Power	120V A/C @ 0.135A max	24V DC @ 0.675 max	Power Hookups: 120V A/C, Solar Panel 24V, 24V DC	
	Wireless Networking Modem	Wireless Network Modem: EV-DO rev A with fallback to CDMA 1x EV-DO Revision 0, CDMA 1xRTT, CDMA IS-95 800 Mhz to 1900 Mhz, Normally 902 to 928Mhz.		
	RF Communication	Spread Spectrum Radio: Frequency Range 902-928 MHz (FHSS). Output power: 5 mW to 1 Watt. Range: 60 Miles (line of sight). Modulation: 2 level GFSK, 115.2 Kbps or 153.6 Kbps. Sensitivity: -108 dBm for BER 1x10 <sup>-6</sup> , -110 dBm for BER 1x10 <sup>-4</sup> . Data transmission: Link throughput- 5.2 Kbps standard speed, 80 Kbps low speed. Data interface: Serial. Protocol: RS232 / 485 / 422 or TTL, 1200 Baud to 115.2 KBaud. Operating temp. range: -40 °C to +75 °C.		
	Phone	Analog Modem: Communicates over analog phone line. Compatible with any telecommunications or dial-up networking software.		
	4MB SRAM Data Storage	2MB Operation System	128K Flash	Campbell Scientific CR1000 Datalogger
Instrument Options	Corrosion Sensor	Output Readings: Mild Steel Corrosion range: 0 to 20 mills per year. Copper Corrosion range: 0 to 20 mills per year. Zinc Corrosion range: 0 to 20 mills per year 4 to 20 MA output low side: 4.0 mA = 0.0 mills per year corrosion rate: 4 to 20 MA output high side: 20.0 mA = 20.0 mills per year corrosion rate. Environmental Specifications: Operational temperature: 32 - 120 deg. F (0 - 49 deg. C). Probe material: CPVC. Probe operational pressure: 0 PSI to 120 PSI at 49 deg. C or less probe temperature range: 0 deg. F to 120 deg. F at 120 PSI or less.		
	Turbidimeter	Range: 0–100 nephelometric turbidity units (NTU). ± 2% of reading or ± 0.02 NTU (whichever is greater) from 0 to 40 NTU. Accuracy: ± 5% of reading from 40 to 100 NTU (when calibration is performed at 20.0 NTU with the offset turned off). Repeatability: Better than ±1.0% of reading or ±0.002 NTU, whichever is greater. Resolution: (displayed) 0.0001 NTU up to 9.9999 NTU; 0.001 NTU from 10.000 to 99.999 NTU; 0.01 NTU at 100.00 NTU.		
	Conductivity Sensor	Electrodeless Conductivity Sensor: Measurement Range 0-200µS to 0-2S; Exact ranges and measurement accuracy are determined by the instruments. Pressure/Temperature measurements: 105 psi at 105°C. Maximum flow rate: 10 ft (3 m)/sec. Operating temp. range: -10 to 105°C (sensor only, not mounting hardware)		
	pH Sensor	Measuring Ranges: pH 0 to 14 pH. Flow rate: 10 ft./sec max. Flow should be as low as possible in low conductivity water and in solutions with high suspended solids. Sensitivity pH: Less than 0.005 pH. Stability: 0.03 pH / 2mV per day, non-cumulative. Temp limits: -5 to 95°C (23 to 203°F)		
	Temperature Sensor	Measurement Range: Input of 4mA to 20mA value. Input: Limitation values see 'Sensor type' 0°C measuring system: The temperature transmitter is a two wire transmitter with analog output. Measurement input for resistance temperature detectors (RTD) in 2-, 3- or 4-wire connection, thermocouples and voltage transmitters. Input for unit Input: °C, °F, K mV or Ω.		
	Flowmeter	Accuracy: RMA 4%, RMB: 3% (RMB-49: 5%), RMC: 2% of full scale. Pressure limits: 100 psi (6.9 bar), Temperature limits: 130°F (54°C).		
	Transmitters	Display: 2 x 16 alpha-numeric LCD display. Power requirements: 4 to 20mA, Loop Powered, 16 to 32 VDC. Memory backup: All user settings are retained indefinitely in memory (EEPROM).		
Instrument Mountings	pH, Conductivity and Temp Sensors are Tri Clover mounted in SST Piping for easy removal and calibration			
Dimensions	36x30x12	Nema 4 Stainless Steel single door wall-mount enclosure.		
Weight	278 pounds crated			
Transmitters and Dataloggers are pre-programmed by Eyasco so all readouts and data should be automatically displayed when the system is powered up. All sensors are factory calibrated, outputs are tested and calibrations and readings verified before shipment.				