

TRACKERSONDE

OVERVIEW & FEATURES



The **AquaRealTime ART-MPS1** is an advanced, integrated water quality monitoring sonde designed for simultaneous measurement of multiple parameters in a single, robust, self-cleaning unit. Engineered for long-term deployment, the ART-MPS1 utilizes high-performance digital sensors to provide real-time data for critical environmental, municipal, aquaculture, and industrial applications.

PLUG AND PLAY INSTALLATION

- **Seamless Integration:** The ART-MPS1 features an integrated six-in-one design where each individual probe is recognized automatically upon connection.
- **Smart Sensor Technology:** Every probe is a digital device with internal memory, storing its own calibration data to enable easy on-site "hot-swapping" without system-wide downtime.
- **Seamless Communication:** Communicates automatically with any AquaRealTime buoy for continuous data (default of 30 minutes sampling rate).
- **Centralized Cleaning:** Equipped with a central cleaning brush that wipes all measurement surfaces simultaneously to reduce errors from biofouling and bubbles and extend deployment periods.
- **Connection:** Mechanical Connection: connects to the Tracker Buoy with provided electronics and tethering cables.

COMPLETE WATER QUALITY CHARACTERIZATION

- **Six simultaneous probes:** See list below.
- **Twelve available parameters:** pH, DO concentration and percent saturation, temperature, ORP, turbidity, conductivity, salinity, chlorophyll (algae), phycocyanin (cyanobacteria), oil in water, depth.
- **Depth:** up to 30 M depth. Deep Water model also available.

ENGINEERED FOR DURABILITY

- **Advanced Materials:** Constructed using Titanium to resist corrosion, POM (aka Delrin), and anti-fouling copper to reduce microbial attachment in harsh environments.
- **Automated Brushing:** Measurement surfaces are automatically brushed before each measurement using a central rotating wiper.
- **Stable Data Transmission:** Robust digital signaling provides stable, interference-free data transmission over long distances.
- **Protective Cage:** Perforated protective sleeve allows for high flow-through while blocking direct contact with hard objects.
- **Rugged Protection:** The sonde is IP68 rated, capable of operating at depths up to 30 meters. (Deep Water model available for up to 200 M deployment).

USE CASES

- **Municipal Water:** Detect costly changes early and optimize processes in drinking water, wastewater, and groundwater.
- **Environmental:** Monitor water quality challenges including Harmful Algae Blooms in lakes, rivers, reservoirs, ponds, estuaries, and coastlines.
- **Aquaculture:** Optimize water quality and maintain healthy conditions in fish farms.
- **Industrial:** Process water control, cooling water, and printing/dyeing plant discharge.

SYSTEM SPECIFICATIONS

System Ratings		Environmental Ratings	
Model	ART-MPS1	Housing IP Rating	IP68
Probe Capacity	Connect up to 6 digital probes	Maximum Water Depth	30 m (Deep Water version available)
Parameters	Up to 7 parameters simultaneously	Operating Temperature	0 – 50°C
Response Time	≤ 30 seconds for system-wide response	Storage Temperature	-20 – 60°C
Power Supply	DC 12 V from Tracker Buoy Supply	General Specifications	
Power Consumption	0.5W continuous, 1.75W peak, 0W sleep	Main Body Diameter	84 mm
Output	Data sent to AquaRealTime buoy	Main Body Length	476 mm
Brush Control	Default: before each measurement	Weight	2.3 kg Including 6 probes
		Cable Length	Customizable (10 M default)
		Material	Titanium, POM for reduced fouling, Anti-fouling Copper on select surfaces

SENSOR OPTIONS

The ART-MPS1 supports a suite of interchangeable digital sensors. Each ART-xx2 sensor is factory-calibrated.

Sensor Name	Parameter	Measurement Range	Accuracy
ART-ODO2	Dissolved Oxygen mg/L and % sat	0 - 50 mg/L (0 - 500% sat)	±1% or ±0.2 mg/L
ART-TU2	Turbidity	0 - 1000 NTU or 0 - 4000 NTU	±5% or 0.3 NTU
ART-PHT2	pH	0 - 14 pH	±0.02 pH
ART-ORP2	ORP	-1999 to +1999 mV	±20 mV
ART-CON2	Conductivity	0 - 200 mS/cm	±1% or 0.01 mS/cm
ART-SAL2	Salinity	0 - 175 ppt	±1 ppt
ART-CA2	Chlorophyll	0 - 500 µg/L	±5% or 0.5 µg/L
ART-PC2	Blue-Green Algae	0 - 300,000 cells/mL	R ² > 0.999 linearity
ART-OW2	Oil in Water	0 - 50 ppm or 0 - 150 ppm	R ² > 0.999 linearity
ART-DEP2	Depth	0 - 30 m	< 0.1% FS
Included	Temperature	0 - 50°C	± 0.2°C

PERFORMANCE HIGHLIGHTS

- **Automatic Data Sync:** sonde data from all sensors is pulled into the connected Tracker buoy on schedule (default 30 minutes) and streamed to the AquaRealTime dashboard every 2 hours.
- **Hot Swap Capable:** All sensor calibration data is stored internally on the sensor enabling hot swapping from one sonde to another.
- **Measurement Principle:** Utilizes digital processing for each parameter, including optical (DO/Turbidity/BGA), electrochemical (pH/ORP), and 4-electrode (Conductivity).
- **Easy Deployment:** connection to the AquaRealTime Tracker buoys through the Rigging Package requires the included electronics cable and the ART-SOM1 mounting kit.

CALIBRATION

- **ART-HH1 Meter:** Use the ART-HH1 handheld meter to calibrate each sensor individually. The meter can also be used to read the sensors offline.