

# T-Chain

Monitor Temperature, Dissolved Oxygen, Pressure and Par.

The T-Chain is used as a water quality monitoring and lake management device that collects water column temperature, dissolved oxygen, PAR and pressure measurements. T-Chains are currently being used to monitor lake and reservoir thermocline and stratification, detect dissolved oxygen fluctuations, observe internal waves, collect data under ice, discover plumes, observe upwelling and eddies, record lake turnover and more. The T-Chain is also used in marine environments.

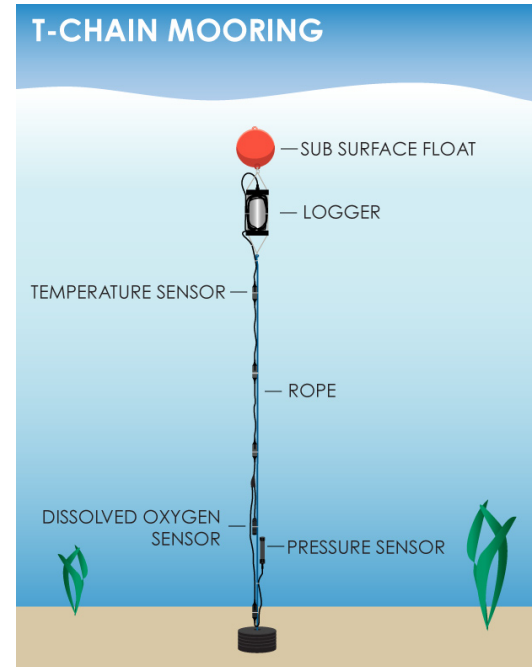
The T-Chain can be supplied with either a PME data logger, Campbell data logger, or with an RS 232/ 485 connection.

## Applications

- Monitor water column temperature
- Monitor dissolved oxygen content
- Detect Plumes and internal waves
- Data on Fall and Spring turnover
- Look at Upwelling and Eddies
- Validate models and Lake Number
- Look at Vertical Eddy Diffusivity

## Sensor Specifications

Temperature Accuracy	+/- 0.010° C
Thermal Range	0 - 36° C
Dissolved Oxygen	Optical, 8µM or 5%
PAR	LI-192SA
Pressure Transducer	5, 10, 20 bar



## T-Chain Specifications

Max. Data Rate	1 scan of all nodes/ sec.
Sensor Time Constant	better than 2 seconds
Resolution	16 bit, approx. 0.005° C
Max. span between nodes	30m
Min. span between nodes	25cm
Maximum depth of a node	165m

## Logger

PME's logger was specifically designed to interact with the T-Chain. It's capacity and endurance depend upon the number of nodes on the chain, the sampling interval, and the capacity of the compact flash card. With 128 Meg flash and sampling 41 nodes per minute, the logger capacity is approximately 2 years.

The logger is a Persistor CF2 single board computer and PME provides a simple logging program. It is possible to configure the T-Chain for other loggers.