

The Riverlabs Wari Ultrasonic Water Level Logger is an automatic logger system using a Maxbotix MB7389 sonar sensor. The logger system is based on a low power Atmel microprocessor combined with a real-time clock, an internal EEPROM memory of 512 Mbit, and a MicroSD card reader.

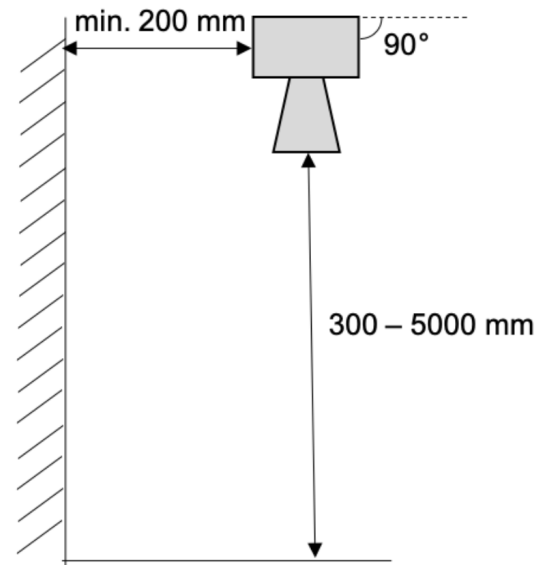
The Atmel CPU uses the Arduino bootloader and programmed with an instruction set written in the Arduino programming language. Although the default instruction set will be sufficient for most uses, it is fully open source, which means that the user can adjust it for specific purposes using the freely available Arduino Software IDE, or any compatible system.

By default, the water level sensor is programmed to measure distance to the water surface, internal temperature, and battery voltage. Measurements are stored in the internal EEPROM memory, which is flushed to the SD card at regular intervals or whenever the logger is reset.



Technical Specifications

Parameter	Specification
Measurement Range	300 mm – 5000 mm
Water Level Resolution	1 mm
Temperature Resolution	0.25°C
Voltage Resolution	0.01 V
Water Level Accuracy	~ 5 mm
Power Supply	1 x 3.7V LiPo battery (18650) or, 1 x 3.7V LiPo Battery (AA) or, 1 x 3.2V LiPo battery (18650)
Battery Duration	More than 2 years under typical use (5 min frequency)
Water Resistance	IP65
Sensor	Maxbotix MB7389 Sonar Sensor
Memory	64 Mbit Internal Flash + MicroSD card



Key Features

- Low power consumption and long battery life (2+ years)
- Fully customizable firmware
- High precision measurements
- Dual memory storage (EEPROM + SD)
- IP67 waterproof rating
- Real-time clock
- Measured Parameters
 - Distance
 - Internal temperature
 - Battery Voltage

Available Options

- Solar Charging - 2W 6V Solar panel and power regulator
- 3G Data connection – XBEE modem
- 4G Data connection
- LoRaWAN Radio Module – including Antenna