

# hydrospider2™

## Economical 3G telemetry, logging and alarm system

The **hydrospider2** is an ultra low power economical solution for data logging, automatic reporting and alarm dialing. It communicates via SMS, email, FTP, Twitter and more.

The **hydrospider2** is housed in a compact IP60 enclosure. Its small size makes it ideal for a variety of environmental and industrial monitoring applications. The whole system including an external battery is designed to fit inside a Tipping Bucket Rain Gauge (TBRG), dramatically reducing installation costs of rainfall monitoring stations.

The **hydrospider2** has an easy to use web interface with built in help. It can be used with any computer or operating systems without the need to install any software.

### Features

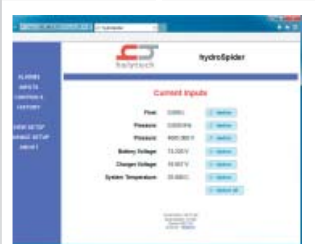
- Complete system includes:
  - Compact IP60 enclosure with built in mounting system
  - Multiple digital and analogue inputs
  - LCD display / keypad option
  - SDI-12 and Modbus input option
  - Digital outputs for powering sensors / accessory control
  - Built-in charger regulator for solar panel / mains charger
  - Ethernet interface
  - Integrated 3G modem
  - External antenna
  - Data logger with over 400,000 records of storage
- User configurable inputs, outputs and alarms
- Connects to any computer with a browser and LAN port
- Easy to use internet-type setup
- Download data as CSV file compatible with Excel
- Alarms via SMS / email / Twitter
- Automatic CSV reports via email / FTP
- Ultra low power design
- Simple and inexpensive install - mounts inside TBRG
- Field-upgradeable software
- Designed and manufactured in Australia

### Typical Applications

- Rainfall / Water Level Stations
- Environmental Monitoring
- Agriculture
- Automatic Meter Reading (AMR)
- Water Treatment
- Irrigation and Bore Monitoring



Compact Unit



Simple Access With Any Browser



Fits Inside TBRG

# Specifications

## General

<b>Dimensions (approx)</b>	158(W) x 90(H) x 46(D) mm
<b>Weight (approx)</b>	360 g
<b>Enclosure rating</b>	IP60
<b>Enclosure material</b>	ABS
<b>Mounting system</b>	Integrated into enclosure
<b>Operating temperature</b>	Standard: -5 to +60 deg C "X" option: -20 to +60 deg C
<b>Factory warranty</b>	12 months parts and labour return to base

## Power Supply

<b>Operating voltage</b>	Nominal 12V DC
<b>Charger type</b>	Built-in battery management system supporting an external battery and external 12V solar panel and/or 16 - 24V DC mains charger
<b>Backup battery</b>	Internal, user replaceable 9V battery

## Inputs

<b>Standard inputs</b>	Up to 2 analogue + 2 digital + 4 system inputs
<b>Optional inputs</b>	Up to 16 SDI-12 / Modbus or RS-232
<b>Input names</b>	User definable
<b>Connector</b>	Modular terminal, push wire type

## Analogue Inputs

<b>Resolution</b>	12 bits
<b>Type</b>	User selectable: Calibrated 4 - 20 mA 0 - 2.4V DC 0 - 5V DC 0 - 10V DC
<b>Units of measure</b>	User definable
<b>Sampling period</b>	User definable, 1 second minimum

## Digital Inputs

<b>Input range</b>	0 - 12V DC or voltage-free switch contact
<b>Type</b>	User selectable: switch, event (rainfall), counter, utility meter

## Counter / Event Inputs

<b>Minimum pulse width</b>	5 ms
<b>Maximum frequency</b>	100 Hz
<b>Range</b>	0 - 999,999

## System Inputs

<b>Type</b>	External battery voltage Charger voltage System temperature Internal moisture sensor
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## Outputs

<b>Number of outputs</b>	Up to 2
<b>Type</b>	1 x Switched power for sensor control 1 x Open collector for accessory control
<b>Output names</b>	User definable
<b>Output control</b>	Via browser, alarms and/or sensor warmup

## Alarms

<b>Number of alarms</b>	8
<b>Type</b>	SMS, e-mail transmission and/or Twitter
<b>Trigger</b>	User definable input and trigger point
<b>SMS / email text</b>	1 per alarm, user definable
<b># of phone numbers</b>	3 per alarm, user definable
<b># of email addresses</b>	3 per alarm, user definable
<b>Alarm names</b>	User definable

## Logger

<b>Capacity</b>	Approximately 400,000 records
<b>Storage memory</b>	Non-volatile FLASH
<b>Time resolution</b>	1 second
<b>Time synchronisation</b>	Automatic by NTP
<b>Report format</b>	CSV file
<b>Automatic reporting</b>	Directly to user by email and/or FTP

## Communication Interfaces

<b>Ethernet</b>	10/100 base-T with LANlink Cable
<b>Mobile communications</b>	Built-in 3G (GSM backwards compatible)
<b>Antenna</b>	External antenna with SMA connector
<b>Internet connectivity</b>	3G (GPRS backwards compatible)
<b>Optional Display / Keypad</b>	Backlit 2 line x 16 char LCD, 3 key keypad

## Optional Assesories

<b>LANlink Cable</b>
<b>Mains Power Supply</b>
<b>12V Solar Panel</b>
<b>12V 7.2Ah Sealed Lead-Acid Battery</b>
<b>Tipping Bucket Rain Gauge (TBRG)</b>
<b>Mounting Bracket for TBRG</b>
<b>12V 2.3Ah Sealed Lead-Acid Battery (fits inside TBRG)</b>

All specifications are subject to change without notice. Published 16 May 2016.

