

Well Cap Groundwater Monitoring Station



Overview



Sutron's Groundwater Well Cap leverages the power and reliability of the X-Link logger family to deliver a cost-effective, self-contained package to monitor groundwater.



Eastern Ridge Mine site in action





Sutron's Well Cap Groundwater Monitoring Station makes it easy to automate measurement of groundwater wells. The cap has the following features:

- Tamper-proof packaging
- Capable of measuring sensors over SDI-12, 4-20ma, and RS485
- Low power with integrated 7 Ahr battery for long term reliable operation
- Optional cell modem and dataplans
- Optional Iridium modem and dataplans
- Optional solar panels to reduce battery servicing intervals
- Mounts on NPS 2 (2.375", 60.33mm OD), 3 (3.5", 88.9mm OD) or 4 (4.5", 114.3mm OD) pipe
- ¼ inch hasp for customer provided lock
- Built-in Sutron X-Link logger/transmitter
- IP67 housing for battery/electronics/antenna with screwless access.
- Powder coated cast aluminum construction with ABS plastic dome.
- Hinged design provides access to sensors without opening electronics compartment
- Sensor hanger plate with room to insert electronic tapes or other calibration devices.
- Concealed bolts to fasten the cap to the well casing.
- Compatible with a variety of sensors with SDI-12 or analog output.
- Optional solar panel for continuous operation

DIMENSIONS

- Diameter: 8" max (20.32cm)
- Height: 12" (30.48cm)
- Weight: : 6.7 lb including battery & logger (3.04kg)



Specifications



Measurement Interval	1 to 24 hours
Measurements	16 supported
Analog Input	2 single-ended 2 differential 1 4-20 mA
Range	0-5 V
Resolution	.298 μ v
Accuracy @25°C	0.004% max
SDI-12	V1.3 compliant
Input voltage	8-16VDC (10V minimum for SDI-12 sensor support)
Current Consumption	0.5mA standby typical (all sensors unpowered)
Temperature	-40°C to +60°C
Humidity	0-95% non-condensing
Log Capacity	240,000 readings, flash memory
Dimensions	Dia: 8" max (20.32cm) Height: 12" (30.48cm)
Weight	6.7 lb including battery & logger (3.04kg)



Australian Project - Simple, Fast Installation



Simple, fast installation
(10 min. for this station)

Well Cap Groundwater Monitoring Station

Only one allen wrench
needed for installation

Hinged top for easy
sensor installation



Install Sensor

Secure the top



Installation for Mining Company,
Western Australia

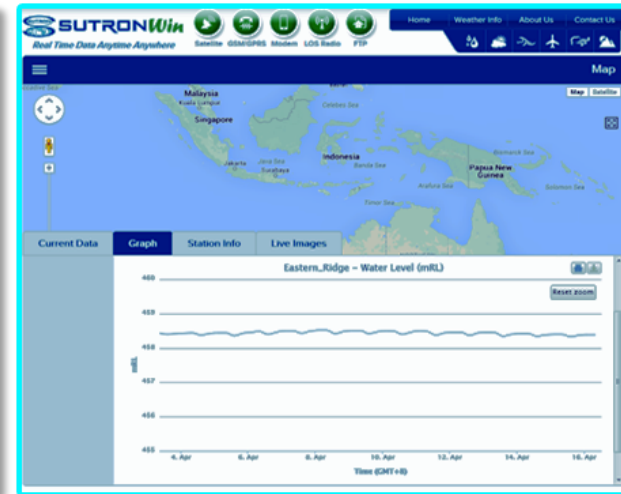
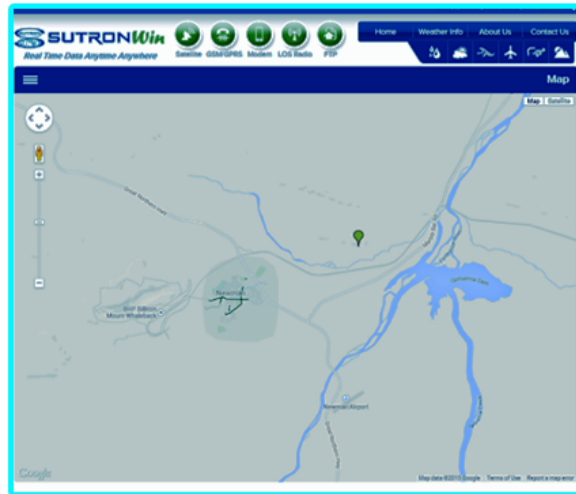


Project Profile: Australian Mining Site



SutronWIN FTP Site

Sutron's Exclusive Customized Web Hosting & Data Visualization Software



Provides the following:

- ▶ Mapped locations
- ▶ Dashboard for all registered sites
- ▶ Graphical displays
- ▶ Multiple export options (raster, vector, images, csv, excel)



Project Profile: Australian Mining Site



.csv export of Water Level data from trial site was easily uploaded to IOWATER* using drag & drop function.



Data from the well is more accurate through the well cap's monitoring.

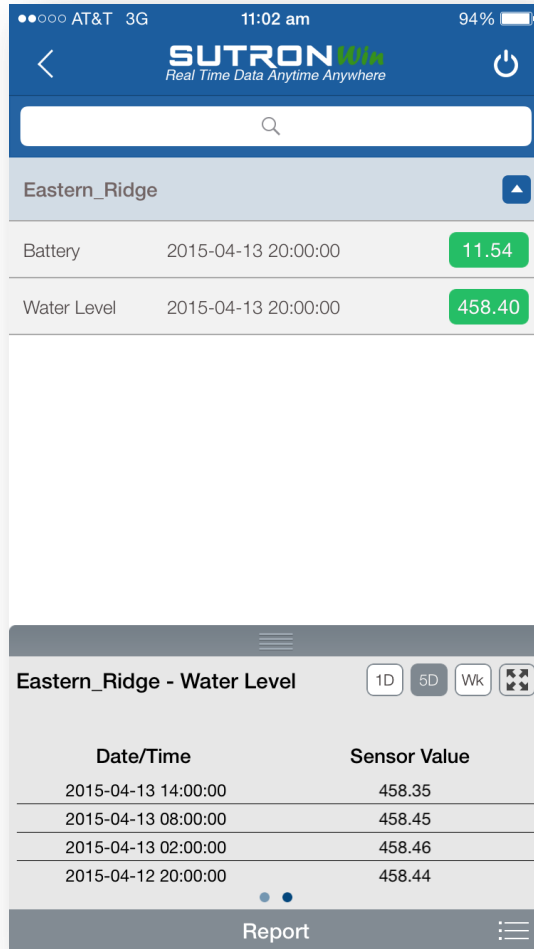
Well Cap's installation

***IOWATER is a Worldwide Network** of 149 organizations gathering all abilities useful for sustainable water resources management in France, in Europe and over the world:

- Bi- and multilateral cooperation organizations,
- Ministries, Water Agencies, public enterprises,
- Municipalities and local authorities,
- Universities, training institutes and research centers,
- Companies of the water sector, water suppliers, consulting firms, equipment providers,
- Professional organizations of industries which use water for their manufacturing processes, etc.



Optional Ordering



SutronWIN App



56-114 series Sutron Submersible Level Sensors (Other brand name sensors may also be used.) Vented sensors require desiccant. A 1” diameter tube plus desiccant should fit standard well pipes. At this time, Sutron does not provide this desiccant assembly. Please consult with your regional Sutron representative when placing your orders.

2271-1195-1 Cable Strain Relief Kit

Ordering Guide



SELECT ONE OF THESE FULLY-ASSEMBLED WELL CAP PACKAGES

Fully-assembled Well Cap Package that includes basic datalogger w/cell modem plus your choice of battery/solar panel configuration. Choose the model with your preferred cell or Iridium communications.

Part #	Description
WC-GPRS-1	26 Ah Lithium Battery* Non-rechargeable
WC-GPRS-2	7 Ah Lead Acid w/ 2 watt Solar Panel
WC-CDMA-1	26 Ah Lithium Battery* Non-rechargeable
WC-CDMA-2	7 Ah Lead Acid w/ 2 watt Solar Panel
WC-HSPA-1	26 Ah Lithium Battery* Non-rechargeable
WC-HSPA-2	7 Ah Lead Acid w/ 2 watt Solar Panel
WC-IRIDIUM-1	26Ah Lithium Battery* Non-rechargeable
WC-IRIDIUM-2	7 Ah Lead Acid w/ 2 watt Solar Panel
WC-XLINK-1	26 Ah Lithium Battery* Non-rechargeable
WC-XLINK-2	7 Ah Lead Acid w/ 2 watt Solar Panel

**Assuming the modem is turned off between transmissions, the high capacity, non-rechargeable, low self-discharge Lithium Battery should last over 1 year, (Calculations did not take into consideration any power drain from the sensor.)*



Ordering Data Plans for IRIDIUM & WYLESS GPRS



IRIDIUM ACTIVATION & SERVICE PLANS

ISBD.SACT	Station Activation
ISBD.0K.1	Min. Monthly Fee, no Data Plan
ISBD.12K.1M.PLAN	Min. Monthly Fee, 12 KB Data
ISBD.100K.1M.PLAN	Min. Monthly Fee, 100 KB data

WYLESS GPRS FOR DOMESTIC USE

(covers T-MOBILE, AT&T, roaming partners)

WGPRS.ACT	Activation, 1 time charge
WGPRS.1MB.PLAN	Monthly Plan, 1 MB
WGPRS.1MB.ADDL	Overage charge / MB

SMS is not available with WYLESS GPRS.



Ordering Data Plans CDMA



VERIZON CDMA SERVICE PLANS (DOMESTIC)

VCDMA.ACT	Activation 1 time charge
VCDMA.1MB.PLAN	Monthly Plan, 1 MB
VCDMA.20MB.PLAN	Monthly Plan, 20 MB
VCDMA.1MB.ADDL	Overcharges / MB
VCDMA.SMS	SMS Each Message





ORDERING DATA PLANS (GPRS & HSPA)

- | | |
|----------------------------|-------------------------------|
| • T-MOBILE | GPRS SERVICE PLANS (DOMESTIC) |
| • TGPRS.ACT | Activation 1 time charge |
| • TGPRS.1MB.PLAN | Monthly Plan, 1 MB |
| • TGPRS.1MB.ADD | Overage charge / MB |
| • TGPRS.5MB.PLAN | Monthly Plan, 5 MB |
| • TGPRS.1GB.PLAN | Monthly Plan, 1 GB |
| • TGPRS.100SMS.PLAN | Monthly Plan |

ORDERING DATA PLANS (CDMA)

- | | |
|--------------------------|--------------------------|
| • VERIZON CDMA | SERVICE PLANS (DOMESTIC) |
| • VCDMA.ACT | Activation 1 time charge |
| • VCDMA. 1MB.PLAN | Monthly Plan, 1 MB |
| • VCDMA.20MB.PLAN | Monthly Plan, 20 MB |
| • VCDMA. 1MB.ADDL | Overcharges / MB |
| • VCDMA.SMS | SMS Each Message |



Ordering Data Plans for GPRS & HSPA



T-MOBILE GPRS SERVICE PLANS (DOMESTIC)

TGPRS.ACT	Activation 1 time charge
TGPRS.1MB.PLAN	Monthly Plan, 1 MB
TGPRS.1MB.ADD	Overage charge / MB
TGPRS.5MB.PLAN	Monthly Plan, 5 MB
TGPRS.1GB.PLAN	Monthly Plan, 1 GB
TGPRS.100SMS.PLAN	Monthly Plan



Eastern Ridge Mine site in action

