

SURFACE WATER MONITORING



APPLICATION BACKGROUND

Local authorities often need to monitor surface water / surface flows which are captured and used to supplement irrigation water for a region.

Surface water monitoring systems provide local authorities with valuable information to help achieve water self-sufficiency. This

should lead to better designed storm water irrigation schemes to alleviate water loss, salinity and flooding problems.

Information would also assist local authorities and communities in minimising the use of scheme water to irrigate sporting facilities and other local parks and gardens.

APPLICATION DETAIL

Many areas suffer shortages of irrigation quality water because traditional surface water catchments are no longer reliable or groundwater sources have become saline.

Local authorities are increasingly turning to schemes which collect storm water from streets, roofs and hardstand areas. Water from these ready-made high yielding catchment areas can be harvested, stored and recycled for watering ovals or sports grounds.

Surface water monitoring systems provide a more accurate picture of yields and water qualities, and assist local authorities in planning for water shortfalls and future irrigation needs.

Such systems would include a measure of water depth, flow velocity, temperature, pH and electrical conductivity. When runoff events occur, these measurement systems can assess how much water flows along drains which collect water from streets, roofs and other hard surfaces found within towns.

The low salinity, low sediment runoff collected would be 'fit for purpose' water, meaning it was suitable to use, for example, as an irrigation supply. However, the water would not be fit for human consumption. Even if used only for watering the town sports grounds, parks and gardens, this would be of enormous benefit, as in many shires these areas generate the greatest demand for town water.





Surface water monitoring equipment measures surface water quality and quantity and transmits the information via cell phone or satellite to a central Neon Server where it can be analysed to make meaningful water management decisions.

Such systems may include instruments to measure water flow, water depth, water quality for example electro conductivity and pH in small open channels and storm water drains and channels. Surface water

movement may also be monitored into and out of small dams and ponds in agricultural areas.

For large pipes and small open channels, an ultrasonic velocity and depth meter can be used to measure occasional flows (during rain periods for example) and also test the water quality of such occasional flows.



TYPICAL CONFIGURATION

APPLICATION SPECIFIC INSTRUMENTS/INPUTS

Options	Unidata Part Number	Description
Ultrasonic Doppler Instrument - velocity, depth & flow	6526J-21	Starflow Ultrasonic Doppler Instrument 0-2m
Ultrasonic Doppler Instrument - velocity, depth & flow	6526J-51	Starflow Ultrasonic Doppler Instrument 0-5m
Ultrasonic Doppler SDI-12 Instrument - velocity & depth	6527A	Starflow QSD Ultrasonic Doppler SDI-12 Instrument
Water Level Instrument	6541C-11	WLI with 500mm Pulley & Alk Batt Metric
Float	6541F-115	WLI Float Assembly - Cylinder 115mm (other options available)
Float Line	6541D-M	WLI Beaded Float line Metric

NEON TELEMETRY - NRL / RTU / FIELD UNITS

Options	Unidata Part Number	Description
Ethernet	3016A-000 / 3008A-000	Neon Remote Logger-16 or 8 Analog Ch / Touch Screen Display
Ethernet & 3G/4G	3016A-C00 / 3008A-C00	Neon Remote Logger-16 or 8 Analog Ch / Touch Screen Display
Ethernet & 3G/4G and LoRa	3016A-CL0 / 3008A-CL0	Neon Remote Logger-16 or 8 Analog Ch / Touch Screen Display
Equatorial Orbit Satellite-Inmarsat	3016A-00I / 3008A-00I	Neon Remote Logger-16 or 8 Analog Ch / Touch Screen Display
Equatorial Orbit Satellite-Inmarsat & 3G/4G	3016A-C0I / 3008A-C0I	Neon Remote Logger-16 or 8 Analog Ch / Touch Screen Display
Low Earth Orbit Satellite - Globalstar	3016A-00G / 3008A-00G	Neon Remote Logger-16 or 8 Analog Ch / Touch Screen Display
Satellite - Iridium Short Burst Data	3016A-00R / 3008A-00R	Neon Remote Logger-16 or 8 Analog Ch / Touch Screen Display
Standalone RTU/NRL - Industrial	3004A-00 / 3004A-0L	Neon Remote Logger-4 Analog Ch with or without Touch Screen Display
Cellular RTU/NRL 3G/4G - Industrial	3004AC0 / 3004A-CL	Neon Remote Logger-4 Analog Ch with or without Touch Screen Display
M – Series Standalone RTU/NRL	3004A-M000 / 3004A-M0B0	Neon Remote Logger-4 Analog Ch with or without Li Battery
M – Series Cellular RTU/NRL 3G/4G	3004A-MC00 / 3004A-MCB0	Neon Remote Logger-4 Analog Ch with or without Li Battery
M – Series LoRa RTU/NRL	3004A-ML00 / 3004A-MLB0	Neon Remote Logger-4 Analog Ch with or without Li Battery
M – Series Ethernet RTU/NRL	3004A-MEBL	Neon Remote Logger-4 Analog Ch, Li Battery & LCD are optional
M – Series Microsatellite RTU/NRL	3004A-MHBL	Neon Remote Logger-4 Analog Ch, Li Battery & LCD are optional
M – Series Iridium Short Burst Data RTU/NRL	3004A-MIBL	Neon Remote Logger-4 Analog Ch, Li Battery & LCD are optional

NEON APPLICATION SOFTWARE - CUSTOMER SERVER

Options	Unidata Part Number	Description
Neon Applications Software	2302A	Neon Server Software Licence Incl 5 NAL
Neon Applications Software	2302A-10	Additional 10 NRT Access Licence
Neon Applications Software	2302A-20	Additional 20 NRT Access Licence
Neon Applications Software	2302A-50	Additional 50 NRT Access Licence

NEON HOSTING SERVICE - UNIDATA SERVER

Options	Unidata Part Number	Description
Neon Hosting Service	2301A	Neon Data Initial Subscription Setup Fee
Neon Hosting Service	2301A-01	Neon Data Service Fee for 1-50 NRT
Neon Hosting Service	2301A-02	Neon Data Service Fee for 51-100 NRT
Neon Hosting Service	2301A-10	Neon Data Service Fee Metering

DATALOGGER MANAGEMENT SOFTWARE

Options	Unidata Part Number	Description
Starlog V4 Management Software	6308A-AUE	STARLOG V4 Full Licence Key

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