

DREAM 2



Professional Internet enabled central controller for multiple irrigation heads



The **DREAM 2** is the next generation of central control systems. It allows combining various technologies to suit each projects specific need.

It is an **Internet enabled controller** so the use can control everything from a **PC or Smartphone**.

The **DREAM 2** can handle multiple irrigation heads allowing the user to manage medium to very large projects with many irrigation lines using a single controller.



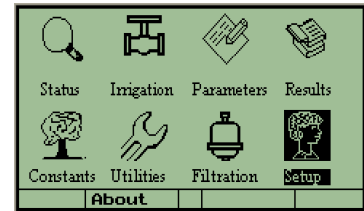
Dream 2 - Features Description

Flexible hardware construction

- Local outputs DC or AC constructed from boards of 16 outputs/ 8 inputs
- Several RTU channels of the following types:
 - 2 wired modular RTUs with up to 60 units per channel. 2,4,6,8 outputs, 4 or 8 inputs selectable per RTU
 - License exempt radio controlled modular RTUs with up to 60 units per channel. 2,4,6,8 outputs, 4 inputs selectable per RTU
- Modules for remote expansion of I/O channels
- Up to 250 outputs and inputs connectable

Comfortable programming

- Large graphical LCD with back illumination for good day and night visibility
- Full numeric key pad that serves also for direct jumping into important subjects
- Position dependent Function Keys
- Special keys for movement inside and between screens
- Built in bilingual software. Switching languages by a single key stroke



General features

- Handling multiple irrigation lines
- Flexible and user changeable network definition
- A large pool of irrigation programs, each program contains the sequence of participating valves, water and fertilizer dosage, operation timing and conditions
- Valves can be irrigated individually or in groups defined as library groups or single use groups
- Handling various water sources
- Cyclical irrigation with constant cycle of days or RUN LIST based. Cycles within the irrigation day, with large number of repetitions, intervals specified in hours: minutes: seconds.
- Irrigation by Soil Moisture, Rain Accumulation and Evapotranspiration.
- Flushing automatic filters by time and/or by pressure differential
- Conditions for starting, stopping, waiting and continuing programs, based on sensors' statuses, flow rates, states of system components etc. the conditions can be combined by OR/ AND connections
- Detailed events report with date and time stamps, can be scanned by various categories
- System STOP TIME or individual stop time per program may force operation stop at a desired time
- Protection and alarming mechanisms detect problems in the irrigation system, in the water supply, in the fertilization system, in the filtration, and in the control system itself
- Optional satellite outputs and optional grouping of inputs
- Accumulation of water and fertilizers, including special accumulation of last irrigation
- Main valves operation- delayed, advanced or simultaneously with the irrigation valves
- Battery backup for the memory of the variable data
- Special tools for the dealer to enable / hide features according to the specific needs, to set up default values, to define the resources allocation

Weather station

- Fully integrated weather station
- The Dream Weather Station features the following sensors
 - Evapo-transpiration --- Solar Radiation --- UV Radiation --- Barometric Pressure
 - Temperature --- Humidity --- Dew Point --- Wind Speed --- Wind Direction
 - Daily Rain -- Rain Rate
- Rain delay feature with its own designated screen
- Evapo transpiration (ET) feature with its own designated screen
- Frost Protection feature with its own designated screen.



Fertilization

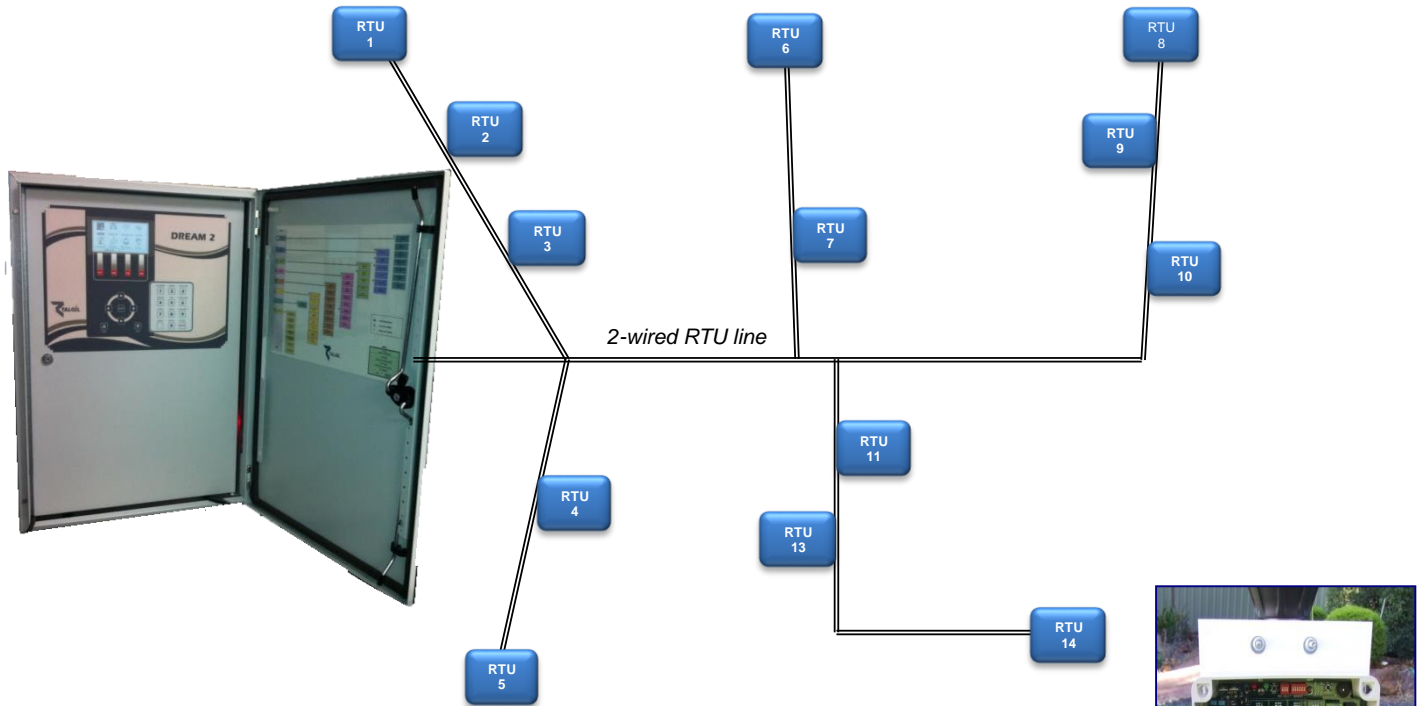
- Handling two types of fertilization sites, local sites which serve individual irrigation lines, and central sites that serve multiple irrigation lines
- Fertilizing in three stages: pre-watering, fertigation and post- watering
- Fertilizer dosage modes:
 - Continuous - Time (h:m:s), Volume (liters)
 - Concentration – L/m³, L/min:sec, sec/min, min:sec/L
 - Proportional - proportion calculated from amount of water and fertilizer.
- A special "water before" value for the first local fertilizer, separately from the other fertilizers
- Handling fertilizer injectors with and without fertilizer meters
- Handling booster pumps of Ventury injectors

Communication

- New PC software, Java based-DREAM CONSOLE. Simple to use, powerful and modern.
- Smartphone application- DREAM SPOT. From any device on any application.
- Communication channels: Netstick, 3G modem, Ethernet cable, radio, cable.
- Email alarm notifications.

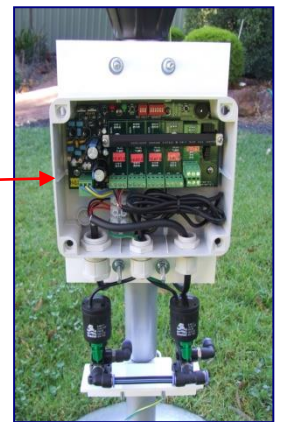
The *DREAM* 2 wired single cable RTU system

The 2 wired single cable system offers a solution for controlling highly distributed irrigation systems, utilizing **Remote Terminal Units** connected to the control unit by a single 2 wired cable. Remote valves and distant meters located in a radius of up to 10Km can easily be reached. Being DC operated and activating energy saving latching solenoids makes it possible to be powered either by standard electric source or by solar energy. The energy to the RTUs is supplied from the center via the 2 communication wires. There are modular RTUs, compact RTUs & molded RTU's. The modular RTU has a maximal capacity of 8 outputs and 8 digital inputs. The compact RTU offers an economical solution in places where the number of outputs and digital inputs does not exceed 2. Optionally analog inputs may be defined in place of digital ones, up to 4 in the modular unit and up to 1 in the compact. All the RTUs incorporated in a system are scanned second by second.



Features of modular RTU

- Modular structure with plug-in I/O boards
- No. of outputs -2,4,6,8
- No. of digital inputs- 4,8
- No. of analog inputs 0-4, each analog replaces 2 digital inputs



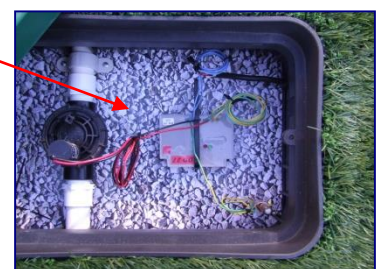
Features of compact RTU

- Flexible structure allocated by software
- No. of outputs – 1,2
- No. of digital inputs- 1,2
- No. of analog inputs 0,1 the analog replaces 2 digital inputs



Features of molded RTU

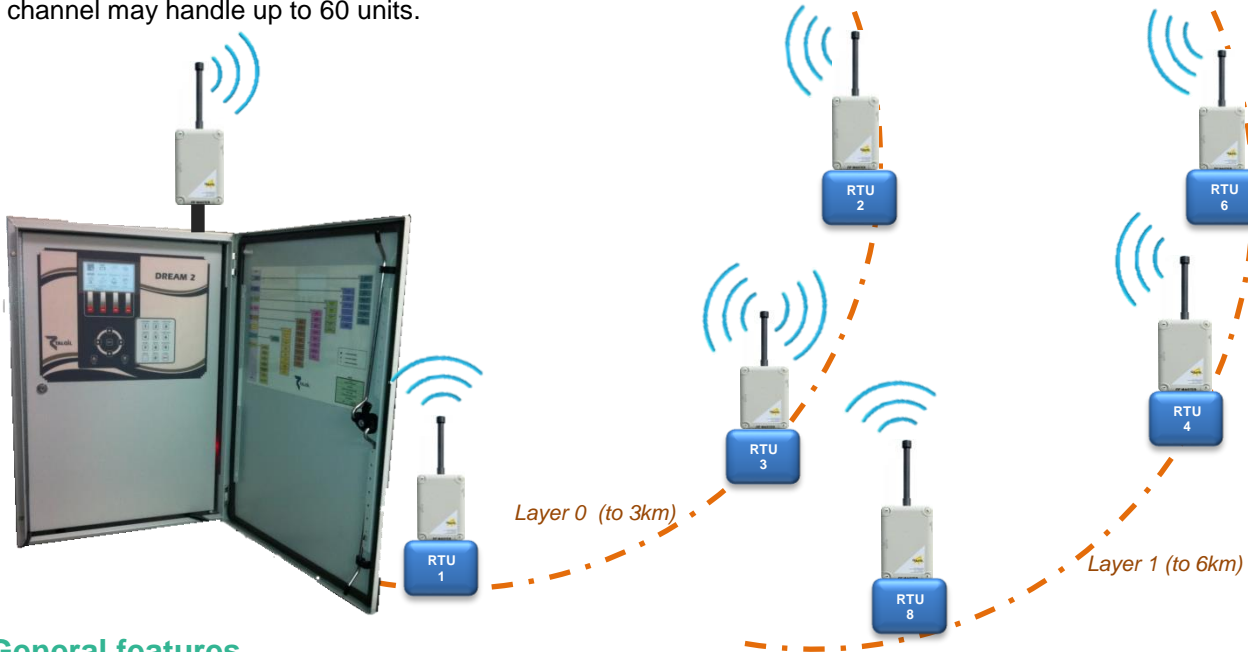
- Flexible structure allocated by software
- No. of outputs – 1,2
- No. of digital inputs - 1



Common features

- Up to a total of 63 units per channel
- Visual and sound signaling of statuses by LED and buzzer
- Buzzer can be turned off for energy saving purposes
- Including I/O test modes
- Scanning rate of 1 second per the whole system
- Built in lightning protection

The radio RTU system of Talgil offers a perfect solution for controlling distributed irrigation systems, when using cable is impossible or undesirable. The system utilizes low transmission energy and therefore no licensing is required. Under good conditions a distance of 3km can be covered. A radio RTU can serve also as a repeater for remote RTUs thus multiplying the communication range to 6 Km. The radio RTUs are energized by standard batteries or solar cells and they activate energy saving latching solenoids, therefore they are suitable for use where no electric energy exists. The bidirectional communication between the RTUs and the control unit enables not only activating remote outputs but also reading remote input, and because each communication gets a confirmation signal the information transfer is highly reliable. The radio RTU has a modular structure with a maximum capacity of 8 outputs and 4 digital inputs. A radio RTU channel may handle up to 60 units.

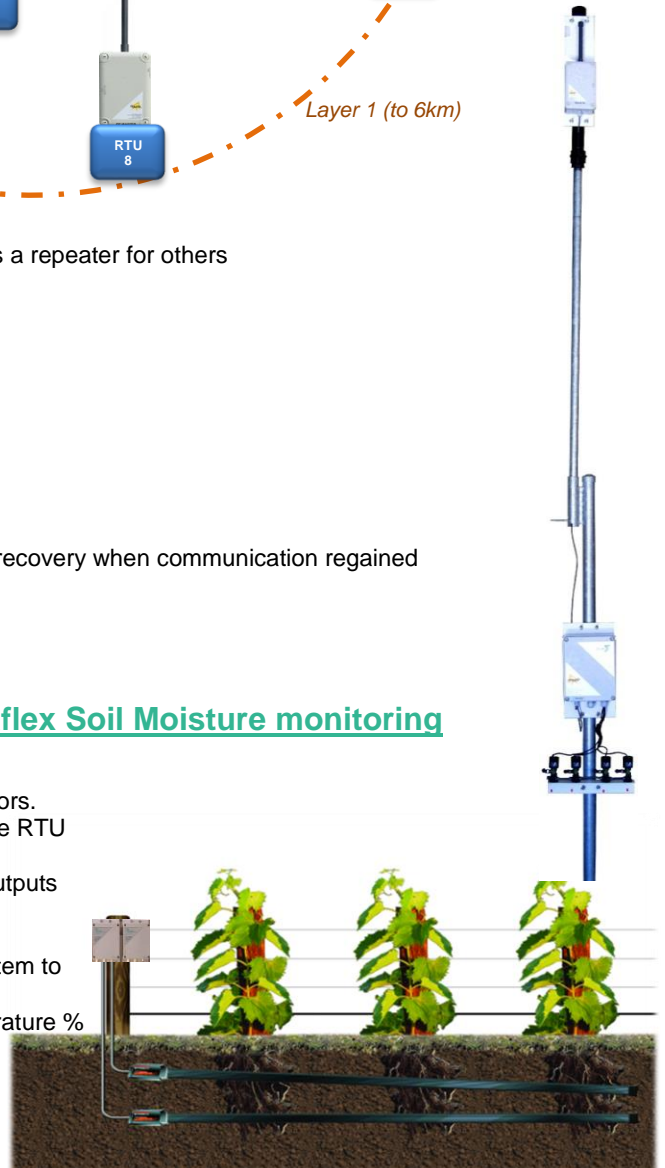


General features

- Communication radius of 3km that can be doubled by using an RTU as a repeater for others
- Bidirectional communication
- Powered by battery or solar energy
- Up to 60 RTUs per channel
- 16 options for channel frequency selection
- License exempt
- RF test mode
- Flexible scanning rate
- No. of outputs -2,4,6,8 (2 wired latching)
- No. of digital inputs- 4
- I/O test mode
- Automatic shut down of outputs on communication loss and automatic recovery when communication regained
- Visual and sound signaling of statuses by LED and buzzer
- Reporting RTU low battery

Features of modular 2-wire or RF RTU utilizing Aquaflex Soil Moisture monitoring

- The Dream system utilizes Aquaflex Soil Moisture & Temperature sensors.
- Aquaflex sensors are connected directly to the system via remote 2-wire RTU or remote RF RTU.
- The 2-wire or RF RTU not only logs analogue data but also actuates outputs for valves etc.
- Two Aquaflex sensors can be connected to each RTU.
- Soil moisture and temperature data is logged onto the main Dream system to be viewed as data or graphed information.
- Irrigation can be switched on/off or conditioned according to soil/temperature %



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