AnyQuest & EverBlu Pulse Enhanced

Radio Module for Remote Meter Reading

The AnyQuest / EverBlu Pulse Enhanced module has been designed to fulfil the requirement to connect easily any meter with pulse output to the Itron AMR & AMI systems. With this generic interface module water, gas, electric, heat and cooling meters can be integrated into the AnyQuest, EverBlu and UniGate radio reading systems.

Benefits of Wireless Solution
» Radio meter reading increases the reading speed.
» The data reliability is improved significantly by avoiding typing or writing errors.
» The radio reading also opens the accessibility to all meters even if the customer is absent or the meters are installed in hard to read locations.

AnyQuest / EverBlu Pulse Enhanced Working Technology
» Based on the proven design of AnyQuest / EverBlu Cyble, the Pulse Enhanced works reliably even in harsh environments.
» It counts, memorises, analyses and transmits on request, the consumption data of any meter via, mobile or fixed network reading systems.
» The AnyQuest / EverBlu Pulse Enhanced is compatible to the open RADIANT radio protocol.

Ease of Installation
Thanks to the special design, it can be easily fixed on the piping or screwed on the wall.
The cable connection to the pulse emitter can be easily done on site and it is protected by a sealed cover.

Consistent Reliability
With the long experience in battery powered metering products, Itron knows that reliability is key for customer satisfaction.
» The enhanced power management allows 15 years of mobile use / 10 years of lifetime when read through EverBlu fixed network.
» With the IP 68 protection the device can even be installed in flooded pits.
» Special electronic design ensures long communication range even in very dense populated and RF perturbated areas.
» The AnyQuest / EverBlu Pulse Enhanced case is made of extra robust plastic material which makes it resistant to shocks and UV-lights.

Advanced Functions
AnyQuest / EverBlu Pulse Enhanced provides powerful smart functions, adding value for your AMR / AMI applications:
» Up to 181 consumption intervals (24 hourly indexes when used in EverBlu / UniGate application).
» Leakage alarm + 13 months history
» Backflow alarms + backflow index
» Tamper alarm
» End of battery lifetime indicator
» Metering intelligence functions:
  • meter oversized
  • meter undersized
  • meter blocked
  • peakflow log + 13 monthly alarms
  • 2 x time of use indexes
  • critical alarms are date stamped
Radio Frequency Features

- **Protocol**: RADIUS / EverBlu
- **Modulation**: Frequency Shift Keying
- **Frequency & power**: 433.82 MHz; ≤ 10 mW ERP
- **Transmission**: Symmetrical 2-way communication
- **Reed input characteristics**:
  - $R_{on} \leq 1 \kappa$ with $R_{off} \geq 2.2 \mathrm{M} \quad$ or $R_{on} \leq 50 \quad$ with $R_{off} \geq 1 \mathrm{M} \quad$; $f_{max} \leq 10 \mathrm{Hz}$; $t_{pulse} \geq 6 \mathrm{ms}$
  - $R_{on} \geq 1 \mathrm{M} \quad$; $R_{off} \leq 30 \quad$; $C_{out} \leq 1 \mathrm{nF}$ (logic high = forward flow counting)
- **Tamper contact (normally open or normally closed depending on configuration)**:
  - Pulse length $\geq 2 \mathrm{s}$ (normally closed)
  - $f_{max} = 0.1 \mathrm{Hz}$; $R_{on} \leq 1 \kappa$ with $R_{off} \geq 1 \mathrm{M}$

Functional Specifications

- **Dimensions**: 138 x 54 x 59 mm
- **Battery lifetime (min.)**: 15 years mobile reading use; 10 years fixed network use (EverBlu / UniGate)
- **Case protection**: IP 68 submersible
- **Relative humidity**: 0 to 100%
- **Operating temperature**: -10°C / +55°C***
- **Accidental temperature**: -20°C / +70°C
- **Conformity**: CE certified, in accordance with the European R&TTE directive (1999/5/EC)

Enhanced Functionnalities

- **Volume index**: Volume index at time of reading
- **Preset billing date**: Volume index recorded at 4 preset dates (programmable)
- **Data-logging**: History of up to 181 consumption intervals (hourly, daily, weekly, monthly)
- **2 Time-Of-Use Indexes**: Registers consumption within a defined intervals of the year and day
- **Volume above threshold**: Total consumption above a high flow-rate threshold
- **Volume below threshold**: Total consumption below a low flow-rate threshold
- **Meter sizing indicators**: 2 x 13 monthly indicators if the meter is oversized or undersized
- **Leakage information**: 13 month history of number of leakage days
- **Backflow volume and alarm**: Total backflow volume and 13 monthly alarms
- **Meter stopped detection**: Alarm if no consumption over a configurable period has been recorded
- **Reversed meter detection**: Alarm if > 1000 consecutive pulses in reverse direction have been recorded
- **Module tamper detection**: Alarm if the radio module module has been tampered
- **Alarm log**: Log of start and end dates for last recorded critical alarms
- **Peak flow-rates**: 5 highest peak flow-rate values with date of occurrence
- **Peak flow alarms**: 13 monthly alarms if the peak flow threshold has been exceeded

Our company is the world’s leading provider of smart metering, data collection and utility software systems, with over 8,000 utilities worldwide relying on our technology to optimize the delivery and use of energy and water.

To realize your smarter energy and water future, start here: [www.itron.com](http://www.itron.com)

AnyQuest Software

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