



Connecting your Sensors to the World



Insights for Experts



Capabilities

UpCom[®] software plugin is a solution for storing, polling and processing RWIS (and other, e.g. meteorological or hydrological sensor) data at the roadside. The UpCom[®] plugin is a Linux based software plugin that runs on off the shelf hardware – the Option Cloudgate cell router family.

The UpCom[®] software plugin collects and processes measure values from various sensors. Sensor data can be converted to different formats, polled via NTCIP or OPC-UA, pushed via JSON API to ViewMondo[®] or via CSV text file to any ftp server.

The data can also be locally processed and used to calculate alarms based on flexible rules. Relays can be controlled via Modbus or GPIO port to control warning beacons or other traffic signals, e.g.

- Displaying weather advisories on signs
- Adjusting signal timing and speed limits
- Disseminating traveler information via the web and apps
- Implementing active traffic and integrated corridor management

Benefits

- Automatically activate safety measures such as beacons, warning signs, and speed limit reductions during inclement weather to ensure road safety
- Optimize traffic flow and minimize disruptions by adjusting signal timings and providing real-time weather advisories to drivers.
- Seamlessly integrate weather data to anticipate and respond to adverse conditions, reducing the risk of accidents and improving overall travel experience



Collect real time weather and road conditions

Share data with your Automatic Traffic Messaging System

Use the data to aid in decisions that help keep drivers safe

Integrated Applications

UpCom® integrates directly with ViewMondo® - our platform to manage sensor values and camera pictures, but can also be used independently to collect, convert and process the measure values on roadside, and push data to other platforms.

Supported Sensors

Sensors can be integrated via Ott Hydromet UMB, SDI-12 protocol or Modbzs, supporting a wide range of sensors to monitor road weather, meteorological or hydrological measurements in real time – e.g.

- Air Temperature
- Barometric Pressure
- Humidity
- Dew point
- Wind speed/direction
- Visibility
- Precipitation type
- Precipitation intensity
- Precipitation amount
- Pavement conditions (ice, temp, etc.)
- Pavement temperature
- Subsurface temperature(s)
- Water film height
- Friction
- Snow height
- Water Level
- Battery Level
- ... and more

Communication Protocols

- NTCIP 1204
- TLSoIP
- OPC-UA
- ViewMondo® API push
- FTP/CSV push
- Modbus Server

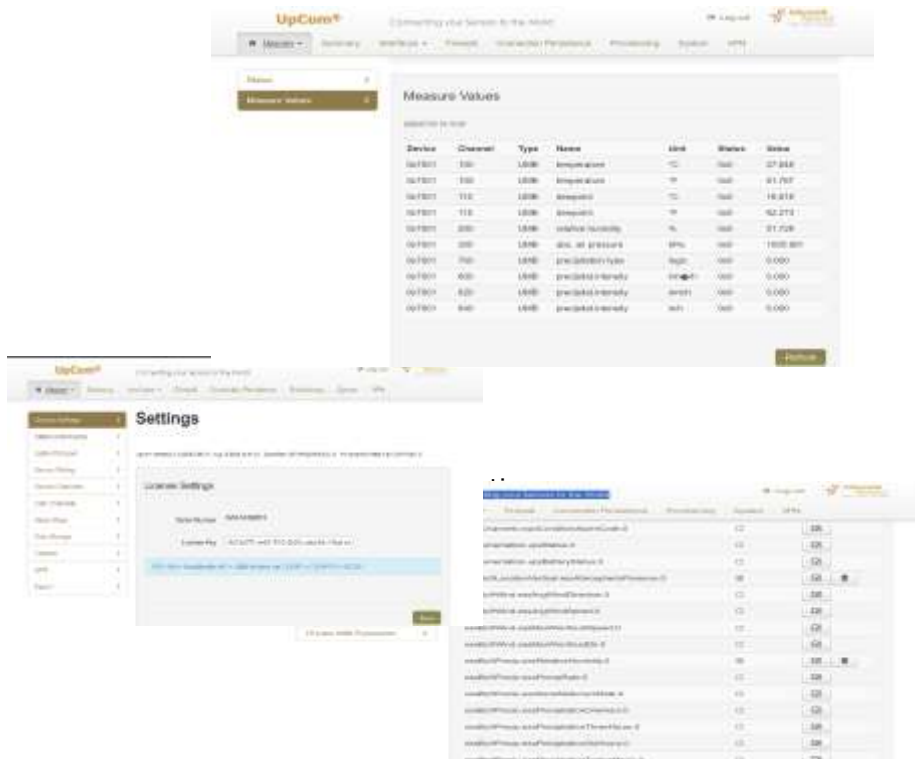
Calculated Sensor Channels

Virtual sensor channels can be created by calculating a new value by:

- Value Mapping
- Rolling Min/Max/Average/Modal calculations over configurable time spans
- Using Python code to implement custom calculation models

Integrated User Interface

The UpCom® plugin is integrated with the router's web based user interface.



in cooperation with



for more than 25 years

UpCom® and ViewMondo®
solutions for road weather, meteorological and hydrological measure values since 1998.