

# MODEL 8205-05 RWIS Software Suite

- NTCIP-Compliant
- Easy-to-Use Control Panel
- Extensive Alarms & Delivery Options
- Versatile Data Storage



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## **DESCRIPTION:**

The Model 8205-05 RWIS Software Suite (aka DataWise®) supports Road Weather Information Systems (RWIS) by incorporating the National Transportation Communications Standard for ITS Protocol; reference NTCIP 1204v3 ESS. This allows DataWise® to communicate with any NTCIP-based Environmental Sensor Station (ESS) device via TCP/IP or serial port. It also enables DataWise® to apply its extensive environmental database management tools to RWIS data, as it does with environmental data collected via other communication techniques; for example, ALERT, MODBUS, and GOES satellite.

### **The following is a partial list of database management tools:**

- Graphics (browser based, including GIS-based mapping with drill-down detail screens).
- Simple alarm detection (sensor upper limit, lower limit, rate of change, malfunctioning sensor behavior).
- Complex alarm detection in which alarms are based upon values of multiple sensors.
- Extensive alarm delivery mechanisms, including synthesized voice alarms, alarms delivered via SMS, MMS, and e-mail, and external controls such as signs, sirens, flashing lights, etc.

Data storage in any ODBC-compliant relational database, including but not limited to MSSQL,

- MySQL, Access, Oracle, Postgres, and SQLite.
- Data storage in U.S. Army Corps of Engineers' HEC-DSS and CWMS databases.
- Extensive quality control test (modified from test developed by the USACOE), including the following data rejection and question criteria:
  1. Absolute value checking that can change by season.
  2. Rate of change.
  3. Up to 5 duration magnitude tests, which check if a sensor reading has been above or below specified values for an extended period of time.
  4. Constant value tests, which check if a sensor has been reading the same value for longer than a specified period.
  5. Relative magnitude tests, which validate a sensor's readings against nearby sensors.

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## **REQUIREMENTS:**

Windows XP or later, including all server versions of Windows (both 32-bit and 64-bit versions).

Minimum of 8 Gigabytes of RAM.

Minimum of 500 Gigabytes of free non-volatile disk storage.

Web-based applications served by Apache or IIS web server.

MODBUS and MODBUS TCP

## **SUPPORTED DATA ACQUISITION PROTOCOLS:**

The 8205-05 RWIS Software Suite supports the following data acquisition protocols:

### **Directly from Remote Sensors:**

ALERT via radio, ALERT over TCP/IP, ALERT2

GOES via DOMSAT, GOES via DCP Data Service (DDS), GOES via Direct Readout Ground Stations

NTCIP 1204ESS protocol

MODBUS

Allen-Bradley Data Highway

Sutron Standard Protocol

Coastal Environmental CCSAIL

Campbell Scientific Loggernet, Campbell Scientific PakBus

Dial-up to *most known* Environmental Data Loggers

NOTE: Additionally DataWise® can directly receive data from HSE's Model 5433 IceSight 2020E/EW Remote Road Surface Condition Sensors

### **Import Weather Data from Other Agencies:**

SHEF-encoded data from the National Weather Service, U.S. Army Corps of Engineers, U.S. Geological Survey National Water Information System.

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