

DataMonitor Plug-in

The Command DataMonitor™ plug-in is a solution for monitoring traffic-related hardware and software systems, and can be accessed and managed using any networked Web browser as the user interface. The DataMonitor examines data from traffic systems and flags potential traffic problems.

Features

- Connects to and automatically analyzes DataCollector data from any number of sensors
- Performs a wide variety of data analyses, including:
 - Missing data
 - Invalid data
 - Incident detection
 - Route congestion
 - Data outside of historical norms
- Automatically notifies user through email, or desktop widget when alert conditions occur
- Web interface lets users see current status of all monitors, including reports
- Subscription model allows users to choose which alerts, and at what severity level, are sent to them



My Alerts Monitor List Subscriptions Reports System Help
Welcome Administrator (Logout) 2/5/2009 10:40:03 AM

My Alerts

DataMonitor: My Alerts

Maximum number of completed alerts: Set

Filter: Monitor All

Level	Monitor Name	Message	Start Time	Status
88	High Truck Volume	Abnormal Data Detected	2/5/2009 8:59:00 AM	In Progress
25	Incidents w/Historical Norms	Historical Norms Test Failure	2/5/2009 8:10:30 AM	In Progress
15	I-80/I-35 EB Congestion	Congestion I-80/35 EB	2/5/2009 7:50:15 AM	Completed
54	I-235 EB Congestion	I-235 EB Congestion Detected	2/5/2009 7:12:00 AM	Completed
79	Missing Data Test	Missing Data Test Failure	2/5/2009 2:25:00 AM	In Progress
24	I-80/I-35 EB Congestion	Congestion I-80/35 EB	2/4/2009 5:32:00 PM	Completed

Test Failures in Alert Duration: less than a minute

Level	Monitor Name	Message	Start Time	Completion Time
55	Missing Data Test	Missing Data Test Failure	2/5/2009 10:40:00 AM	2/5/2009 10:40:00 AM
55	Missing Data Test	Missing Data Test Failure	2/5/2009 10:35:00 AM	2/5/2009 10:35:00 AM
55	Missing Data Test	Missing Data Test Failure	2/5/2009 10:30:00 AM	2/5/2009 10:30:02 AM
55	Missing Data Test	Missing Data Test Failure	2/5/2009 10:25:00 AM	2/5/2009 10:25:00 AM
55	Missing Data Test	Missing Data Test Failure	2/5/2009 10:20:00 AM	2/5/2009 10:20:06 AM
55	Missing Data Test	Missing Data Test Failure	2/5/2009 10:15:00 AM	2/5/2009 10:15:14 AM

Details

Sensor: localhost:5005, 100% missing
 Sensor: localhost:5005, 10 contiguous missing
 Sensor: localhost:5006, 100% missing
 Sensor: localhost:5006, 10 contiguous missing
 Sensor: localhost:5013, 100% missing
 Sensor: localhost:5013, 10 contiguous missing
 Sensor: localhost:5017, 100% missing
 Sensor: localhost:5017, 10 contiguous missing
 Sensor: localhost:5019, 100% missing



Technical Specifications

Data Monitoring

- Automatically functions with a DataCollector server on local network to analyze data
- Checks data for values (speed, volume, occupancy, vehicle class) above and/or below user-defined thresholds
- Compares current data values with historical data (speed, volume, occupancy, vehicle class) for percentage differences beyond a user-defined threshold
- Checks for traffic incidents based on difference of current data values (speed, volume, occupancy, vehicle class) with previous, adjacent, or expected data values; users can define specific parameters
- Checks for missing data, based on either percentage missing over a period of time, or contiguous missing time intervals, using user-defined parameters
- Checks routes for route congestion based on data thresholds on adjacent sensors, using user-defined parameters
- Users can stop, pause or manually run any monitor
- Supports unlimited alerts

Reporting

- Supports creation of custom reports based on one or more monitors
- Reports can run automatically on a user-defined schedule
- Reports can be configured to cover a user-determined amount of time ranging from one hour to one month
- Reports can be run manually through web interface at any time
- Current and previous reports are accessible through the web at any time

Route Management

- Supports creation of routes—user-defined sequences of adjacent sensors for congestion tracking
- Route creation supports assigning only certain lanes of a sensor to a route node
- Routes can be modified or deleted through the web interface

Alert Notification

- Desktop widget on local workstation notifies users of alert status
- Supports email notification of alert status on a per-user basis
- Alert subscriptions can be modified according to alert level, allowing users to choose whether to receive low, mid, and/or high severity-level events
- Users can modify alerts subscriptions on a per monitor basis, so each user can customize the alerts received
- Users can subscribe to custom reports, also received through email once created
- Users can also subscribe to system events, including error and warning messages created by DataMonitor

Ordering Information

Part Number — WX-CMD-MP1

Recommended Accessories

- DataCollector — WX-CMD-DCxx

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- Automatic XML output exports alert data for CMD SpeedMap or other compatible use
- Alerts will be stored for a period of 90 days

Camera Management

- Supports assigning camera locations to specific sensors, with a defined camera action to enable quick viewing of the alert location
- Desktop widget supports camera actions—clicking on camera icon will perform assigned camera action for that camera
- Camera actions can be created/modified/deleted through the web interface

Web-based Interface

- Interface: web-based and accessible to any user with web browser and network connection
- Information listed in interface includes:
 - Number of monitors in system, with run time and status
 - List of recent alerts with alert severity level from 1 to 100
- Other operations available through interface:
 - Run monitor manually at any time
 - Add new monitors with parameters and schedule
 - Modify or delete existing monitors
 - Stop or pause existing monitors from continuing to monitor
 - Adjust user subscriptions for alerts, including test level
 - Configure and view reports of system alerts
 - View journal of all actions performed by all users
 - Add or remove users and modify user privileges
- Interface security-controlled through user name and password
 - User logins can have different levels of permissions for different levels of access to functionality

Testing

- Burn-in testing for each unit
- Test period: not less than 1 week
- Testing standard: service is able to run consistently over the testing period with a representative workload
- Testing documentation provided upon request, showing the performance results over the testing period

Support

- Delivered with 90 days of Gold Support as standard, effective after customer acceptance of the contracted system:
 - 30 hours prepaid phone technical support, same day guaranteed response
 - 2 days prepaid on-site technical support
 - Next business day on-site hardware service
 - Includes bug fixes, minor application updates, version updates, and software operation system updates
- Extended and/or upgraded support packages are available for purchase



DataMonitor Plug-in Bid Specification

1.0 General. This item shall govern for the furnishing and installation of a traffic data monitoring subsystem (TDMS), equivalent to the Wavetronix DataMonitor system, used to monitor collected data from a vehicle sensing device (VSD) as shown in the plans, as detailed in the special specifications and as directed by the engineer. Test results and other documentation demonstrating TDMS performance and capabilities shall be provided.

All equipment and component parts furnished shall be new, be of the latest proven design and manufacture, and be in an operable condition at the time of delivery and installation.

All equipment shall include all licenses, where required, for any software in the subsystem.

2.0 Product Description. The TDMS shall be a server-based data monitoring subsystem. This system should be an off-the-shelf ATMS subsystem appliance that streamlines the monitoring, management, and dissemination of notifications regarding the current status of traffic data and equipment. The TDMS monitors real-time data from advanced traffic detectors stored in a relational database. Distribution of notifications is achieved using standard e-mail or through a desktop information client application, and is published with-in the TDMS web interface.

3.0 Data Monitoring. The TDMS shall automatically function with a data collection server on the local network to analyze data.

The TDMS shall check data for values (speed, volume, occupancy, vehicle class) above and/or below user-defined thresholds.

The TDMS shall compare current data values with historical data (speed, volume, occupancy, vehicle class), looking for values beyond a user-defined percentage difference.

The TDMS shall check for traffic incidents based on difference of current data values (speed, volume, occupancy, vehicle class) with previous, adjacent, or expected data values. The TDMS shall enable users to define specific parameters.

The TDMS shall check for missing data, based on either percentage missing over a period of time, or contiguous missing time intervals, using user-defined parameters.

The TDMS shall check routes for route congestion based on data thresholds on adjacent sensors, using user-defined parameters.

The TDMS shall enable users to stop or pause any monitor.

The TDMS shall support an unlimited number of alerts.

4.0 Reporting. The TDMS shall support the creation of custom reports based on one or more monitors.

The TDMS shall be capable of running reports automatically on a user-defined schedule.

The TDMS shall enable users to configure reports to cover a user-determined amount of time ranging from one hour to one month.

The TDMS shall enable users to run reports manually through web interface at any time.

The TDMS shall store current and previous reports and make them accessible through the web at any time.

5.0 Route Management. The TDMS shall support the creation of routes, which are defined as user-defined sequences of adjacent sensors for congestion tracking.

The TDMS' route creation capabilities shall support assigning only certain lanes of a sensor to a route node.

The TDMS shall enable users to modify or delete routes through the web interface.

6.0 Alert Notification. The TDMS shall feature a desktop widget that runs on a local workstation to notify users of alert status.

The TDMS shall support email notification of alert status on a per-user basis.

The TDMS shall enable users to modify alert subscriptions according to alert level, allowing users to choose whether to receive low-, mid-, and/or high-level events.

The TDMS shall enable users to modify alerts subscriptions on a per monitor basis, allowing each user to customize the alerts received.

The TDMS shall enable users to subscribe to custom reports, also received through email once created.

The TDMS shall enable users to subscribe to system events, including error and warning messages created by the application.

The TDMS shall feature automatic XML output, which shall export alert data for compatible systems such as the Wave-tronix CMD SpeedMap.

The TDMS shall store alerts for a period of 90 days.

7.0 Camera Management. The TDMS shall enable users to assign camera locations to specific sensors, with a defined camera action.

The TDMS shall feature a desktop widget that supports camera actions. Clicking on the camera icon shall perform the assigned camera action for that camera.

The TDMS shall enable users to create, modify and delete camera actions through the web interface.

8.0 Web-based Interface. The TDMS shall provide a Web-based interface, accessible to any user with a Web browser and network connection, which will list the number of monitors in the system, with run time and status, and a list of recent alerts with their severity level from 1 to 100.

The Web interface will also allow the user to run a monitor manually at any time, add new monitors with parameters and schedule, modify or delete existing monitors, stop or pause existing monitors from continuing to monitor, adjust user subscriptions for alerts (including severity level), configure and view reports of system alerts, and view a journal of recent actions performed by all users.

The TDMS Web interface shall be accessed by a user name/ password combination, allowing users with varying levels of privileges to access some or all of the functionality of the TDMS. The Web interface will also allow users to be added or subtracted from the system, or modified to have different permissions.

9.0 Testing. Before shipping, each TDMS unit shall have a burn-in test period of not less than one week.

The testing standard for the TDMS shall be that the service is able to run consistently over the testing period with a representative workload.

Testing documentation shall be provided showing the results from the TDMS test over the testing period upon request.

10.0 Support. The TDMS shall be warranted with 90 days of support, defined as follows:

- 30 hours prepaid phone technical support, same day guaranteed response
- Two days prepaid on-site technical support
- Next business day on-site hardware service

- Included bug fixes, minor application updates, version updates, and software operation system updates

Extended and/or upgraded support packages shall be available for purchase.