iCITE ®
Intelligent Cabinet Interface to Traffic Equipment

Data Aggregator DA-500E for Centracs® SPM & Aries

A data and communications-rich hardware platform that transforms legacy or isolated traffic cabinets into dedicated real-time traffic data reporting and count stations

iCITE® Data Aggregator DA-500E is a hardware platform that interfaces with traffic controllers, communications-enabled detectors, and MMUs/CMUs at remote or networked intersections. The DA-500E can provide real-time intersection data to your existing ATMS data set, in addition to cabinet health and GPS-based time sync. It easily installs in Type 170/2070, NEMA TS-1, TS-2, ITS or ATC style traffic cabinets, and provides a simplified interface with EDI or Reno A&E MMUs/CMUs, enabling complete data retrieval.

This information is based on what Econolite Centracs® SPM can provide:
Communicating with Econolite Centracs® SPM data analytics, the DA-500E can provide turning movement counts, amber/red actuations, arrivals on red, detector failures, high or low preemption details, communications and power failures/alerts, split and interval timing data, and vehicle travel time. It also provides the Purdue Coordination Diagram (PCD) and the Indiana Hi-Resolution Data Set, tailored to provide Automated Traffic Signal Performance Measures (ATSPM) via the Econolite Centracs® SPM user-friendly interface.

FEATURES

- Data and communications-rich hardware platform

- Transforms legacy traffic cabinets into 24/7/365 count stations

- Easily interfaces with controllers and detectors

- Ability to safely retrieve critical intersection and cabinet data from an MMU/CMU

- Add remote intersection data to your Centracs® SPM data set

- Provides cabinet health and GPS-based time sync

- Capacitor back up for power failure alerts

- Access remote intersections via 4G/LTE cellular

- Interfaces with Econolite Centracs® SPM, ASC/3 and Cobalt model controllers, and most type 170/2070/NEMA, ITS, and ATC controllers.

- 5-Band antenna covering GSM/GPRS/LTE, GPS, Wi-Fi, BlueTooth, DSRC bands

- Shelf or rack-mounted installation

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Data Aggregator DA-500E

FUNCTIONALITY

Connectivity	
Cell Modem	Yes - 4G/LTE and GSM or GPRS (Standard)
Wi-Fi	Yes - (Receive only - cannot be used as a WLAN)
Ethernet Port	Standard - 2 ports (10/100 Base -T)
EIA-232	Yes
SDLC	Standard - 2 ports (Easy connectivity with NEMA TS-2 controllers & MMUs)
USB	Standard - 2 ports
Aux. Ports (Qty. 8)	Standard (RS-485 inputs from Communicating Detectors)

Cabinet I/O	
Analog Inputs	14 (7 X 0 - 232 VAC; 7 X 0 - 40 VDC) + 1 temperature sensor
Digital Inputs	20 (16 X 24 DC; 4 X 24 VDC; 16 detectors; 4 peds)
Time Sync	Normally Open and Normally Closed with user selectable time

Miscellaneous	
Operating System	Linux - Ubuntu 12.04.2 LTS kernel ver. 3.15.3
GPS	Yes - Geolocation with Time Sync
Operating Temperature	-40ºF to 176ºF / -40º C to 80º C / Standard Industrial temp. range
Humidity	0 - 95% Non-Condensing
Dimensions	Depth: 6.3 inches (160 mm) Height: 6.42 inches (163 mm) Width: 2.50 Inches (63.5 mm)
Weight	2 lbs (0.91 kg)
Power Input Voltage	150 mA at 250 VAC (5mm X 20mm Fast-blo fuse) 120 -240 VAC - Universal Input
Real Time Clock	Yes
Capacitor Back Up	Yes

Protocols	
SDLC	Yes - Standard (TS2 or TS2 Type 2 cabinets only)
RS-232	Yes - Standard up to 32 channels of input
Ethernet	Yes - 2 ports

Other	
Solar Power Capable	Yes
Antenna	Yes - 5 band (Cellular, GPS, Wi-Fi, BT and DSRC)
Antenna Bracket	Optional side mount to traffic cabinet

- Detector information from NEMA TS-1, TS-2, or Type 170/2070 cabinets using RS-485 Serial Communications for up to 32 channels

- Detector and signal information from NEMA TS-2 cabinets using SDLC communications to provide additional data

- Remote access to non-interconnected intersections with 4G/LTE Cellular Communications

- Compatible with High-Speed Wired or Wireless Networks

- Provides back-up of critical communications from intersections that are already connected to a central ATMS system

- Communications and interfaces using encryption

- Provides VPN Network to cabinet / controller

- Cabinet Health Monitors
  - Ambient temperature
  - Battery backup system
  - Heater / fan
  - Cabinet door
  - Stop time
  - AC/DC power
  - Intersection flash
  - Primary communication
  - and more...

Notes:
If a specific cellular carrier is preferred, or existing service plans will be used for cellular data, please specify carrier at the time of order. In USA only, deeply discounted plans can be provided along with the device from AT&T, T-Mobile, or Rogers. International cellular providers need to be verified for device internal modem compatibility prior to order.

Custom configurations of Analog and Digital I/Os available for volume orders.

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