Diamond Knowledge Base

Omega - Features & Specifications

- The Omega Timestamp Counter/Classifier is high end vehicle traffic recording unit that uses pneumatic road tubes sensors. The unit is extremely compact and lightweight in a 0.250 thick extruded aluminum wall case that is waterproof. It is programmable by a PC or laptop using either a hardwire USB on the go port or wireless Bluetooth® connections.
  The Omega is capable of acting as a host to USB peripheries such as thumb drives, GPS, and Data storage devices.
  The lithium-ion battery is recharged through the USB port and will operate for 90-200 days between charges depending on use of the Bluetooth® wireless. The Omega stores data in a high resolution time stamp format, but also performs processing of sensor inputs to display in real time on the 128 X 64 pixel LCD graphic display by lane number, vehicle speed and number of axles for each vehicle. This allows field personnel easy verification of proper operation.
  The Omega also provides an "End of Study" summary to present field users the data totals in an easy and useful way before leaving the site to ensure proper data collection was performed eliminating the question of data quality and accuracy. Data can be retrieved through the USB Port or the Bluetooth® direct to a PC/PDA or by using a thumb drive plugged into the USB port.
  Diamond Traffic's Centurion Software programs the counter, downloads data and provides advanced processing of data providing easy export to Excel and 17 different export formats with over 20 different reports formats.
  Features
    Count 1-4 Lanes

- Count methods include directional, lane subtraction, and normal.
    Classify 1-2 lanes

- Using two sensors the unit can classify single lane directional traffic, two lane bi-directional traffic and two lane same direction traffic.
    Temperature and Battery Data Storage

- When in collection mode the Omega can be set to store temperature data and battery voltage data changes along with the sensor timestamp data in the counter files for later processing.
    Watertight Design

- With most recorders having to endure harsh weather, the Omega is designed around our proven Traffic Tally® case that is watertight to allow for operation in harsh roadside environments.
    Embedded Magnetic Switches

- Easy control over the unit is performed by the two Magnetic reed switches that are activated on each side of the case. This keeps the unit watertight while providing the user a trouble free interface.
    LCD Graphic Display

- The 128x64 pixel LCD display allows real time vehicle data monitoring, programming, diagnostics and

status of the unit via picture menus and simple graphical user interface.
Bluetooth® Wireless communications

- An onboard Bluetooth® wireless allows complete communication and control with no cables and over short distances (up to 100ft). With Bluetooth® users can monitor and download units without cables in the field and the office.
USB OTG (On-The-Go)

- The new USB OTG specification designates devices to act as a host and peripheral to alleviate the confusion of USB compatibility between other USB devices. It also allows smaller connectors to be utilized keeping the size compact.
Auto Start and Smart Record Fail Safe

- The Omega unit in sleep mode monitors airswitch activity and will auto start recording if vehicles counts are sensed to eliminate the issue of users forgetting to start recording in the field. This fail safe makes sure the unit records study data every time even if you forget to.
Ultra Low power consumption with Smart Power Management

- The Omega is designed to last for prolonged operating periods in the field on each charge of the lithium ion battery. Because the unit includes Bluetooth it has been equipped with smart power management to eliminate extra battery drain when Bluetooth® is not needed. User selectable management modes allow for the most flexibility of Bluetooth® use in the field. Depending on Bluetooth® mode battery life is 90-270 days per charge.
Real Time Classification Monitoring

- Unlike other timestamp units, the Omega has an on board classification and vehicle processor that allows real time feedback via the display of the unit operation and sensor activations for easy User feedback of proper operation..
End Of Study Summaries

- A highly useful and reassuring feature to users is this new ability to view immediate summary data such as ADT, average speed, peak times and data quality percentage when closing the study. The display gives the user immediate feedback of the data accuracy and allows the user to known if the data collected is useable before retrieving the unit.
Ultra High Resolution Timestamp Accuracy

- The omega operates and records timestamp data to a finer resolution than any other roadside unit to provide the highest quality of data accuracy. Each timestamp is recorded to 100,000th of a second (0.00001s) and stored with no loss of resolution in memory.
On-board Sensor Diagnostics

- Using advanced A to D converters the Omega provides the user with sensor diagnostics to show users the condition of the sensor and attached road tubes so troubleshooting on site is simple and quick eliminating the hassle of bad sensor installations.
Large Memory Capacity

- The Omega has a 16MB on board non-volatile flash memory capacity to store up to 4 million timestamp records and up to 65,000 separate studies.
  Compact Size and Lightweight

Weighing in at just over 2 pounds and small enough to fit in your palm, the Omega is ultra portable and lightweight. Using a Solid Aluminum Case the unit is robust providing great protection and vandal resistant operation.

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