CAN Data Logger CL1000, CL2000 (+RTC)

General Features

- Functionality: Functions as both a data logger and a real-time CAN interface.
- Status Indication: Equipped with three externally visible LEDs to display logger status.
- Firmware: Free firmware updates available, enabling new features.
- Software: Includes free software for converting files to ASC/TRC formats on Windows and Linux.
- Analysis Tools: Bundled with SavvyCAN, open source software for streaming and analyzing CAN data, including DBC decoding for Windows and Linux.
- File Accessibility: Configuration (.INI) and log (.TXT) files are accessible with standard text editors or scripts on both Windows and Linux.
- Certifications: Certified to CE, FCC, IC, and RoHS standards.

CAN Bus Capabilities

- Standard Compliance: Follows ISO 11898-2 physical layer standard.
- Identifier Support: Compatible with CAN 2.0A (11-Bit ID) and 2.0B (29-Bit ID) specifications.
- Bit Rate: Supports bit rates up to 1 Mbps, with manual or automatic configuration.
- Auto-Detection: Capable of automatically detecting bit rates.
- Protocol Support: Protocol-independent, allowing logging of CAN, J1939, CANopen, OBD2, and more.
- Message Filtering: Advanced message filtering on four configurable channels.
- Silent Mode: Silent mode available, ensuring the device does not affect CAN-bus transmission.
- Fail-safes: The device does not terminate the CAN-bus internally.

Data Logging Features

- **Real-Time Clock: CL1000 – no; CL2000 - yes**
- Storage: Uses a replaceable 8 GB SD card, with optional support for up to 32 GB.

- Time Stamping: Built-in real-time clock provides 1 ms resolution time stamps for CAN messages.
- Control Signals: Logging state can be toggled during runtime using CAN-bus control messages.
- Heartbeat: Supports periodic heartbeat signals to indicate logger status.
- Cyclic Logging: Enables cyclic logging, overwriting the oldest log file when storage is full.
- Down Sampling: Allows CAN ID-specific down-sampling to reduce message frequency in logs.
- Transmit Capability: Can transmit up to 20 customized CAN bus messages (including OBD2), with full real-time transmit control via USB.
- File System: Uses the standard FAT file system.
- Frame Rate: Can log or stream approximately 800–1000 frames per second without data loss; for higher busloads, a CANedge device is recommended.

Power Supply

- CAN Connector: Power can be supplied through the DB9 CAN connector (for logging/streaming) or via USB (for data extraction).
- Voltage Range: Accepts CAN bus power input from +7.0V to +32V DC.
- Protection: Features reverse voltage and transient voltage pulse protection on CAN-bus power supply.
- USB Power: USB provides +5.0V DC for data extraction and configuration.
- Power Consumption: The logger operates at approximately 1 W.

Mechanical & Environmental

- Enclosure: Robust and compact design.
- Dimensions: Measures 66.7 x 42.7 x 23.5 mm (L x W x H).
- Weight: Weighs 45 grams.
- Connectors: Standard D-sub 9 (DB9) connector for CAN interfaces (OBD2, J1939, or generic adaptors available).
- USB: Standard mini USB (B) connector for data extraction and streaming (cable not included).
- Operating Temperature: Designed to operate from -20°C to +65°C.
- Real-Time Clock: Built-in clock with calendar and battery backup; date and time are recorded in log files. Battery lasts over two years.
- IP Rating: Rated IP40 for ingress protection.