

CT630 DATA SHEET

*** Preliminary ***

FEATURE SUMMARY

- C-compatible OS
- Programmable with open-source tools
- Transaction-based flash file system
- Internal un-interruptible power supply
- Wide input voltage range, 7.5 – 36 V
- Electrical transient protection
- J1708 vehicle data bus
- J1939 vehicle data bus
- RS-232 port
- RS232/485 port
- Digital I/O
- Wide operating temperature
- Liquid sealed
- GSM/GPRS (option)
- Internal GPS (option)
- Bluetooth Transceiver (option)

Description

The Dyacon CT630 builds on the successful CT6xx series of vehicle interface and communication computers. The CT630 paves the way for the wireless cab by providing Bluetooth connectivity to laptops, hand held computers or other in-cab electronics.

The CT630 includes both J1708 and J1939 vehicle data connections as well as two serial ports, cell phone, GPS, high-current digital outputs, and digital inputs.

The C-programmable operating system opens the CT630 to many applications where vehicle monitoring, tracking, and remote data communications are required.

Applications

In the standard configuration, the CT630 may be programmed to monitor vehicle status through J1708 and J1939, provide geo-fencing features, manage data traffic over a connected satellite transceiver, and enhance security.

With the optional industrial GPS receiver and cell phone modules, the CT630 can serve as a multi-mode communication modem; select least-cost message routing via external satellite, external 802.11, or internal cell phone.



CT630

Key Features

J1708 and J1939: The SAE J1708 and J1939 vehicle data buses are used in heavy-duty trucks. Vehicle parameters such as road speed, fuel usage, engine RPM, and throttle position are among the hundreds of values available.

These messages may be used for vehicle diagnostics, logging, security, or monitoring of driver behavior.

Bluetooth: Hand held computers can now connect to the vehicle through the CT630 for vehicle, GPS, and cell phone data. This provides the benefits of a tethered in-cab computer while maintaining the portable convenience of the hand held.

UPS: The CT630 includes an integrated un-interruptible power supply that will typically sustain full run mode after power loss. The application may use the power-good interrupt to set flags or save data during UPS operation.

Flash File System: A transaction-based flash memory file system ensures data is preserved in any situation.

Open-source Tools: Development on the CT630 is inexpensive with open-source programming tools. A hardware abstraction layer reduces the learning curve by providing high-level functions for the embedded hardware.

Hardware Configuration: The CT630 can be configured for price and feature optimization specific to the communication system.

ENVIRONMENTAL

Operating Temp	-35 °C to 75 °C
Storage Temp	-40 °C to 85 °C
Humidity	90% RH, non-condensing
Vibration Operating	SAE J1455 Section 4.9 (5.2 grms)
Sealing, Liquid	Submersible to 3 ft (base configuration)

J1708 CONTROLLER

API Interface	Filtering for up to 30 MID/PIDs
	MID wild card
	Send message w/priority control
Firmware	Field upgradeable

J1939 Features

API Interface	Receive J1939 and CAN bus messages
	Send J1939 and CAN bus messages

POWER FEATURES

Input	7.5 V to 36 V
	Transient protected
	Reverse voltage protected
	Less than 40 mA max avg. @ 13 V
Un-interruptible Supply	Low power mode < 10 mA @ 13 V
	30 s full run mode (Dependant on software controls and hardware configuration.)
	Bad-power detection signal
Ultra-capacitor	UPS Support

I/O AND CONNECTORS

Connector 1	Deutsch sealed connector
	J1708 Vehicle Data Bus
	J1939 Vehicle Data Bus
	Digital outputs 1 and 2 (250 mA)
	Digital input 2
	Ground
	Debug/Console port (RXD, TXD)
Connector 2	Deutsch sealed connector
	Com 1: RS-232 (RXD, TXD, RTS, CTS)
	Com 2: RS-232/485 (Software selectable, full duplex)
	Digital input 1
	Power
Ground	
Antenna Connector 1	SMA for optional GPS receiver
Antenna Connector 2	SMA for optional cell phone transceiver

OS, MEMORY, & uP

OS	C-compatible
	Open-source tools (GNU Compiler)
	Hardware abstraction layer
	Field upgradeable
Processor	ARM920T
	Freescale Dragonball i.MXL
RAM	16 MB
Flash	16 MB

MECHANICAL

Enclosure	Deutsch case
	Thermoplastic
	Silicon Elastomer seals
	0.29" dia mounting holes at 4" O.C. (7.4 mm dia at 102 mm O.C.)
Dimensions	1.5" H x 4.8" W x 5.5" D (36.5 mm x 118 mm x 134 mm)

REGULATORY

Emissions	FCC Part 15 Class A
Immunity	EN 61000-4-2, ESD
	EN 61000-4-3, Radiated
	EN 61000-4-4, Elec. Fast Transient
	EN 61000-4-6, RF Conducted

USER INTERFACE

Indicators	Red LED, software controlled
	Green LED, software controlled
	Blue LED, cell phone controlled
	Yellow LED, Bluetooth controlled
Command and control	Console port for terminal interface
External Display and Equip	RS232 and RS485 ports

Wireless Features

Cell Phone	Embedded GSM/GPRS modem
GPS	20 channel internal GPS receiver
	Antenna open and short circuit detection
Bluetooth	Bluetooth 2.0
	Class 2
	SPP Mode