DYACON®
RUGGED DATA SYSTEMS

CT605 DATA SHEET

CT605

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
- Two RS-232 ports (optional RS-485)
- Internal GPS (optional)
- Digital I/O
- GSM/GPRS or CDMA/1xRTT (optional)
- Wide operating temperature
- Liquid sealed

Description

The Dyacon CT605 is more than just an asset tracking device. The CT605 is an open-platform, C-programmable vehicle computer; not restricted to a set of configurable settings.

Unique to the CT605 is the combination of J1708 vehicle data bus, cell phone, GPS, and C-programmability. These features open a wide range of possibilities for the system integrator.

Applications

In the standard configuration, the CT605 may be programmed to monitor vehicle status through J1708, provide geo-fencing features, manage data traffic over a connected satellite transceiver, and enhance security.

With optional industrial GPS receiver and cell phone modules, the CT605 can serve as a multi-mode communication modem; select least-cost message routing via external satellite, external 802.11, or internal cell phone.

Key Features

J1708: The SAE J1708 vehicle data bus is 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.

The J1708 data is managed by a separate microcontroller, thus avoiding the burden on the main processor and conflicts with user applications.

UPS: The CT605 will typically operate for more than 30 seconds after good power has been lost. The application may use the power-good interrupt to set flags or save data.

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

Open-source Tools: Development on the CT605 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 CT605 can be configured for price and feature optimization specific to the communication system.

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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

POWER FEATURES

Input	7.5 V to 36 V
	Transient protected
	Reverse voltage protected
	Less than 40 mA max avg. @ 13 V
	Low power mode < 10 mA @ 13 V
Un-interruptible Supply	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
	Digital outputs 1 and 2
	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 (RXD, TXD) (Com 2 option for RS-485, full duplex)
	Digital input 1
	Power
	Ground
Antenna Connector 1	SMA for optional GPS receiver
Antenna Connector 2	SMA for optional cell phone transceiver
System Wake Inputs	Incoming data on cell phone, Com 1, Debug/Console
	Low-power detection

OS, MEMORY, & µP

OS	C-compatible
	Open-source tools
	Hardware abstraction layer
	Field upgradeable
Processor	144 MHz
	Freescale Dragonball i.MXL, ARM920T
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