

CW25 Development Kit

Description

The CW25 Development Kit is a complete development platform for the CW25 GPS receiver. It comprises the CW25 Development Board, peripherals that support its operation and power supply.

The CW25 is a small size OEM module that is specifically designed for use in weak signal GPS environments. Refer to CW25 User Manual for details.

The CW25 Development Kit includes:

- CW25 Development Board (CW25-DB)
- Interface Accessories
 - DB15 to DB9 Breakout Adapter
 - DB9 to DB9 Serial Cable
- Power Supply (universal) with 2M cable to 2.1mm power socket and local main plugs
- Magnetic Patch Antenna, ideal for use in automotive applications, with a 3M lead
- CD provides Manual, NS3K View and GPS Plan Installation Software
- RS232 serial ports

All of these necessary components included are required to evaluate the

Features

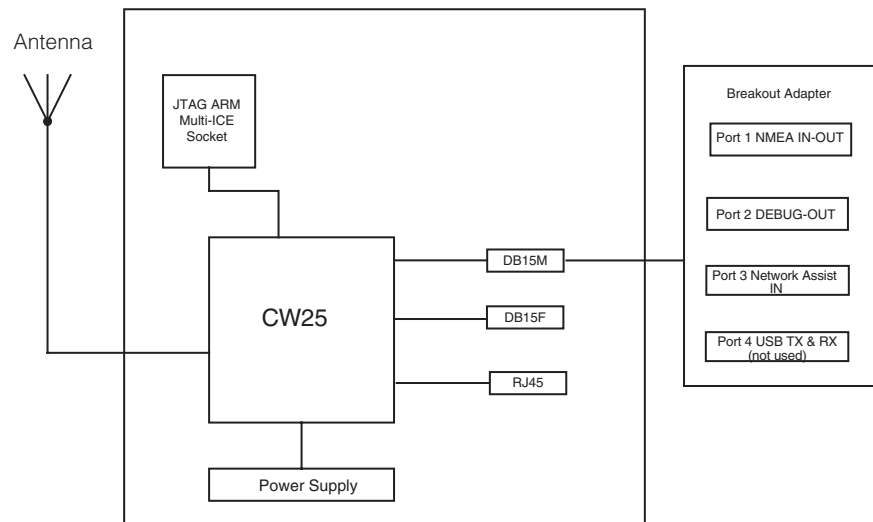
- Easy to use complete development system
- Includes all interface accessories
- Includes all required user peripherals
- Includes all necessary external equipment
- Includes all manuals and software



CW25. The software in the CD allows the user to evaluate the CW25 performance on the host PC. The CW25-DB has a number of user interfaces to set up the platform. The JTAG interface is internal and requires that the case top be removed for exposure. The external interfaces include:

- DB15M
- DB15F
- RJ45
- Power Input
- RF Input

Block Diagram



CW25 DEVELOPMENT KIT SPECIFICATIONS ¹

Performance

Physical	Module dimensions	25mm (D) x 27mm (W) x 4.2mm (H)
	Supply voltages	3V3 (Digital I/O), 3V3 (RF), 1V8 (Core option), 3V (Standby Battery)
	Operating / Storage Temp	-30°C to +75°C / -30°C to +80°C ²
	Humidity	5% to 95% non-condensing
	Max Velocity / Altitude	515ms ⁻¹ / 18,000m
	Max Acceleration / Jerk	4g / 1gs ⁻¹ (sustained for less than 5 seconds)
Sensitivity	Acquisition w/network assist	-185dBW
	Tracking	-186dBW
	Acquisition Stand Alone	-173dBW
Acquisition Time	Hot Start with network assist	Outdoor: <2s Indoor (-178dBW): <5s
	Stand Alone (Outdoor)	Cold: <45s Warm: <38s Hot: <5s Re-acquisition: <0.5s (90% confidence)
Accuracy	Position: Outdoor / Indoor	<5m rms / <50m rms
	Velocity	<0.05ms ⁻¹
	Latency	<200ms
	Raw Measurement Accuracy	Pseudorange <0.3m rms, Carrier phase <5mm rms
	Tracking	Code and carrier coherent
Power	1 fix per second	0.6W typically
	Coma Mode Current (RF3V3+DIG 3V3)	10mA
	Standby Current (VBATT)	1.5µA
Interfaces	Serial	3 UART ports, CMOS levels
	Multi-function I/O	1PPS Frequency Output available on GPIO [0] Event Counter/Timer Input Up to 4 x GPIO (multi-function) 2 x LED Status Drive I ² C, External Clock (on special build)
	Protocols	Network Assist, NMEA 0183, Proprietary ASCII and binary message formats
	1pps Timing Output	30ns rms accuracy, <5ns resolution User selectable pulse width
	Event Input	30ns rms accuracy, <10ns resolution
	Frequency Output (GPIO [0])	10 Hz to 30 MHz (CW25-TIM)
	Receiver Type	12 parallel channel x 32 taps up to 32 point FFT. Channels, taps and FFT can be switched off to minimize power or simulate simpler designs.
General	Processor	ARM 966E-S on a 0.18µ process at up to 120 MHz.

Note: 1. The features listed above may require specific software builds and may not all be available in the initial release.

2. Please contact factory for other temperature options.

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