



Aplicom C-series Development Kit

The Aplicom C-series Development Kit is a hardware development tool for the Aplicom C-series product family. The C-series Development Kit provides a fully programmable platform for various applications and offers an extensive set of peripheral and sensor interfaces. The C-series Development Kit includes a C-series circuit board and an integrated GPS positioning device in a specific frame. An integrated GPRS module is available as an option. The C-series Development Kit allows the use of debugging tools. Therefore application developers have more efficient and powerful application developing environment for the C-series. The larger memory configuration allows to make solution for special memory requirements.

The Aplicom C-series Development Kit comprises two products: C-series Development Kit with GPS module and C-series Development Kit with GPS and GPRS modules.

The C-series Development Kit contains the printed circuit board of the C-series in a frame. Integrated GPS module is in the bottom side of the PCB.

Both Development Kits have larger Flash memory configuration than standard C-series products. The larger memory configuration allows application provider make special solutions which requires a special memory configuration.

Most of the connections are in a multi-pin automotive connector like in other C-series products. JTAG connection on PCB allows an efficient and powerful debugging by ARM Multi-ICE debugging tool (a product of ARM Ltd.).

Four fully programmable LED indicators can be used by the application to indicate the unit status including power on/off. Separate DIP-switches are available for backup battery and forced software loading.

The GPRS module is an option. The optional module is on top of the PCB and the SIM card is accessible from the front end.

Automotive cables A5 and B1 as well as the null modem cable belong to the delivery content of the C-series Development Kit.

The heart of the C-series software architecture is the Aplicom OS95A, a real-time multitasking operating system that enables efficient performance in a real-life vehicle environment. The C-series is fully programmable using C/C++ language and the Aplicom AC Tool Kit which provides an extensive library of functions and utilities for the programmer. Aplicom supplies interfaces for a variety of different GSM and GPRS phones as well as other radio modems.

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Technical Data

Available models	C-series Development Kit with GPS C-series Development Kit with GPS and GPRS
Operating system	Multitasking real time operating system Aplicom OS95A
Main processor	ARM7TDMI core, 32 bit, 24 MHz
Memory (16-bit)	2 x SRAM 512 kB (battery back-up) 2 x Flash 1024 kB EEPROM for ID purposes
User specific appl.	Programmed using C language with the Aplicom AC Tool Kit and ARM development tools
Real time clock	Built-in real time clock
Input voltage	10.5...32 VDC, reverse polarity voltage protection
Power consumption	200 mA typical at 12 VDC peak current 1.5A max. 1 mA in sleep mode at 12 VDC
Controls	ON/OFF switch, reset button, DIP switches for back-up battery and boot loader
Indicators	Four bi-colour LEDs, controllable by application software
Accessories	Automotive Cables A5 and B1, null modem cable
Options	GPRS modem module

Connections	42-pin automotive connector containing: - CAN-bus (1 Mbits/s) - I ² C-bus (max 205 kbits/s) - 3 serial ports (115.2 kbits/s) - 2 open collector relay control outputs - 2 pcs 5 VDC digital inputs/outputs - 4 pcs 5 VDC digital / A/D inputs (10-bits) - 3 pcs pulse counters (100 kHz) - power output 10.5...32 VDC unregulated, max. 500 mA - ignition sense - power supply connector - throughput to option board
Optional connectors	JTAG connector in PCB 1 internal serial port for GPS 1 internal serial port for optional module board / GPRS module SMA for GPS antenna SMA for GSM antenna and SIM-card reader

