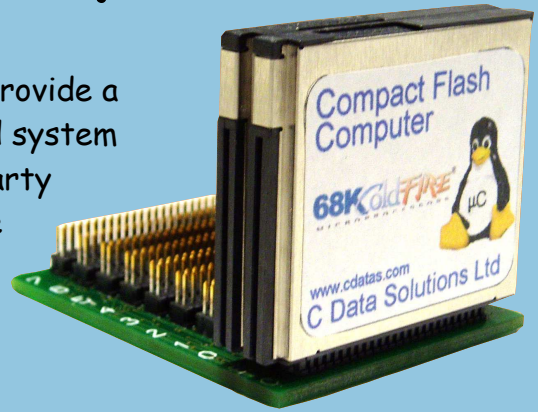


Compact Flash Based Linux System

C Data Solutions has taken the standards route to provide a modular embedded computing platform for embedded system developers based on Compact Flash Cards. Add 3rd party Compact Flash cards to customise your system. Choose from ethernet, 802.11b, Bluetooth, GSM/GPRS, GPS, RS232/422/485, USB, CAN, DAQ and FLASH storage.

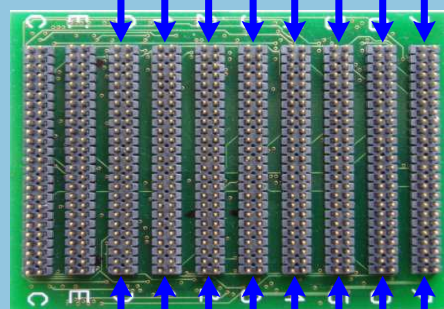


The Compact Flash Computer incorporates a 40MHz Freescale Coldfire FC5272 processor, 32 MBytes of SDRAM and 8 Mbytes of FLASH memory, pre-loaded with uClinux. The card consumes less than 200mA at 3.3V. Power it from 3 AA cells. Expansion is via a 16 bit Compact Flash compatible bus. A 20 pin header provides a serial port, and an interface for the Coldfire's



Address/Data

Background Debug Mode (BDM) connection. A debug header board provides a 9 pin D-Type serial connector and the 26 pin BDM connector. The BDM port allows debugging using the GNU GDB debugger.



CE1[0..7]/CE2[0..7]

The Compact Flash Computer requires a Bus Expansion Unit when used with the motherboard. The motherboard has 10 slots, eight of which are

available for expansion. The Bus Expansion Unit supplies the chip select lines to the individual Compact Flash slots. The selection of each of the slots is controlled by the processor communicating with the Bus Expansion Unit over a serial interface (QSPI).

The Bus Expansion Unit also includes a switching regulator that provides 3.3V@500mA

Compact Flash Computer as Processor Core

Use the Compact Flash Computer as a processor core for your products. The Compact Flash Computer has 16 data and 11 address lines, compatible with 3rd party 3.3V Compact Flash Cards. Attach your custom hardware directly. No debugging of processor core is required.

It is pre-loaded with ppcboot and uClinux to minimise software development costs.

Full schematics of the Bus Expansion Unit, motherboard, header board are available at www.cdatas.com to allow you to develop custom carrier boards.

Applications

Industrial control/monitoring
Wearable/handheld/portable devices
Autonomous vehicles

Smart devices core processor
Rapid product development,
NAS

Compact Flash Computer Specification

CPU

- Motorola MFC5272c3 @40MHz

IO

- RS-232
- Motorola Background Debug Mode port

Memory

- 16M x 16 7.5ns SDRAM
- 4M x 16 90ns FLASH

Expansion

- 16 bit Compact Flash compatible
- SPI control for Bus Expansion Unit

Power Requirements

- 3.3V regulated DC @ 150mA

Integrated OS

- Boot loader (ppcboot) for support of third party RTOS.
- uClinux 2.4 OS
POSIX
Full Complement of Network Protocols
 - TCP/IP,UDP,ICMP,ARP,IGMP,DNS
 - FTP,TFTP,HTTP,DHCP
 - TELNET

Integrated Development Tools

- GNU C/C++ cross development.

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