

ADDENDUM

CML-12C32SLK

HCS12 MONITOR OPERATION

This CML-12C32 contains the HCS12 Serial Monitor instead of the MON12 monitor mentioned in the User Guide. This addendum provides a brief description of this serial monitor program. Further details may be found in Application Note AN2548 from Freescale Semiconductor. This board also contains a small demo program that flashes LED1 and LED2 has been loaded to simulate application code startup.

The 2K byte serial monitor program provides RS-232 serial interface to a host PC. The monitor is compatible with Metrowerks CodeWarrior and other serial monitor interface IDE's. It is not compatible with ASCII interface programs such as hyperterm or AxIDE. The monitor supports 23 primitive commands to control the target MCU. To allow a user to specify the address of each interrupt service routine, this monitor redirects interrupt vectors to an unprotected portion of FLASH just before the protected monitor program.

The monitor uses the SCI0 serial interface to communicate with the host PC. The monitor must have exclusive use of the serial port to work correctly. This monitor accommodates RS-232 serial communications through SCI0 at 115.2 K bps.

MEMORY MAP

0x0000 – 0x03FF	Registers	
0x3800 – 0x3FFF	Internal RAM	
0x8000 – 0xBFFF	Fixed Flash EEPROM Block 1 (visible at RESET)	16K bytes
0xC000 – 0xF6FF	Fixed Flash EEPROM Block 2	16K bytes
0xF780 – 0xF7FF	User Vectors(Relocated) User Reset Vector F7FE:F7FF	
0xF800 – 0xFFFF	Vectors (Protected)	

NOTE: Although the monitor does not support external memory, the user can enable external memory accesses in the unfilled areas of the memory map.

CONFIGURATION

The CML-12C32 boots to user application code out of RESET if the pseudo-reset (F7FE:F7FF) vector is programmed. Pressing SW1 after user application code executes has no effect.

The CML-12C32 boots to monitor mode if the pseudo-reset vector is not programmed or if SW1 is depressed during POR or RESET.

REFERENCES

The following documents provide further details on the operation and use of the HCS12 Serial Monitor:

AN2548.pdf

Serial Monitor for HCS12 MCU's

www.freescale.com/files/microcontrollers/doc/app_note/AN2548.pdf

CML12_SerMon.phy

Physical Record Object Code File

CML12_SerMon.sx

S-Record Object Code File