

TCN#: 812-04

DATE: 5 March 2002

DEVICE/TOOL:

ADuC812 on-chip firmware, including download/debug kernel and power-on configuration routine.

DESCRIPTION OF CHANGE:

- Remove “security bit refresh” instruction.
- Change implementation of “erase code+data” and “erase code only” functions.
- Allow modification of ETIM registers via serial download protocol.

REASON FOR CHANGE:

- Security bit refresh is no longer needed as the security bits have been removed in hardware.
- Hardware “erase all” function used to erase both code and data Flash/EE areas, but now only erases code space. Therefore, download/debug kernel must implement separate “erase code” and “erase data” instructions in order to respond to an “erase code+data” command via the serial download protocol.
- In order to maintain proper timing for Flash/EE programming instructions at clock speeds other than 11.0592MHz, the ETIM1 & ETIM2 SFRs must be modified. This new function allows these registers to be modified via the serial download protocol, thereby allowing proper programming timing in serial download mode.

SUPPORTING INFORMATION:

MicroConverter technical note number uC-004 details the serial download protocol, including the added functions for adjusting the ETIM registers. Available on the web at the following URL:

<http://www.analog.com/microconverter>

CHANGE EFFECTIVE DATE:

This change is effective beginning with all devices shipped from the factory on or after 5 March 2002.

Devices with this kernel revision can be identified via the reset string returned from the ADuC812 UART when it enters serial download/debug mode as follows:

Previous Kernel, Reset String = ‘ADI 812 V211’

Revised Kernel, Reset String = ‘ADI 812 V222’

COMPATIBILITY:*With Development Tools....*

The revised on-chip firmware kernel is 100% compatible with existing and future ADI QuickStart™ Development Tools.

With Production Systems....

Systems making use of the serial download protocol to reprogram the device should note that the reset string returned by the chip on entry to serial download/debug mode has been updated from V211 to V222 on devices containing this revised on-chip firmware.

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