



June 11, 2007

PCN Number: 0710

PCN Change Level: Minor

Subject: Change to Test Sequence in Silicon Sculptor Software and Adapter Module

Dear Customer,

The purpose of this notice is to inform you that when Silicon Sculptor software v4.62.0 and v4.64.0 (only versions affected by this issue) are used to program A54SX72A devices, customers may experience a higher than normal programming fallout and see an error message that states "failed programming with ANTIFUSE XXXXX PULSE 1000", where XXXXX is an antifuse number. This failure mode is due to a test sequence issue, which creates a conflict with the Silicon Sculptor power supply, thus causing "false" failures. The affected devices are listed in Table 1.

Table 1 • Affected Devices for Test Sequence Issue

Part Number	Packages	Temperature Grades
A54SX72A	FG256/FGG256	C, I, A, M
A54SX72A	FG484/FGG484	C, I, A, M
A54SX72A	PQ208/PQG208	C, I, A, M
A54SX72A*	CQ208	C, M, B
A54SX72A*	CQ256	C, M, B

Note: *Includes the following DSCC part numbers: 5962-0054301QYC, 5962-0054302QYC, 5962-0054301QXC, 5962-0054302QXC

The following devices are NOT affected by the incorrect programming test sequence:

- A54SX08A
- A54SX16A
- A54SX32A
- RTSX32SU
- RTSX72SU

The programming test sequence has now been modified to eliminate the issue described above. This fix has been implemented in Silicon Sculptor v4.64.1 and is now available at http://www.actel.com/download/program_debug/ss/sculptor4641.aspx. In addition, Actel recommends that only Silicon Sculptor II or Silicon Sculptor 3 programmers be used when programming the devices listed in Table 1.



Designers targeting A54SX72A devices must use this version or a later software version and Silicon Sculptor II and Silicon Sculptor 3 programmers to avoid higher than normal programming failures.

Additionally, if customers are using a design with TRST and dedicated JTAG mode, the failure message (mentioned in the first paragraph on page 1) may be generated when using the Actel P/N: SM208PQ-ACTEL-2 adapter module (BPM Microsystems P/N: FASM208PQBACT). The reason for this failure message is that the TRST pin needs to be driven high when a design with TRST and dedicated JTAG mode is being programmed; the SM208PQ-ACTEL-2 adapter module cannot drive the TRST pin. The immediate solution for this unique scenario is to use the BPM Microsystems generic module FASM208PQC for programming. Soon, Actel will introduce a new SM208PQ-ACTEL-3 module to drive TRST. The devices affected by this issue are listed in Table 2.

Table 2 • Affected devices for Adapter Module Issue

Part Number	Packages	Temperature Grades
A54SX72A	PQ208/PQG208	C, I, A, M

In regards to the two failure modes described above, Actel strongly recommends that designers targeting A54SX72A devices use Silicon Sculptor software v4.64.1 or later and Silicon Sculptor II and Silicon Sculptor 3 programmers to avoid higher than normal programming failures. When using the A54SX7A in a PQ208 package, Actel recommends that customers use adapter socket FASM208PQC or SM208PQ-ACTEL-3 (when available).

If you have any questions, please contact Actel's Application Technical Support at tech@actel.com.

Regards,

Actel Corporation