



December 22, 2010

PCN Number: 1019

PCN Change Level: Minor

Subject: Programming Software Enhancement for RTAX-S/SL/DSP and RTSX-SU Product Families

Dear Customer,

Microsemi has implemented programming enhancements for ALL the products in the RTAX™-S/SL/DSP and RTSX-SU product families. Refer to [Table 1](#) for a list of affected devices.

Programming of Microsemi antifuse FPGAs using Silicon Sculptor II and Silicon Sculptor 3 consists of two main processes:

- Programming the antifuses
- Running end of programming (EOP) tests

The EOP tests, which are embedded in the Silicon Sculptor programming software, consist of a number of checks that confirm the integrity of the device. In Silicon Sculptor programming software v5.8.0 and later, Microsemi has implemented several enhancements to the EOP tests to help validate the integrity of a programmed device more effectively.

Microsemi recommends that customers upgrade to the latest version of the Silicon Sculptor software to take advantage of these enhancements. The Silicon Sculptor software can be downloaded from http://www.actel.com/download/program_debug/ss/files.aspx.

Table 1. Affected Devices

RTSX32SU		
RTSX32SU-CC256M	RTSX32SU-CQ84EV	RTSX32SU-CQ208PROTO
RTSX32SU-1CC256M	RTSX32SU-1CQ84EV	RTSX32SU-1CQ208PROTO
RTSX32SU-CC256B	RTSX32SU-CQ84PROTO	RTSX32SU-CQ256B
RTSX32SU-1CC256B	RTSX32SU-1CQ84PROTO	5962-0150805QXC
RTSX32SU-CC256E	RTSX32SU-CQ208B	RTSX32SU-1CQ256B
RTSX32SU-1CC256E	5962-0150805QYC	5962-0150806QXC
RTSX32SU-CC256EV	RTSX32SU-1CQ208B	RTSX32SU-CQ256E
RTSX32SU-1CC256EV	5962-0150806QYC	5962-0150807QXC
RTSX32SU-1CQ84B	RTSX32SU-CQ208E	RTSX32SU-1CQ256E
5962-0150806QZC	5962-0150807QYC	5962-0150808QXC
RTSX32SU-CQ84E	RTSX32SU-1CQ208E	RTSX32SU-CQ256EV
5962-0150807QZC	5962-0150808QYC	RTSX32SU-1CQ256EV
RTSX32SU-1CQ84E	RTSX32SU-CQ208EV	RTSX32SU-CQ256PROTO
5962-0150808QZC	RTSX32SU-1CQ208EV	RTSX32SU-1CQ256PROTO



Table 1. Affected Devices (continued)

RTSX72SU		
RTSX72SU-CGS624B	RTSX72SU-1CQ208E	5962-0151508QXC
RTSX72SU-1CGS624B	5962-0151508QYC	RTSX72SU-CQ256EV
RTSX72SU-CGS624E	RTSX72SU-CQ208EV	RTSX72SU-1CQ256EV
RTSX72SU-1CGS624E	RTSX72SU-1CQ208EV	RTSX72SU-CQ256PROTO
RTSX72SU-CGS624EV	RTSX72SU-CQ208PROTO	RTSX72SU-1CQ256PROTO
RTSX72SU-1CGS624EV	RTSX72SU-1CQ208PROTO	RTSX72SU-LG624B
RTSX72SU-CG624PROTO	RTSX72SU-CQ256B	RTSX72SU-1LG624B
RTSX72SU-1CG624PROTO	5962-0151505QXC	RTSX72SU-LG624E
RTSX72SU-CQ208B	RTSX72SU-1CQ256B	RTSX72SU-1LG624E
5962-0151505QYC	5962-0151506QXC	RTSX72SU-LG624EV
RTSX72SU-1CQ208B	RTSX72SU-CQ256E	RTSX72SU-1LG624EV
5962-0151506QYC	5962-0151507QXC	RTSX72SU-LG624PROTO
RTSX72SU-CQ208E	RTSX72SU-1CQ256E	RTSX72SU-1LG624PROTO
5962-0151507QYC		
RTAX250S/SL		
RTAX250S-CG624B	5962-0421904QYC	RTAX250SL-1CQ352E
5962-0421901QUA	RTAX250S-CQ208EV	5962-0421908QXC
RTAX250S-1CG624B	RTAX250S-1CQ208EV	RTAX250SL-CQ352EV
5962-0421902QUA	RTAX250SL-CQ208B	RTAX250SL-1CQ352EV
RTAX250S-CG624E	5962-0421905QYC	RTAX250S-CQ352PROTO
5962-0421903QUA	RTAX250SL-1CQ208B	RTAX250S-1CQ352PROTO
RTAX250S-1CG624E	5962-0421906QYC	RTAX250S-LG624B
5962-0421904QUA	RTAX250SL-CQ208E	5962-0421901QZC
RTAX250S-CG624EV	5962-0421907QYC	RTAX250S-1LG624B
RTAX250S-1CG624EV	RTAX250SL-1CQ208E	5962-0421902QZC
RTAX250SL-CG624B	5962-0421908QYC	RTAX250S-LG624E
5962-0421905QUA	RTAX250SL-CQ208EV	5962-0421903QZC
RTAX250SL-1CG624B	RTAX250SL-1CQ208EV	RTAX250S-1LG624E
5962-0421906QUA	RTAX250S-CQ208PROTO	5962-0421904QZC
RTAX250SL-CG624E	RTAX250S-1CQ208PROTO	RTAX250S-LG624EV
5962-0421907QUA	RTAX250S-CQ352B	RTAX250S-1LG624EV
RTAX250SL-1CG624E	5962-0421901QXC	RTAX250SL-LG624B
5962-0421908QUA	RTAX250S-CQ352E	5962-0421905QZC



Table 1. Affected Devices (continued)

RTAX250SL-CG624EV	5962-0421903QXC	RTAX250SL-1LG624B
RTAX250SL-1CG624EV	RTAX250S-1CQ352E	5962-0421906QZC
RTAX250S-CG624PROTO	5962-0421904QXC	RTAX250SL-LG624E
RTAX250S-1CG624PROTO	RTAX250S-CQ352EV	5962-0421907QZC
RTAX250S-CQ208B	RTAX250S-1CQ352EV	RTAX250SL-1LG624E
5962-0421901QYC	RTAX250SL-CQ352B	5962-0421908QZC
RTAX250S-1CQ208B	5962-0421905QXC	RTAX250SL-LG624EV
5962-0421902QYC	RTAX250SL-1CQ352B	RTAX250SL-1LG624EV
RTAX250S-CQ208E	5962-0421906QXC	RTAX250S-LG624PROTO
5962-0421903QYC	RTAX250SL-CQ352E	RTAX250S-1LG624PROTO
RTAX250S-1CQ208E	5962-0421907QXC	
RTAX1000S/SL		
RTAX1000S-CGS624B	RTAX1000S-CQ352B	RTAX1000S-LG624B
5962-0422001QUA	5962-0422001QXC	5962-0422001QYC
RTAX1000S-1CGS624B	RTAX1000S-1CQ352B	RTAX1000S-1LG624B
5962-0422002QUA	5962-0422002QXC	5962-0422002QYC
RTAX1000S-CGS624E	RTAX1000S-CQ352E	RTAX1000S-LG624E
5962-0422003QUA	5962-0422003QXC	5962-0422003QYC
RTAX1000S-1CGS624E	RTAX1000S-1CQ352E	RTAX1000S-1LG624E
5962-0422004QUA	5962-0422004QXC	5962-0422004QYC
RTAX1000S-CGS624EV	RTAX1000S-CQ352EV	RTAX1000S-LG624EV
RTAX1000S-1CGS624EV	RTAX1000S-1CQ352EV	RTAX1000S-1LG624EV
RTAX1000SL-CGS624B	RTAX1000SL-CQ352B	RTAX1000SL-LG624B
5962-0422005QUA	5962-0422005QXC	5962-0422005QYC
RTAX1000SL-1CGS624B	RTAX1000SL-1CQ352B	RTAX1000SL-1LG624B
5962-0422006QUA	5962-0422006QXC	5962-0422006QYC
RTAX1000SL-CGS624E	RTAX1000SL-CQ352E	RTAX1000SL-LG624E
5962-0422007QUA	5962-0422007QXC	5962-0422007QYC
RTAX1000SL-1CGS624E	RTAX1000SL-1CQ352E	RTAX1000SL-1LG624E
5962-0422008QUA	5962-0422008QXC	5962-0422008QYC
RTAX1000SL-CGS624EV	RTAX1000SL-CQ352EV	RTAX1000SL-LG624EV
RTAX1000SL-1CGS624EV	RTAX1000SL-1CQ352EV	RTAX1000SL-1LG624EV
RTAX1000S-CG624PROTO	RTAX1000S-CQ352PROTO	RTAX1000S-LG624PROTO
RTAX1000S-1CG624PROTO	RTAX1000S-1CQ352PROTO	RTAX1000S-1LG624PROTO



Table 1. Affected Devices (continued)

RTAX2000S/SL		
RTAX2000S-CG1152B	RTAX2000S-1CGS624E	RTAX2000SL-1CQ256B
5962-0422101QTA	5962-0422104QNA	5962-0422106QUC
RTAX2000S-1CG1152B	RTAX2000S-CGS624EV	RTAX2000SL-CQ256E
5962-0422102QTA	RTAX2000S-1CGS624EV	5962-0422107QUC
RTAX2000S-CG1152E	RTAX2000SL-CGS624B	RTAX2000SL-1CQ256E
5962-0422103QTA	5962-0422105QNA	5962-0422108QUC
RTAX2000S-1CG1152E	RTAX2000SL-1CGS624B	RTAX2000SL-CQ256EV
5962-0422104QTA	5962-0422106QNA	RTAX2000SL-1CQ256EV
RTAX2000S-CG1152EV	RTAX2000SL-CGS624E	RTAX2000S-CQ256PROTO
RTAX2000S-1CG1152EV	5962-0422107QNA	RTAX2000S-1CQ256PROTO
RTAX2000SL-CG1152B	RTAX2000SL-1CGS624E	RTAX2000S-CQ352B
5962-0422105QTA	5962-0422108QNA	5962-0422101QXC
RTAX2000SL-1CG1152B	RTAX2000SL-CGS624EV	RTAX2000S-1CQ352B
5962-0422106QTA	RTAX2000SL-1CGS624EV	5962-0422102QXC
RTAX2000SL-CG1152E	RTAX2000S-CG624PROTO	RTAX2000S-CQ352E
5962-0422107QTA	RTAX2000S-1CG624PROTO	5962-0422103QXC
RTAX2000SL-1CG1152E	RTAX2000S-1CQ256B	RTAX2000S-1CQ352E
5962-0422108QTA	5962-0422102QUC	5962-0422104QXC
RTAX2000SL-CG1152EV	RTAX2000S-CQ256E	RTAX2000S-CQ352EV
RTAX2000SL-1CG1152EV	5962-0422103QUC	RTAX2000S-1CQ352EV
RTAX2000S-CG1152PROTO	RTAX2000S-1CQ256E	RTAX2000SL-CQ352B
RTAX2000S-1CG1152PROTO	5962-0422104QUC	5962-0422105QXC
RTAX2000S-1CGS624B	RTAX2000S-CQ256EV	RTAX2000SL-1CQ352B
5962-0422102QNA	RTAX2000S-1CQ256EV	5962-0422106QXC
RTAX2000S-CGS624E	RTAX2000SL-CQ256B	RTAX2000SL-CQ352E
5962-0422103QNA	5962-0422105QUC	5962-0422107QXC
RTAX2000SL-1CQ352E	5962-0422105QMC	RTAX2000S-1LG624E
5962-0422108QXC	RTAX2000SL-1LG1152B	5962-0422104QYC
RTAX2000SL-CQ352EV	5962-0422106QMC	RTAX2000S-LG624EV
RTAX2000SL-1CQ352EV	RTAX2000SL-LG1152E	RTAX2000S-1LG624EV
RTAX2000S-CQ352PROTO	5962-0422107QMC	RTAX2000SL-LG624B
RTAX2000S-1CQ352PROTO	RTAX2000SL-1LG1152E	5962-0422105QYC
RTAX2000S-LG1152B	5962-0422108QMC	RTAX2000SL-1LG624B



Table 1. Affected Devices (continued)

5962-0422101QMC	RTAX2000SL-LG1152EV	5962-0422106QYC
RTAX2000S-1LG1152B	RTAX2000SL-1LG1152EV	RTAX2000SL-LG624E
5962-0422102QMC	RTAX2000S-LG1152PROTO	5962-0422107QYC
RTAX2000S-LG1152E	RTAX2000S-1LG1152PROTO	RTAX2000SL-1LG624E
5962-0422103QMC	RTAX2000S-LG624B	5962-0422108QYC
RTAX2000S-1LG1152E	5962-0422101QYC	RTAX2000SL-LG624EV
5962-0422104QMC	RTAX2000S-1LG624B	RTAX2000SL-1LG624EV
RTAX2000S-LG1152EV	5962-0422102QYC	RTAX2000S-LG624PROTO
RTAX2000S-1LG1152EV	RTAX2000S-LG624E	RTAX2000S-1LG624PROTO
RTAX2000SL-LG1152B	5962-0422103QYC	
RTAX4000/SL		
RTAX4000S-CG1272B	RTAX4000S-CQ352B	RTAX4000S-LG1272B
5962-0822401QZA	5962-0822401QXC	5962-0822401QYC
RTAX4000S-1CG1272B	RTAX4000S-1CQ352B	RTAX4000S-1LG1272B
5962-0822402QZA	5962-0822402QXC	5962-0822402QYC
RTAX4000S-CG1272E	RTAX4000S-CQ352E	RTAX4000S-LG1272E
5962-0822403QZA	5962-0822403QXC	5962-0822403QYC
RTAX4000S-1CG1272E	RTAX4000S-1CQ352E	RTAX4000S-1LG1272E
5962-0822404QZA	5962-0822404QXC	5962-0822404QYC
RTAX4000S-CG1272EV	RTAX4000S-CQ352EV	RTAX4000S-LG1272EV
RTAX4000S-1CG1272EV	RTAX4000S-1CQ352EV	RTAX4000S-1LG1272EV
RTAX4000SL-CG1272B	RTAX4000SL-CQ352B	RTAX4000SL-LG1272B
5962-0822405QZA	5962-0822405QXC	5962-0822405QYC
RTAX4000SL-1CG1272B	RTAX4000SL-1CQ352B	RTAX4000SL-1LG1272B
5962-0822406QZA	5962-0822406QXC	5962-0822406QYC
RTAX4000SL-CG1272E	RTAX4000SL-CQ352E	RTAX4000SL-LG1272E
5962-0822407QZA	5962-0822407QXC	5962-0822407QYC
RTAX4000SL-1CG1272E	RTAX4000SL-1CQ352E	RTAX4000SL-1LG1272E
5962-0822408QZA	5962-0822408QXC	5962-0822408QYC
RTAX4000SL-CG1272EV	RTAX4000SL-CQ352EV	RTAX4000SL-LG1272EV
RTAX4000SL-1CG1272EV	RTAX4000SL-1CQ352EV	RTAX4000SL-1LG1272EV
RTAX4000S-CG1272PROTO	RTAX4000S-CQ352PROTO	RTAX4000S-LG1272PROTO
RTAX4000S-1CG1272PROTO	RTAX4000S-1CQ352PROTO	RTAX4000S-1LG1272PROTO



Table 1. Affected Devices (continued)

RTAX-DSP		
RTAX2000D-CGD1272B	RTAX2000D-CQ352B	RTAX4000D-LGD1272B
RTAX2000D-CGD1272E	RTAX2000D-CQ352E	RTAX4000D-LGD1272E
RTAX2000D-CGD1272EV	RTAX2000D-CQ352EV	RTAX4000D-LGD1272EV
RTAX2000D-CGD1272PROTO	RTAX2000D-CQ352PROTO	RTAX4000D-LGD1272PROTO
RTAX2000D-LGD1272B	RTAX4000D-CGD1272B	RTAX4000D-CQ352B
RTAX2000D-LGD1272E	RTAX4000D-CGD1272E	RTAX4000D-CQ352E
RTAX2000D-LGD1272EV	RTAX4000D-CGD1272EV	RTAX4000D-CQ352EV
RTAX2000D-LGD1272PROTO	RTAX4000D-CGD1272PROTO	RTAX4000D-CQ352PROTO

If you have any questions, please contact Microsemi's SoC Products Group ITAR Technical Support at soc_tech_itar@microsemi.com.

Regards,

Microsemi Corporation