

# Functional Differences Between Rev. 1.0 and Rev. 1.1 of the MSC8157 DSP Family

The MSC8157 family DSPs are members of the Freescale family of high-end multicore programmable digital signal processors (DSPs) that use the fourth-generation StarCore SC3850 core.

This engineering bulletin discusses the functional differences between revisions 1.0 and 1.1 of this DSP family. Unless otherwise noted, MSC8157 includes the following devices:

- MSC8157
- MSC8157E
- MSC8158
- MSC8158E

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# 1 Summary of Differences

There are two principal areas of difference between Rev. 1.0 and Rev. 1.1 silicon, as follows:

- The revision portion of the device IDs have been updated to indicate the revision change.
- Three errata (SERDES1, SERDES2, and SERDES4) were fixed by Rev. 1.1.

# 2 Device IDs

**Table 1** summarizes the Device IDs for the Rev. 1.0 and Rev. 1.1 MSC8157 family devices.

**Table 1. Device ID**

Device	Rev	SPRIDR[PARTID: REVID)	RapidIO DIDCAR[DI]; DICAR[DR]	JTAG ID Register
MSC8157	1.0	0x8305:0000	0x1828; 0x0000	0x0188401D
	1.1	0x8305:0001	0x1828; 0x0001	0x1188401D
MSC8157E	1.0	0x830D:0000	0x182A, 0x0000	0x0188401D
	1.1	0x830D:0001	0x182A, 0x0001	0x1188401D
MSC8158	1.0	0x8303:0000	0x181C; 0x0000	0x0188401D
	1.1	0x8303:0001	0x181C; 0x0001	0x1188401D
MSC8158E	1.0	0x830B:0000	0x181E, 0x0000	0x0188401D
	1.1	0x830B:000	0x181E, 0x0001	0x1188401D

### 3 Errata Fixes

Rev. 1.1 silicon fixes the following three errata:

- SERDES1 caused SerDes PLL instability and decreased lock capability. This is corrected by Rev. 1.1.
- SERDES2 prevented enablement of 3.125 Gbaud operation for the SerDes ports. This is corrected by Rev. 1.1.
- SERDES4 prevented enablement of SGMII and Serial RapidIO communication at 1.25 Gbaud under certain conditions. This is corrected by Rev. 1.1.

#### NOTE

For details, refer to the following documents, available under NDA:

- *MSC8157 Device Errata* (MSC8157CE), Rev. D.
- *MSC8157E Device Errata* (MSC8157ECE), Rev. D.
- *MSC8158 Device Errata* (MSC8158CE), Rev. D.
- *MSC8158E Device Errata* (MSC8158ECE), Rev. D.

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