

14.4.77 Single-Bit ECC memory error management (DDR_ERR_SBE)

The single-bit ECC memory error management register stores the threshold value for reporting single-bit errors and the number of single-bit errors counted since the last error report. When the counter field reaches the threshold, it wraps back to the reset value (0). If necessary, software must clear the counter after it has managed the error.

Address: 8000h base + E58h offset = 8E58h

Bit	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
R																																
W	SSBET								SBET								SSBEC								SBEC							
Reset	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

DDR_ERR_SBE field descriptions

Field	Description
0–7 SSBET	Scrubbed single-bit error threshold. Establishes the number of single-bit errors that must be detected and fixed during ECC scrubbing before an error condition is reported.
8–15 SBET	Single-bit error threshold. Establishes the number of single-bit errors that must be detected before an error condition is reported.

Table continues on the next page...

DDR_ERR_SBE field descriptions (continued)

Field	Description
16–23 SSBEC	Scrubbed single-bit error counter. Indicates the number of scrubbed single-bit errors detected and fixed in memory since the last error report. This counter is incremented only if a single-bit error is detected during the ECC interval scrubbing. If single-bit error reporting is enabled, an error is reported and an interrupt is generated when this value equals SSBET. SSBEC is automatically cleared when the threshold value is reached.
24–31 SBEC	Single-bit error counter. Indicates the number of single-bit errors detected and corrected since the last error report. If single-bit error reporting is enabled, an error is reported and an interrupt is generated when this value equals SBET. SBEC is automatically cleared when the threshold value is reached. This counter is only incremented when single-bit errors which are not automatically fixed by the controller are detected.