



Intel Atom® x6000E Series, and Intel Pentium® and Celeron® N and J Series Processors (Code Name: Elkhart Lake) Platform CRB Intel® Safety Island (Intel® SI) Firmware

Revision 055 (v1.6)

Release Notes

August 2021

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Revision History

Date	Revision	Description
August 2021	055 (v1.6)	Maintenance Release 1 (MR1)
April 2021	053B	Plan Release 1 (PR1)
March 2021	048B	Production Version Release
January 2021	048B	Pre-Production QS Release
December 2020	048B	Beta 4 Engineering Release
September 2020	045A	Beta 1 and 2 Release, Beta 3 Engineering Release
July 2020	042	Alpha 8 Release
March 2020	036A	Alpha 1, Alpha 3, Alpha 5 Release
December 2019	033A	Engineering Release 3 (ER3)
November 2019	031	Engineering Release 1 (ER1)
October 2019	028	Engineering Release 0 (ER0)
August 2019	025	Pre-Silicon Software External Release 23 (ER23)
June 2019	020	Pre-Silicon Software External Release 20 (ER20)

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1.0 Introduction

1.1 Intended Audience

This document is intended for Intel® IOTG customers. This package contains the Intel® Safety Island firmware binary. This package is available to Intel customers who have an agreement in place to use Intel® production products.

1.2 Customer Support

For technical support, go to Intel® Premier Support:
<https://employeeportal.intel.com/irj/portal/IntelPremierSupportUser>

1.3 Terminology

Table 1. Terminology

Term	Description
Intel® SI	Intel® Safety Island

1.4 Reference Documents

Table 2. Reference Documents

Document	Document No.
<i>Elkhart Lake FUSA User Guide</i>	610113

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2.0 Intel® Safety Island

Table 3. Intel® Safety Island

Intel® Safety Island Version	Change Summary	Known Issues/Limitation
ISI_FW_v1.6_PROD_PV_SET_R55.bin	<ul style="list-style-type: none"> • PST default timing is set to 100ms in code. • Fixed getting NOK while running ODCC signature mismatch after OS boot. • Fixed booting issue when threshold value set as zero for certain parameters in ISIconfig.ini file. • Fixed ISI not issuing info on calling smcl_nok_alert_generate() with info as alarm severity. • Fixed ISI issuing NOK for multiple SMCL Warning generate request from HOST. • Fixed error log for scenarios like err1 timeout and nonrecoverable error not defined in the diagnostic data spec. • Fixed less coverage for transport_tracker.c • Fixed discrepancy between the diagnostic data for HOST STL/ODCC detected errors and their corresponding diagnostic data packet details given in diagnostic data spec. • Fixed HOST not getting diagnostic data for correctable/uncorrectable error sent with HOST STL results. • Fixed ISI and HOST are not exchanging their versions for command 0x407. 	<ul style="list-style-type: none"> • Diagnostic data mismatch for timer checks. • ISI error status for null pin info gets overwritten in insert_node function. • Diagnostic data not received on other channel for POSC failure test.

ISI_FW_R053B.bin	<ul style="list-style-type: none"> • Fixed code issue in fst_common_checks.c file. • Fixed incorrect event severity on exceeding threshold for correctable error. • Addressed negative ITD values in periodic FST. • Change of tolerance to 20mV in periodic FST. 	<ul style="list-style-type: none"> • Issuing NOK for continuous correctable error sent with HOST STL log. • ISI and HOST are not exchanging their versions for command 0x407.
ISI_FW_R048B.bin	<ul style="list-style-type: none"> • Fixed software adaptation for ClockMon rework and ISI register alignment. 	<ul style="list-style-type: none"> • FRCPU mailbox interrupt. • FSTM does not trigger PLL and VID FST periodically.
ISI_FW_R045A.bin	<ul style="list-style-type: none"> • Fixed VID/DT CRC mismatch failure. • Fixed issue for communication over SPI with 4 wires on MCU setup. 	<ul style="list-style-type: none"> • Alert is asserted only once when multiple warn alarms occur simultaneously. • Host is not notified when loopback mismatch occurs for NOK and alert assertion. • Firmware hangs when injecting PSS parity error. • Some error codes not reported by ISI to Host.
ISI_FW_R042.bin	<ul style="list-style-type: none"> • Changed TIMER_TICKS_PER_MICRO_SEC calculation in timer modules to avoid division operation. 	<ul style="list-style-type: none"> • BSP to be fixed in code. • RTOS, GP, Periodic and WD Timer driver issues.
ISI_FW_R036A.bin	<ul style="list-style-type: none"> • Clock monitoring and FrCPU are enabled. 	<ul style="list-style-type: none"> • Proof test is disabled. • ODCC 1002D is not enabled.

		• VID and Punit features are disabled.
ISI_FW_R033A.bin	N/A	N/A
ISI_FW_R031.bin	N/A	N/A
ISI_FW_R028.bin	N/A	N/A
ISI_FW_R020.bin	N/A	N/A