Document Number: ISF2P1_KINETIS_ER
Rev. 1, 4/2015

Intelligent Sensing Framework 2.1 for Kinetis Errata Sheet

The following errata sheet covers changes to the Freescale Intelligent Sensing Framework 2.1 (ISF 2.1) middleware, released for Kinetis® platforms. ISF 2.1 consists of Processor Expert® components that can be updated independent of a release.

These changes are made to the ISF R2P1 PEx.PEupd file (REV 2) that is added to the ISF project via CodeWarrior® or Kinetis Design Studio (KDS).

These changes have been tested locally, but a complete regression test on the various platforms has not been conducted. However, it is in the best interest of users to include these updates in a timely fashion.

Revision History

Rev	Date	Description
0	3/2015	Open and closed defects; defect corrections associated with the initial interim update to the ISF R2P1 PEx.PEupd file (REV 1).
1	4/2015	Open and closed defects; defect corrections associated with the initial interim update to the ISF R2P1 PEx.PEupd file (REV 2). • Added Table 2; Closed defects for ISF 2.1 PEupd.PE (Rev 2). • Added SSDSW-99 to Table 1 Open Defects.

Contents

1 ISF Known Defects and Limitations

Defect priority level is classified as follows:

Priority	Description
L1	The defect causes the system to fail. There is no known workaround.
L2	The defect fails to meet key functional requirements. There is a workaround.
L3	The defect or enhancement should be fixed in the next scheduled release.
L4	The defect or enhancement is noncritical.
L5	The defect or enhancement is trivial or cosmetic.

1.1 Software Limitation

Each embedded application is limited to accessing each specific sensor in a single subscription.

1.2 Open Defects

Table 1. Open defects

Defect ID	Ticket Summary	Ticket Submission Date	Priority
CR340211	ISF 2.0 depends on an update to the MQXLite_task PEx component in order to compile properly. Users must use the most recent version of CodeWarrior 10.6.1.	18 November 2014	L2
CR340214[1]	ISF Sensor Adapter PEx Components sometimes fail to offer I2C_CH1 Communications Channel to User.	18 November 2014	L3
SSDSW-99	The response packet for the Command Interpreter does not match the ISF 2.0 Software Reference Manual. The offset and command echo are eliminated for the response, and the number of bytes transferred is duplicated.	27 March 2015	L3

1. Also known as SSDSW-10

1.3 Closed Defects

Table 2. Closed defects – ISF 2.1 PEupd.PE (Rev 2) (21 April 2015)

Defect ID	Ticket Summary	Ticket Closure Date	Priority
CR340662[1]	In order for the Command Interpreter (CI) Streaming feature to work properly, the user must manually type in the following into the Protocol component methods: ci_stream_init ci_protocol_CB_stream	14 April 2015	L3
SSDSBOX-30[2]	Some internal tasks using floating point calculations do not enable MQX_FLOATING_POINT_TASK properly.	2 April 2015	L3
SSDSBOX-49[2]	There are numerous typographical errors in the generic sensor type definitions.	16 April 2015	L5
SSDSW-3	There are remnants of the MAG3110 embedded app appearing in the code generated in App1.c.	2 April 2015	L5
SSDSW-9	The fixed point conversion factors in FXOS8700CQ and FXAS21002C sensor adapters are incorrect. The fixed-point acceleration data has 15 fraction bits rather than 16. It is suspected that a similar situation exists for the magnetometer and gyroscope data as well.	16 April 2015	L3
SSDSW-79	Orientation Sensor does not include pressure data, the 10th axis.	10 April 2015	L2
SSDSW-97	Cycling the Orientation Sensor through STARTED_SUBSCRIBED to STOPPED_UNSUBSCRIBE and back does not work. The isf_fifo_init routine was called inside the sensor adapter configuration API instead of the initialization API.	10 April 2015	L3
SSDSW-98	The stack size for the main task of ISFEmbApp cannot be modified.	2 April 2015	L3
SSDSW-101	A request to steam data for the FXAS21002 at 800 Hz results in only 480–500 Hz stream data.	10 April 2015	L3
SSDSW-104	The FXAS21002 sensor adapter Processor Expert component does not allow the user to set sample rates of either 400 or 800 Hz.	10 April 2015	L3
SSDSW-105	The default task priorities for ISF were not correct and some could not be changed in the Processor Expert components.	10 April 2015	L3
SSDSW-106	The sensor adapter conversion tables are swapped for the FXAS21002C and the FXAS21000.	15 April 2015*	L3

1. Also known as SSDSW-6
2. Also known as SSDSW-4
3. Also known as SSDSW-8

Table 3. Closed defects – ISF 2.1 PEupd.PE (Rev 1) (20 March 2015)

Defect ID	Ticket Summary	Ticket Closure Date	Priority
SSDSW-2	FXAS21002C Sensor Adapter reports incorrect response to WHOAMI command.	20 March 2015	L2
SSDSW-64	The floating point conversion factors in MPL3115 sensor adapter are incorrect.	20 March 2015	L3
SSDSW-98	The stack size for MainTask of ISFEmbApp cannot be modified.	20 March 2015	L3

Table 4. Closed defects – ISF 2.1 (6 March 2015)

Defect ID	Ticket Summary	Ticket Closure Date	Priority
CR340207[1]	The installation shows unit test information released in the core library.	6 March 2015	L3
CR345614	The CI mailbox protocol does not use 2 bytes for offset as specified in the SWRM.	30 January 2015	L3
CR345907	If the Component name for the ISFEmbApp component is changed, the compilation fails.	2 February 2015	L3
CR345910	The FXOS8700CQ sensor adapter does not properly support accelerometer only usage at frequencies other than 400 Hz.	30 January 2015	L3
CR346036	The Device ID Command does not consistently return the expected 18 bytes of data.	30 January 2015	L2
SSDSBOX-81	Timestamp resolution has only 5 µsec resolution by default and may create duplicate timestamps.	9 February 2015	L3

1. Also known as SSDSW-5

Table 5. ISF 2.0 Release (December 2014)

Defect ID	Ticket Summary	Ticket Closure Date	Priority
CR312443	The Device info command returns incorrect values for legacy data fields.	30 September 2014	L4
CR318202	CW 10.6 build fails due to code duplication.	28 September 2014	L5
CR325403	Incomplete Error Handling in the DSA.	1 December 2014	L2
CR339505	Bus Manager appears to run out of tokens in the Newton sensor adapter.	1 December 2014	L3
CR340065	When the host writes an incorrect sample period data to the MAG310, the incorrect value is saved in memory even though an error message is sent to the user.	8 December 2014	L3
CR340212	Remove compilation warnings (Warnings generated by MQX™ remain.)	4 December 2014	L4
CR340215	Improve the error handling in the Embedded Application goto-state.	25 November 2014	L3
CR340217	Lack of error handling in Sensor Adapters.	25 November 2014	L3

2 ISF Errata Change Log

These changes have been tested locally but a complete regression test on the various platforms to the ISF R2P1 PEx.PEupd file (REV 1) has not been conducted. However, it is in the best interest of users to include these updates in a timely fashion.

Beginning with Version 2.1 (March 2015), ISF for Kinetis software errata are published in this errata sheet. Errata for earlier ISF for Kinetis releases were published in the software release notes. The following table chronicles the releases of these documents .

Table 6. ISF Errata Changes

ISF Release	Description	Document
Version 2.1 (April 2015)	Updated ISF R2P1 PEx.PEupd file (REV 2)	Errata Sheet (Rev 1 of this document)
Version 2.1 (March 2015)	Updated ISF R2P1 PEx.PEupd file (REV 1)	Errata Sheet Rev 0
Version 2.1 (March 2015)	Sensor Fusion incorporated as a virtual Orientation sensor.	Release Notes (ISF2P1_KINETIS_RN)
Version 2.0 (December 2014)	ISF integrated with Processor Expert with hardware abstraction for entire Kinetis platforms supporting PIT timers.	Release Notes
Version 1.1 (April 2014)	This the initial ISF release supporting Kinetis KL25Z.	Release Notes

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