

AC784xx_DFP EIM

5.1.0

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Chapter 1

Class Index

1.1 Class List

Here are the classes, structs, unions and interfaces with brief descriptions:

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Chapter 2

File Index

2.1 File List

Here is a list of all files with brief descriptions:

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Chapter 3

Class Documentation

3.1 Eim_ChannelConfigType Struct Reference

Eim fault type.

```
#include <Eim_Hal_Types.h>
```

Public Attributes

- uint32 [Eim_Word](#) [[EIM_WORD_NUM](#)]

3.1.1 Detailed Description

Eim fault type.

Definition at line 65 of file Eim_Hal_Types.h.

3.1.2 Member Data Documentation

3.1.2.1 Eim_Word

```
uint32 Eim_ChannelConfigType::Eim_Word[EIM\_WORD\_NUM]
```

Definition at line 67 of file Eim_Hal_Types.h.

The documentation for this struct was generated from the following file:

- [Eim_Hal_Types.h](#)

Chapter 4

File Documentation

4.1 AC784xx_API_Reference_Manual_EIM.pdf File Reference

4.2 AC784xx_Eim_Reg.h File Reference

This file provides extern Low level Eim register api.

```
#include "Device_Register.h"
#include "Esm_Hal_Types.h"
#include "Eim_Hal_Types.h"
```

Functions

- LOCAL_INLINE void [Eim_Reg_EnableGlobal](#) (boolean En)
Globally enable/disable error injection function.
- LOCAL_INLINE boolean [Eim_Reg_GetEnableGlobal](#) (void)
Get error injection function globally enable/disable state.
- LOCAL_INLINE void [Eim_Reg_EnableChannel](#) (Eim_ChannelType Channel, boolean En)
Enable/disable the corresponding error injection channel.
- LOCAL_INLINE void [Eim_Reg_ConfigWord0](#) (Eim_ChannelType Channel, uint32 Pattern)
Configure Injection word0 (Data).
- LOCAL_INLINE void [Eim_Reg_ConfigWord1](#) (Eim_ChannelType Channel, uint32 Pattern)
Configure Injection word1 (Address).
- LOCAL_INLINE void [Eim_Reg_ConfigWord2](#) (Eim_ChannelType Channel, uint32 Pattern)
Configure Injection word2 (Ecc Check).

4.2.1 Detailed Description

This file provides extern Low level Eim register api.

4.2.2 Function Documentation

4.2.2.1 Eim_Reg_ConfigWord0()

```
LOCAL_INLINE void Eim_Reg_ConfigWord0 (
    Eim_ChannelType Channel,
    uint32 Pattern )
```

Configure Injection word0 (Data).

Note

Function ID: DES_EIM_API_103

Parameters

in	<i>Channel</i>	error injection channel.
in	<i>Pattern</i>	injection pattern to check bit flip.

Returns

void

Definition at line 137 of file AC784xx_Eim_Reg.h.

4.2.2.2 Eim_Reg_ConfigWord1()

```
LOCAL_INLINE void Eim_Reg_ConfigWord1 (
    Eim_ChannelType Channel,
    uint32 Pattern )
```

Configure Injection word1 (Address).

Note

Function ID: DES_EIM_API_104

Parameters

in	<i>Channel</i>	error injection channel.
in	<i>Pattern</i>	injection pattern to check bit flip.

Returns

void

Definition at line 151 of file AC784xx_Eim_Reg.h.

4.2.2.3 Eim_Reg_ConfigWord2()

```
LOCAL_INLINE void Eim_Reg_ConfigWord2 (
    Eim_ChannelType Channel,
    uint32 Pattern )
```

Configure Injection word2 (Ecc Check).

Note

Function ID: DES_EIM_API_105

Parameters

in	<i>Channel</i>	error injection channel.
in	<i>Pattern</i>	injection pattern to check bit flip.

Returns

void

Definition at line 165 of file AC784xx_Eim_Reg.h.

4.2.2.4 Eim_Reg_EnableChannel()

```
LOCAL_INLINE void Eim_Reg_EnableChannel (
    Eim_ChannelType Channel,
    boolean En )
```

Enable/disable the corresponding error injection channel.

Note

Function ID: DES_EIM_API_102

Parameters

in	<i>Channel</i>	error injection channel.
in	<i>En</i>	enable/disable. TRUE: enable. FALSE: disable.

Returns

void

Definition at line 116 of file AC784xx_Eim_Reg.h.

4.2.2.5 Eim_Reg_EnableGlobal()

```
LOCAL_INLINE void Eim_Reg_EnableGlobal (
    boolean En )
```

Globally enable/disable error injection function.

Note

Function ID: DES_EIM_API_100

Parameters

in	En	enable/disable. TRUE: enable. FALSE: disable.
----	----	---

Returns

void

Definition at line 82 of file AC784xx_Eim_Reg.h.

4.2.2.6 Eim_Reg_GetEnableGlobal()

```
LOCAL_INLINE boolean Eim_Reg_GetEnableGlobal (
    void )
```

Get error injection function globally enable/disable state.

Note

Function ID: DES_EIM_API_101

Parameters

in	void	
----	------	--

Returns

Enable/disable state. TRUE: enable. FALSE: disable.

Definition at line 102 of file AC784xx_Eim_Reg.h.

4.3 Eim_Hal.c File Reference

This file provides Hal Eim api.

```
#include "AC784xx_Eim_Reg.h"
#include "Eim_Hal.h"
```

Macros

- #define [SRAM_L_BASE](#) (SRAM_L_START_ADDRESS)
- #define [SRAM_L_END](#) (SRAM_L_END_ADDRESS)
- #define [SRAM_U_BASE](#) (SRAM_U_START_ADDRESS)
- #define [SRAM_U_END](#) (SRAM_U_END_ADDRESS)

Functions

- void [Eim_Hal_Lock](#) (void)
Lock EIM.
- void [Eim_Hal_Unlock](#) (void)
Unlock EIM.
- void [Eim_Hal_SetupConfig](#) (Eim_ChannelType Channel, const [Eim_ChannelConfigType](#) *ConfigPtr)
Setup EIM configuration.
- uint32 [Eim_Hal_InjectFault](#) (Eim_ChannelType Channel, uint32 Offset)
Inject Fault to test ECC.
- void [Eim_Hal_ClearFault](#) (Eim_ChannelType Channel)
Clear fault to test ECC.

4.3.1 Detailed Description

This file provides Hal Eim api.

4.3.2 Macro Definition Documentation

4.3.2.1 SRAM_L_BASE

```
#define SRAM_L_BASE (SRAM_L_START_ADDRESS)
```

Definition at line 54 of file Eim_Hal.c.

4.3.2.2 SRAM_L_END

```
#define SRAM_L_END (SRAM_L_END_ADDRESS)
```

Definition at line 58 of file Eim_Hal.c.

4.3.2.3 SRAM_U_BASE

```
#define SRAM_U_BASE (SRAM_U_START_ADDRESS)
```

Definition at line 62 of file Eim_Hal.c.

4.3.2.4 SRAM_U_END

```
#define SRAM_U_END (SRAM_U_END_ADDRESS)
```

Definition at line 66 of file Eim_Hal.c.

4.3.3 Function Documentation

4.3.3.1 Eim_Hal_ClearFault()

```
void Eim_Hal_ClearFault (
    Eim_ChannelType Channel )
```

Clear fault to test ECC.

Note

Function ID: DES_EIM_API_005

Parameters

in	<i>Channel</i>	EIM channel.
----	----------------	--------------

Returns

void

Definition at line 170 of file Eim_Hal.c.

4.3.3.2 Eim_Hal_InjectFault()

```
uint32 Eim_Hal_InjectFault (
    Eim_ChannelType Channel,
    uint32 Offset )
```

Inject Fault to test ECC.

Note

Function ID: DES_EIM_API_004

Parameters

in	<i>Channel</i>	EIM channel.
in	<i>Offset</i>	EIM channel offset.

Returns

Value of EIM channel offset.

Definition at line 123 of file Eim_Hal.c.

4.3.3.3 Eim_Hal_Lock()

```
void Eim_Hal_Lock (  
    void )
```

Lock EIM.

Note

Function ID: DES_EIM_API_001

Parameters

in	void	
----	------	--

Returns

void

Definition at line 80 of file Eim_Hal.c.

4.3.3.4 Eim_Hal_SetupConfig()

```
void Eim_Hal_SetupConfig (  
    Eim_ChannelType Channel,  
    const Eim_ChannelConfigType * ConfigPtr )
```

Setup EIM configuration.

Note

Function ID: DES_EIM_API_003

Parameters

in	<i>Channel</i>	EIM channel.
in	<i>ConfigPtr</i>	pointer of EIM channel configuration.

Returns

void

Definition at line 103 of file Eim_Hal.c.

4.3.3.5 Eim_Hal_Unlock()

```
void Eim_Hal_Unlock (
    void )
```

Unlock EIM.

Note

Function ID: DES_EIM_API_002

Parameters

in	void	
----	------	--

Returns

void

Definition at line 91 of file Eim_Hal.c.

4.4 Eim_Hal.h File Reference

This file provides extern Hal Eim api.

```
#include "Eim_Hal_Types.h"
#include "Esm_Hal_Types.h"
```

Functions

- void [Eim_Hal_Lock](#) (void)
Lock EIM.
- void [Eim_Hal_Unlock](#) (void)
Unlock EIM.
- void [Eim_Hal_SetupConfig](#) (Eim_ChannelType Channel, const [Eim_ChannelConfigType](#) *ConfigPtr)
Setup EIM configuration.
- uint32 [Eim_Hal_InjectFault](#) (Eim_ChannelType Channel, uint32 Offset)
Inject Fault to test ECC.
- void [Eim_Hal_ClearFault](#) (Eim_ChannelType Channel)
Clear fault to test ECC.

4.4.1 Detailed Description

This file provides extern Hal Eim api.

4.4.2 Function Documentation

4.4.2.1 Eim_Hal_ClearFault()

```
void Eim_Hal_ClearFault (
    Eim_ChannelType Channel )
```

Clear fault to test ECC.

Note

Function ID: DES_EIM_API_005

Parameters

in	<i>Channel</i>	EIM channel.
----	----------------	--------------

Returns

void

Definition at line 170 of file Eim_Hal.c.

4.4.2.2 Eim_Hal_InjectFault()

```
uint32 Eim_Hal_InjectFault (
    Eim_ChannelType Channel,
    uint32 Offset )
```

Inject Fault to test ECC.

Note

Function ID: DES_EIM_API_004

Parameters

in	<i>Channel</i>	EIM channel.
----	----------------	--------------

Returns

void

Note

Function ID: DES_EIM_API_004

Parameters

in	<i>Channel</i>	EIM channel.
in	<i>Offset</i>	EIM channel offset.

Returns

Value of EIM channel offset.

Definition at line 123 of file Eim_Hal.c.

4.4.2.3 Eim_Hal_Lock()

```
void Eim_Hal_Lock (
    void )
```

Lock EIM.

Note

Function ID: DES_EIM_API_001

Parameters

in	<i>void</i>	
----	-------------	--

Returns

void

Definition at line 80 of file Eim_Hal.c.

4.4.2.4 Eim_Hal_SetupConfig()

```
void Eim_Hal_SetupConfig (
    Eim_ChannelType Channel,
    const Eim_ChannelConfigType * ConfigPtr )
```

Setup EIM configuration.

Note

Function ID: DES_EIM_API_003

Parameters

in	<i>Channel</i>	EIM channel.
in	<i>ConfigPtr</i>	pointer of EIM channel configuration.

Returns

void

Definition at line 103 of file Eim_Hal.c.

4.4.2.5 Eim_Hal_Unlock()

```
void Eim_Hal_Unlock (
    void )
```

Unlock EIM.

Note

Function ID: DES_EIM_API_002

Parameters

in	void	
----	------	--

Returns

void

Definition at line 91 of file Eim_Hal.c.

4.5 Eim_Hal_Types.h File Reference

This file provides Eim hal types header.

```
#include "Device_Register.h"
```

Classes

- struct [Eim_ChannelConfigType](#)
Eim fault type.

Macros

- #define [EIM_WORD_NUM](#) (sizeof(EIM_CHANNEL_Type) / sizeof(uint32))

4.5.1 Detailed Description

This file provides Eim hal types header.

4.5.2 Macro Definition Documentation

4.5.2.1 EIM_WORD_NUM

```
#define EIM_WORD_NUM (sizeof(EIM_CHANNEL_Type) / sizeof(uint32))
```

Definition at line 58 of file Eim_Hal_Types.h.

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