

AC784xx\_DFP CTU

4.1.0

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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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<a href="#">Ctu_MappingCfgType</a>	Ctu mapping configure structure . . . . .	4

# 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 Ctu\_CfgType Struct Reference

Ctu configure structure.

```
#include <Ctu_Hal.h>
```

#### Public Attributes

- boolean [EnLock](#)
- uint8 [CfgCnt](#)
- const [Ctu\\_MappingCfgType](#) \* [MappingCfgs](#)

#### 3.1.1 Detailed Description

Ctu configure structure.

Definition at line 64 of file Ctu\_Hal.h.

#### 3.1.2 Member Data Documentation

##### 3.1.2.1 CfgCnt

```
uint8 Ctu_CfgType::CfgCnt
```

Definition at line 67 of file Ctu\_Hal.h.

### 3.1.2.2 EnLock

```
boolean Ctu_CfgType::EnLock
```

Definition at line 66 of file Ctu\_Hal.h.

### 3.1.2.3 MappingCfgs

```
const Ctu_MappingCfgType* Ctu_CfgType::MappingCfgs
```

Definition at line 68 of file Ctu\_Hal.h.

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

- [Ctu\\_Hal.h](#)

## 3.2 Ctu\_MappingCfgType Struct Reference

Ctu mapping configure structure.

```
#include <Ctu_Hal.h>
```

### Public Attributes

- Ctu\_TargetModuleType [Module](#)
- Ctu\_TriggerSourceType [Source](#)

### 3.2.1 Detailed Description

Ctu mapping configure structure.

Definition at line 55 of file Ctu\_Hal.h.

### 3.2.2 Member Data Documentation

#### 3.2.2.1 Module

```
Ctu_TargetModuleType Ctu_MappingCfgType::Module
```

Definition at line 57 of file Ctu\_Hal.h.

#### 3.2.2.2 Source

```
Ctu_TriggerSourceType Ctu_MappingCfgType::Source
```

Definition at line 58 of file Ctu\_Hal.h.

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

- [Ctu\\_Hal.h](#)

## Chapter 4

# File Documentation

### 4.1 AC784xx\_API\_Reference\_Manual\_CTU.pdf File Reference

### 4.2 AC784xx\_Ctu\_Reg.h File Reference

ctu access register inline function definition.

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

#### Macros

- #define [CTU\\_REG\\_BASE](#) (CTU\_BASE)

#### Functions

- LOCAL\_INLINE void [Ctu\\_Reg\\_SetFunc](#) (uint32 FuncId, boolean Enable)  
*enable/disable function*
- LOCAL\_INLINE void [Ctu\\_Reg\\_SetModuleTrig](#) (uint32 Module, uint32 Source)  
*Set module trigger source.*
- LOCAL\_INLINE uint32 [Ctu\\_Reg\\_GetModuleTrig](#) (uint32 Module)  
*Get module trigger source.*
- LOCAL\_INLINE void [Ctu\\_Reg\\_EnableModuleLock](#) (uint32 ModuleIdx, boolean Enable)  
*Enable module lock.*
- LOCAL\_INLINE uint32 [Ctu\\_Reg\\_GetModuleLock](#) (uint32 ModuleIdx)  
*Get module lock.*
- LOCAL\_INLINE void [Ctu\\_Reg\\_SetAdc0Inter](#) (uint32 Value)  
*set adc0 inter*
- LOCAL\_INLINE void [Ctu\\_Reg\\_SetAdc1Inter](#) (uint32 Value)  
*set adc1 inter*

#### 4.2.1 Detailed Description

ctu access register inline function definition.



## 4.2.2 Macro Definition Documentation

### 4.2.2.1 CTU\_REG\_BASE

```
#define CTU_REG_BASE (CTU_BASE)
```

Definition at line 67 of file AC784xx\_Ctu\_Reg.h.

## 4.2.3 Function Documentation

### 4.2.3.1 Ctu\_Reg\_EnableModuleLock()

```
LOCAL_INLINE void Ctu_Reg_EnableModuleLock (  
    uint32 ModuleIdx,  
    boolean Enable )
```

Enable module lock.

#### Note

Function ID: DES\_MCL\_API\_213

#### Parameters

in	<i>ModuleIdx</i>	module idx
in	<i>Enable</i>	TRUE or FALSE, enable or disable lock

#### Returns

void

Definition at line 128 of file AC784xx\_Ctu\_Reg.h.

### 4.2.3.2 Ctu\_Reg\_GetModuleLock()

```
LOCAL_INLINE uint32 Ctu_Reg_GetModuleLock (  
    uint32 ModuleIdx )
```

Get module lock.

#### Note

Function ID: DES\_MCL\_API\_214

**Parameters**

in	<i>ModuleIdx</i>	module idx
----	------------------	------------

**Returns**

uint32: register lock, value is 0 or 1

Definition at line 144 of file AC784xx\_Ctu\_Reg.h.

**4.2.3.3 Ctu\_Reg\_GetModuleTrig()**

```
LOCAL_INLINE uint32 Ctu_Reg_GetModuleTrig (  
    uint32 Module )
```

Get module trigger source.

**Note**

Function ID: DES\_MCL\_API\_212

**Parameters**

in	<i>Module</i>	module id
----	---------------	-----------

**Returns**

uint32 : trigger source

Definition at line 111 of file AC784xx\_Ctu\_Reg.h.

**4.2.3.4 Ctu\_Reg\_SetAdc0Inter()**

```
LOCAL_INLINE void Ctu_Reg_SetAdc0Inter (  
    uint32 Value )
```

set adc0 inter

**Note**

Function ID: DES\_MCL\_API\_215

**Parameters**

in	<i>Value</i>	register value
----	--------------	----------------

Returns

void

Definition at line 160 of file AC784xx\_Ctu\_Reg.h.

4.2.3.5 Ctu\_Reg\_SetAdc1Inter()

```
LOCAL_INLINE void Ctu_Reg_SetAdc1Inter (
    uint32 Value )
```

set adc1 inter

Note

Function ID: DES\_MCL\_API\_216

Parameters

in	<i>Value</i>	register value
----	--------------	----------------

Returns

void

Definition at line 171 of file AC784xx\_Ctu\_Reg.h.

4.2.3.6 Ctu\_Reg\_SetFunc()

```
LOCAL_INLINE void Ctu_Reg_SetFunc (
    uint32 FuncId,
    boolean Enable )
```

enable/disable function

Note

Function ID: DES\_MCL\_API\_210

Parameters

in	<i>FuncId</i>	function id
in	<i>Enable</i>	TRUE or FALSE, enable or disable function

**Returns**

void

Definition at line 79 of file AC784xx\_Ctu\_Reg.h.

**4.2.3.7 Ctu\_Reg\_SetModuleTrig()**

```
LOCAL_INLINE void Ctu_Reg_SetModuleTrig (  
    uint32 Module,  
    uint32 Source )
```

Set module trigger source.

**Note**

Function ID: DES\_MCL\_API\_211

**Parameters**

in	<i>Module</i>	target module
in	<i>Source</i>	trigger source

**Returns**

void

Definition at line 96 of file AC784xx\_Ctu\_Reg.h.

## 4.3 Ctu\_Hal.c File Reference

ctu hal source file.

```
#include "Ctu_Hal.h"  
#include "Ckgen_Hal.h"  
#include "Rcm_Hal.h"  
#include "AC784xx_Ctu_Reg.h"
```

**Macros**

- #define CTU\_MODULE\_LOCK\_CNT (23U)
- #define CTU\_MODULE\_ARRAY\_CNT (21U)
- #define CTU\_MODULE\_OFFSET (4U)

## Functions

- void [Ctu\\_Hal\\_EnableSWTrigger](#) (Ctu\_SWTriggerIdType Id, boolean Enable)  
*enable/disable software trigger source*
- void [Ctu\\_Hal\\_EnableFunc](#) (Ctu\_FuncIdType FuncId, boolean Enable)  
*enable module function*
- Ctu\_TriggerSourceType [Ctu\\_Hal\\_GetModuleTriggerSource](#) (Ctu\_TargetModuleType Module)  
*Get module trigger source.*
- Hal\_StatusType [Ctu\\_Hal\\_SetModuleTriggerSource](#) (Ctu\_TargetModuleType Module, Ctu\_TriggerSourceType Source)  
*Set module trigger source.*
- void [Ctu\\_Hal\\_Init](#) (const Ctu\_CfgType \*CfgPtr)  
*Initialize module trigger source.*
- void [Ctu\\_Hal\\_DeInit](#) (void)  
*Deinit ctu.*

### 4.3.1 Detailed Description

ctu hal source file.

### 4.3.2 Macro Definition Documentation

#### 4.3.2.1 CTU\_MODULE\_ARRAY\_CNT

```
#define CTU_MODULE_ARRAY_CNT (21U)
```

Definition at line 55 of file Ctu\_Hal.c.

#### 4.3.2.2 CTU\_MODULE\_LOCK\_CNT

```
#define CTU_MODULE_LOCK_CNT (23U)
```

Definition at line 52 of file Ctu\_Hal.c.

#### 4.3.2.3 CTU\_MODULE\_OFFSET

```
#define CTU_MODULE_OFFSET (4U)
```

Definition at line 58 of file Ctu\_Hal.c.

### 4.3.3 Function Documentation

#### 4.3.3.1 Ctu\_Hal\_DeInit()

```
void Ctu_Hal_DeInit (
    void )
```

Deinit ctu.

##### Note

Function ID: DES\_MCL\_API\_206

##### Returns

void

Definition at line 223 of file Ctu\_Hal.c.

#### 4.3.3.2 Ctu\_Hal\_EnableFunc()

```
void Ctu_Hal_EnableFunc (
    Ctu_FuncIdType FuncId,
    boolean Enable )
```

enable module function

##### Note

Function ID: DES\_MCL\_API\_205

##### Parameters

in	<i>FuncId</i>	module function id
in	<i>Enable</i>	enable or disable

##### Returns

void

Definition at line 85 of file Ctu\_Hal.c.

#### 4.3.3.3 Ctu\_Hal\_EnableSWTrigger()

```
void Ctu_Hal_EnableSWTrigger (
    Ctu_SWTriggerIdType Id,
    boolean Enable )
```

enable/disbale software trigger source

##### Note

Function ID: DES\_MCL\_API\_204

**Parameters**

in	<i>Id</i>	software trigger source id
in	<i>Enable</i>	enable/disable software trigger

**Returns**

void

Definition at line 73 of file Ctu\_Hal.c.

**4.3.3.4 Ctu\_Hal\_GetModuleTriggerSource()**

```
Ctu_TriggerSourceType Ctu_Hal_GetModuleTriggerSource (
    Ctu_TargetModuleType Module )
```

Get module trigger source.

**Note**

Function ID: DES\_MCL\_API\_203

**Parameters**

in	<i>Module</i>	module id
----	---------------	-----------

**Returns**

Ctu\_TriggerSourceType: module trigger source

Definition at line 141 of file Ctu\_Hal.c.

**4.3.3.5 Ctu\_Hal\_Init()**

```
void Ctu_Hal_Init (
    const Ctu_CfgType * CfgPtr )
```

Initialize module trigger source.

**Note**

Function ID: DES\_MCL\_API\_201

**Parameters**

in	<i>CfgPtr</i>	the pointer to the Ctu_CfgType structure
----	---------------	--

**Returns**

void

Definition at line 178 of file Ctu\_Hal.c.

**4.3.3.6 Ctu\_Hal\_SetModuleTriggerSource()**

```
Hal_StatusType Ctu_Hal_SetModuleTriggerSource (
    Ctu_TargetModuleType Module,
    Ctu_TriggerSourceType Source )
```

Set module trigger source.

**Note**

Function ID: DES\_MCL\_API\_202

**Parameters**

in	<i>Module</i>	target module
in	<i>Source</i>	trigger source

**Returns**

Hal\_StatusType: set success or not

Definition at line 157 of file Ctu\_Hal.c.

**4.4 Ctu\_Hal.h File Reference**

ctu hal define.

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

**Classes**

- struct [Ctu\\_MappingCfgType](#)  
*Ctu mapping configure structure.*
- struct [Ctu\\_CfgType](#)  
*Ctu configure structure.*



## Functions

- void [Ctu\\_Hal\\_Init](#) (const [Ctu\\_CfgType](#) \*CfgPtr)  
*Initialize module trigger source.*
- Hal\_StatusType [Ctu\\_Hal\\_SetModuleTriggerSource](#) (Ctu\_TargetModuleType Module, Ctu\_TriggerSourceType Source)  
*Set module trigger source.*
- Ctu\_TriggerSourceType [Ctu\\_Hal\\_GetModuleTriggerSource](#) (Ctu\_TargetModuleType Module)  
*Get module trigger source.*
- void [Ctu\\_Hal\\_EnableSWTrigger](#) (Ctu\_SWTriggerIdType Id, boolean Enable)  
*enable/disable software trigger source*
- void [Ctu\\_Hal\\_EnableFunc](#) (Ctu\_FuncIdType FuncId, boolean Enable)  
*enable module function*
- void [Ctu\\_Hal\\_DeInit](#) (void)  
*Deinit ctu.*

### 4.4.1 Detailed Description

ctu hal define.

### 4.4.2 Function Documentation

#### 4.4.2.1 Ctu\_Hal\_DeInit()

```
void Ctu_Hal_DeInit (
    void )
```

Deinit ctu.

#### Note

Function ID: DES\_MCL\_API\_206

#### Returns

void

Definition at line 223 of file Ctu\_Hal.c.

#### 4.4.2.2 Ctu\_Hal\_EnableFunc()

```
void Ctu_Hal_EnableFunc (
    Ctu_FuncIdType FuncId,
    boolean Enable )
```

enable module function

#### Note

Function ID: DES\_MCL\_API\_205

**Parameters**

in	<i>Func↔ Id</i>	module function id
in	<i>Enable</i>	enable or disable

**Returns**

void

Definition at line 85 of file Ctu\_Hal.c.

**4.4.2.3 Ctu\_Hal\_EnableSWTrigger()**

```
void Ctu_Hal_EnableSWTrigger (
    Ctu_SWTriggerIdType Id,
    boolean Enable )
```

enable/disbale software trigger source

**Note**

Function ID: DES\_MCL\_API\_204

**Parameters**

in	<i>Id</i>	software trigger source id
in	<i>Enable</i>	enable/disable software trigger

**Returns**

void

Definition at line 73 of file Ctu\_Hal.c.

**4.4.2.4 Ctu\_Hal\_GetModuleTriggerSource()**

```
Ctu_TriggerSourceType Ctu_Hal_GetModuleTriggerSource (
    Ctu_TargetModuleType Module )
```

Get module trigger source.

**Note**

Function ID: DES\_MCL\_API\_203

**Parameters**

in	<i>Module</i>	module id
----	---------------	-----------

**Returns**

Ctu\_TriggerSourceType: module trigger source

Definition at line 141 of file Ctu\_Hal.c.

**4.4.2.5 Ctu\_Hal\_Init()**

```
void Ctu_Hal_Init (
    const Ctu_CfgType * CfgPtr )
```

Initialize module trigger source.

**Note**

Function ID: DES\_MCL\_API\_201

**Parameters**

in	<i>CfgPtr</i>	the pointer to the Ctu_CfgType structure
----	---------------	--

**Returns**

void

Definition at line 178 of file Ctu\_Hal.c.

**4.4.2.6 Ctu\_Hal\_SetModuleTriggerSource()**

```
Hal_StatusType Ctu_Hal_SetModuleTriggerSource (
    Ctu_TargetModuleType Module,
    Ctu_TriggerSourceType Source )
```

Set module trigger source.

**Note**

Function ID: DES\_MCL\_API\_202

**Parameters**

in	<i>Module</i>	target module
in	<i>Source</i>	trigger source

#### Returns

Hal\_StatusType: set success or not

Definition at line 157 of file Ctu\_Hal.c.

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