

# VADC\_GROUP\_CONFIG

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## Data Structures

Here are the data structures with brief descriptions:

[VADC\\_GROUP\\_CONFIG](#)

**Config  
structure**

[VADC\\_GROUP\\_CONFIG\\_CHANNEL](#)

[VADC\\_GROUP\\_CONFIG\\_RESULT\\_REGISTER](#)



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## VADC\_GROUP\_CONFIG Struct Reference

## Detailed Description

config structure

Definition at line **127** of file **VADC\_GROUP\_CONFIG.h**.

```
#include <VADC_GROUP_CONFIG.h>
```

## Data Fields

---

VADC\_GROUP\_CONFIG\_func\_ptr **init\_func**

---

XMC\_VADC\_GROUP\_t \*const **group\_ptr**

---

XMC\_VADC\_GLOBAL\_t \*const **module\_ptr**

## Field Documentation

**XMC\_VADC\_GROUP\_t\* const VADC\_GROUP\_CONFIG::group\_ptr**

VADC Group ptr

Definition at line [131](#) of file [VADC\\_GROUP\\_CONFIG.h](#).

**VADC\_GROUP\_CONFIG\_func\_ptr VADC\_GROUP\_CONFIG::init\_fur**

Function pointer to configure a VADC Group

Definition at line [129](#) of file [VADC\\_GROUP\\_CONFIG.h](#).

Referenced by [VADC\\_GROUP\\_CONFIG\\_Init\(\)](#).

**XMC\_VADC\_GLOBAL\_t\* const VADC\_GROUP\_CONFIG::module\_p**

VADC Module ptr

Definition at line [134](#) of file [VADC\\_GROUP\\_CONFIG.h](#).

---

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

- [VADC\\_GROUP\\_CONFIG.h](#)
- 
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## VADC\_GROUP\_CONFIG\_CHANNEL Struct Reference

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## Detailed Description

Structure to configure the channels

Definition at line **105** of file **VADC\_GROUP\_CONFIG.h**.

```
#include <VADC_GROUP_CONFIG.h>
```

## Data Fields

---

`const XMC_VADC_CHANNEL_CONFIG_t* ch_handle`

---

`const uint8_t ch_num`



## Field Documentation

**const XMC\_VADC\_CHANNEL\_CONFIG\_t\* VADC\_GROUP\_CONFIG\_**

This holds the VADC Channel LLD structures

Definition at line **107** of file **VADC\_GROUP\_CONFIG.h**.

**const uint8\_t VADC\_GROUP\_CONFIG\_CHANNEL::ch\_num**

This Holds the Channel Number

Definition at line **109** of file **VADC\_GROUP\_CONFIG.h**.

---

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

- **VADC\_GROUP\_CONFIG.h**



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## VADC\_GROUP\_CONFIG\_RESULT\_REGISTER Struct Reference

## Detailed Description

Structure to configure the channels

Definition at line **116** of file **VADC\_GROUP\_CONFIG.h**.

```
#include <VADC_GROUP_CONFIG.h>
```

## Data Fields

---

```
const XMC_VADC_RESULT_CONFIG_t* res_handle
```

---

```
const uint8_t res_reg_num
```

## Field Documentation

**const XMC\_VADC\_RESULT\_CONFIG\_t\* VADC\_GROUP\_CONFIG\_R**

This holds the VADC Result Register LLD structures

Definition at line **118** of file **VADC\_GROUP\_CONFIG.h**.

**const uint8\_t VADC\_GROUP\_CONFIG\_RESULT\_REGISTER::res\_re**

This Holds the Result Register Number

Definition at line **120** of file **VADC\_GROUP\_CONFIG.h**.

---

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

- **VADC\_GROUP\_CONFIG.h**



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Here is a list of all documented struct and union fields with links to the struct/union documentation for each field:

- `ch_handle` : [VADC\\_GROUP\\_CONFIG\\_CHANNEL](#)
- `ch_num` : [VADC\\_GROUP\\_CONFIG\\_CHANNEL](#)
- `group_ptr` : [VADC\\_GROUP\\_CONFIG](#)
- `init_func` : [VADC\\_GROUP\\_CONFIG](#)
- `module_ptr` : [VADC\\_GROUP\\_CONFIG](#)
- `res_handle` : [VADC\\_GROUP\\_CONFIG\\_RESULT\\_REGISTER](#)
- `res_reg_num` : [VADC\\_GROUP\\_CONFIG\\_RESULT\\_REGISTER](#)



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- `ch_handle` : [VADC\\_GROUP\\_CONFIG\\_CHANNEL](#)
- `ch_num` : [VADC\\_GROUP\\_CONFIG\\_CHANNEL](#)
- `group_ptr` : [VADC\\_GROUP\\_CONFIG](#)
- `init_func` : [VADC\\_GROUP\\_CONFIG](#)
- `module_ptr` : [VADC\\_GROUP\\_CONFIG](#)
- `res_handle` : [VADC\\_GROUP\\_CONFIG\\_RESULT\\_REGISTER](#)
- `res_reg_num` : [VADC\\_GROUP\\_CONFIG\\_RESULT\\_REGISTER](#)





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File List

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## File List

Here is a list of all documented files with brief descriptions:

 [VADC\\_GROUP\\_CONFIG.c](#)

 [VADC\\_GROUP\\_CONFIG.h](#)



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[Functions](#)

## VADC\_GROUP\_CONFIG.c File Reference

## Detailed Description

### Date

2016-08-18

NOTE: This file is generated by DAVE-4. Any manual modification done to this file will be lost when the code is regenerated.

Definition in file [VADC\\_GROUP\\_CONFIG.c](#).

## Functions

`DAVE_APP_VERSION_t` **VADC\_GROUP\_CONFIG\_GetA**  
`()`  
Get the **VADC\_GROUP\_CONFIG**  
version. [More...](#)

**VADC\_GROUP\_CONFIG\_STATUS\_t** **VADC\_GROUP\_CONFIG\_Init** (  
**VADC\_GROUP\_CONFIG\_t** \*cor  
Function to initialize the SPI mod  
per the configuration made in GL

## Function Documentation

**VADC\_GROUP\_CONFIG\_STATUS\_t VADC\_GROUP\_CONFIG\_Init ( c**

Function to initialize the SPI module as per the configuration made in GUI.

### Parameters

[in] **handle** Pointer to static content of APP configuration.

### Returns

VADC\_GROUP\_CONFIG\_STATUS\_t: Status of the SPI driver initialization.

**VADC\_GROUP\_CONFIG\_STATUS\_SUCCESS** - on successful initialization.

**VADC\_GROUP\_CONFIG\_STATUS\_FAILURE** - if initialization fails.

Definition at line **97** of file **VADC\_GROUP\_CONFIG.c**.

References **VADC\_GROUP\_CONFIG::init\_func**, and **VADC\_GROUP\_CONFIG\_STATUS\_SUCCESS**.

[Go to the source code of this file.](#)



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## VADC\_GROUP\_CONFIG.h File Reference

## Detailed Description

### Date

2016-08-18

NOTE: This file is generated by DAVE-4. Any manual modification done to this file will be lost when the code is regenerated.

Definition in file [VADC\\_GROUP\\_CONFIG.h](#).

## Data Structures

---

struct **VADC\_GROUP\_CONFIG\_CHANNEL**

---

struct **VADC\_GROUP\_CONFIG\_RESULT\_REGISTER**

---

struct **VADC\_GROUP\_CONFIG**  
config structure [More...](#)



## Typedefs

---

```
typedef struct VADC_GROUP_CONFIG_CHANNEL VADC_GROUP_COM
```

---

```
typedef struct VADC_GROUP_CONFIG_RESULT_REGISTER VADC_GROUP_COM
```

---

```
typedef struct VADC_GROUP_CONFIG VADC_GROUP_COM  
config structure
```

## Functions

<code>DAVE_APP_VERSION_t</code>	<code>VADC_GROUP_CONFIG_GetA (void)</code> Get the <code>VADC_GROUP_CONFIG</code> version. More...
<code>VADC_GROUP_CONFIG_STATUS_t</code>	<code>VADC_GROUP_CONFIG_Init (c VADC_GROUP_CONFIG_t *cor</code> Function to initialize the SPI moc configuration made in GUI. More
<code>enum</code>	<code>VADC_GROUP_CONFIG_STAT VADC_GROUP_CONFIG_STAT = 0U, VADC_GROUP_CONFIG_STAT }</code> Return value of an API. More...
<code>typedef enum VADC_GROUP_CONFIG_STATUS</code>	<code>VADC_GROUP_CONFIG_STAT</code> Return value of an API.

[Go to the source code of this file.](#)



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Here is a list of all documented functions, variables, defines, enums, and typedefs with links to the documentation:

- [VADC\\_GROUP\\_CONFIG\\_CHANNEL\\_t](#) :  
[VADC\\_GROUP\\_CONFIG.h](#)
- [VADC\\_GROUP\\_CONFIG\\_GetAppVersion\(\)](#) :  
[VADC\\_GROUP\\_CONFIG.c](#) , [VADC\\_GROUP\\_CONFIG.h](#)
- [VADC\\_GROUP\\_CONFIG\\_Init\(\)](#) : [VADC\\_GROUP\\_CONFIG.c](#) ,  
[VADC\\_GROUP\\_CONFIG.h](#)
- [VADC\\_GROUP\\_CONFIG\\_RESULT\\_REGISTER\\_t](#) :  
[VADC\\_GROUP\\_CONFIG.h](#)
- [VADC\\_GROUP\\_CONFIG\\_STATUS](#) : [VADC\\_GROUP\\_CONFIG.h](#)
- [VADC\\_GROUP\\_CONFIG\\_STATUS\\_FAILURE](#) :  
[VADC\\_GROUP\\_CONFIG.h](#)
- [VADC\\_GROUP\\_CONFIG\\_STATUS\\_SUCCESS](#) :  
[VADC\\_GROUP\\_CONFIG.h](#)
- [VADC\\_GROUP\\_CONFIG\\_STATUS\\_t](#) : [VADC\\_GROUP\\_CONFIG.h](#)
- [VADC\\_GROUP\\_CONFIG\\_t](#) : [VADC\\_GROUP\\_CONFIG.h](#)



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- VADC\_GROUP\_CONFIG\_GetAppVersion() :  
[VADC\\_GROUP\\_CONFIG.c](#) , [VADC\\_GROUP\\_CONFIG.h](#)
- VADC\_GROUP\_CONFIG\_Init() : [VADC\\_GROUP\\_CONFIG.c](#) ,  
[VADC\\_GROUP\\_CONFIG.h](#)



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- VADC\_GROUP\_CONFIG\_CHANNEL\_t :  
[VADC\\_GROUP\\_CONFIG.h](#)
- VADC\_GROUP\_CONFIG\_RESULT\_REGISTER\_t :  
[VADC\\_GROUP\\_CONFIG.h](#)
- VADC\_GROUP\_CONFIG\_STATUS\_t : [VADC\\_GROUP\\_CONFIG.h](#)
- VADC\_GROUP\_CONFIG\_t : [VADC\\_GROUP\\_CONFIG.h](#)



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- VADC\_GROUP\_CONFIG\_STATUS : [VADC\\_GROUP\\_CONFIG.h](#)



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- VADC\_GROUP\_CONFIG\_STATUS\_FAILURE :  
[VADC\\_GROUP\\_CONFIG.h](#)
- VADC\_GROUP\_CONFIG\_STATUS\_SUCCESS :  
[VADC\\_GROUP\\_CONFIG.h](#)



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## VADC\_GROUP\_CONFIG.h

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1

```
52 /*****
```

```
53 * HEADER FILES
```

```
54
```

```
*****
```

```
55 #ifndef VADC_GROUP_CONFIG_H
```

```
56 #define VADC_GROUP_CONFIG_H
```

```
57
```

```
58 #include "VADC_GLOBAL_CONFIG/vadc_global_config.h"
```

```
59 #include "vadc_group_config_conf.h"
```

```
60
```

```
61 /*****
```

```
62 * MACROS
```

```
63
```

```
*****
```

```
64 #if (!(XMC_LIB_MAJOR_VERSION == 2U) && \
```

```
65 (XMC_LIB_MINOR_VERSION >= 1U) && \
```

```
66 (XMC_LIB_PATCH_VERSION >= 8U)))
```

```
67 #error "VADC_GROUP_CONFIG requires XMC Peripheral Library  
v2.1.8 or higher"
```

```
68 #endif
```

```
69
```

```
70 /*****
```

```
71 * ENUMS
```

```
72
```

```
*****
```



```

73
80 typedef enum VADC_GROUP_CONFIG_STATUS
81 {
82     VADC_GROUP_CONFIG_STATUS_SUCCESS = 0U,
83     VADC_GROUP_CONFIG_STATUS_FAILURE
85 } VADC_GROUP_CONFIG_STATUS_t;
86
91 /*****
92  * DATA STRUCTURES
93  *****/
94
95 typedef VADC_GROUP_CONFIG_STATUS_t
(*VADC_GROUP_CONFIG_func_ptr) (void);
96
105 typedef struct VADC_GROUP_CONFIG_CHANNEL
106 {
107     const XMC_VADC_CHANNEL_CONFIG_t *ch_handle;
109     const uint8_t ch_num;
111 } VADC_GROUP_CONFIG_CHANNEL_t;
112
116 typedef struct VADC_GROUP_CONFIG_RESULT_REGISTER
117 {
118     const XMC_VADC_RESULT_CONFIG_t *res_handle;
120     const uint8_t res_reg_num;
122 } VADC_GROUP_CONFIG_RESULT_REGISTER_t;
123
127 typedef struct VADC_GROUP_CONFIG
128 {
129     VADC_GROUP_CONFIG_func_ptr init_func;
130     #if XMC_VADC_GROUP_AVAILABLE == 1U
131     XMC_VADC_GROUP_t *const group_ptr;
132     #endif
133
134     XMC_VADC_GLOBAL_t *const module_ptr;
135 } VADC_GROUP_CONFIG_t;
136

```

```
141 /*****
142  * API Prototypes
143
144  *****/
144 #ifdef __cplusplus
145 extern "C" {
146 #endif
147
161 DAVE_APP_VERSION_t
VADC_GROUP_CONFIG_GetAppVersion(void);
162
201 VADC_GROUP_CONFIG_STATUS_t
VADC_GROUP_CONFIG_Init(const VADC_GROUP_CONFIG_t *const
handle);
202
207 /* Include App extern declaration file */
208 #include "vadc_group_config_extern.h"
209
210 #ifdef __cplusplus
211 }
212 #endif
213
214 #endif /* VADC_GROUP_CONFIG_H */
```

---

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## VADC\_GROUP\_CONFIG.c

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1

```
53 /*****
```

```
54 * HEADER FILES
```

```
55
```

```
*****
```

```
56 #include "vadc_group_config.h"
```

```
57
```

```
58 /*****
```

```
59 * MACROS
```

```
60
```

```
*****
```

```
61
```

```
62 /*****
```

```
63 * LOCAL DATA
```

```
64
```

```
*****
```

```
65
```

```
66 /*****
```

```
67 * LOCAL ROUTINES
```

```
68
```

```
*****
```

```
69
```

```
70 /*****
```

```
71 * API IMPLEMENTATION
```

```
72
```

```
*****
```

```
73
78 DAVE_APP_VERSION_t
VADC_GROUP_CONFIG_GetAppVersion()
79 {
80 DAVE_APP_VERSION_t version;
81
82 version.major = VADC_GROUP_CONFIG_MAJOR_VERSION;
83 version.minor = VADC_GROUP_CONFIG_MINOR_VERSION;
84 version.patch = VADC_GROUP_CONFIG_PATCH_VERSION;
85
86 return version;
87 }
97 VADC_GROUP_CONFIG_STATUS_t
VADC_GROUP_CONFIG_Init(const VADC_GROUP_CONFIG_t *const
handle)
98 {
99 VADC_GROUP_CONFIG_STATUS_t status;
100 XMC_ASSERT("VADC_GROUP_CONFIG_Init APP handle
function pointer uninitialized", ((handle != NULL) &&
101 (handle->init_func !=NULL)))
102
103 status = VADC_GROUP_CONFIG_STATUS_SUCCESS;
104
105 status = handle->init_func();
106
107 return status;
108 }
```

---

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## Data structures

# Data Structures

struct **VADC\_GROUP\_COM**

typedef struct **VADC\_GROUP\_CONFIG\_CHANNEL** **VADC\_GROUP\_COM**

typedef struct **VADC\_GROUP\_CONFIG\_RESULT\_REGISTER** **VADC\_GROUP\_COM**

typedef struct **VADC\_GROUP\_CONFIG** **VADC\_GROUP\_COM**  
config structure

## Detailed Description

## Typedef Documentation

**typedef struct** `VADC_GROUP_CONFIG_CHANNEL` `VADC_GROUP_`

Structure to configure the channels

**typedef struct** `VADC_GROUP_CONFIG_RESULT_REGISTER` `VADC_`

Structure to configure the channels





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## Files

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file [VADC\\_GROUP\\_CONFIG.c](#) [code]

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file [VADC\\_GROUP\\_CONFIG.h](#) [code]

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## Methods

`DAVE_APP_VERSION_t` [VADC\\_GROUP\\_CONFIG\\_GetA](#)  
(void)  
Get the `VADC_GROUP_CONFIG`  
version. [More...](#)

`VADC_GROUP_CONFIG_STATUS_t` [VADC\\_GROUP\\_CONFIG\\_Init](#) (`VADC_GROUP_CONFIG_t *cor`  
Function to initialize the SPI mod  
per the configuration made in GL

## **Detailed Description**

### **Methods**

## Function Documentation

### **DAVE\_APP\_VERSION\_t VADC\_GROUP\_CONFIG\_GetAppVersion (**

Get the **VADC\_GROUP\_CONFIG** APP version.

#### **Returns**

**DAVE\_APP\_VERSION\_t** APP version information (major, minor and patch number)

Example Usage:

#### **Returns**

**DAVE\_APP\_VERSION\_t** APP version information (major, minor and patch number)

Definition at line **78** of file **VADC\_GROUP\_CONFIG.c**.

### **VADC\_GROUP\_CONFIG\_STATUS\_t VADC\_GROUP\_CONFIG\_Init (**

Function to initialize the SPI module as per the configuration made in GUI.

#### **Parameters**

**handle** Pointer to static content of APP configuration.

#### **Returns**

**VADC\_GROUP\_CONFIG\_STATUS\_t**: Status of the SPI driver initialization.

**VADC\_GROUP\_CONFIG\_STATUS\_SUCCESS** - on successful initialization.

**VADC\_GROUP\_CONFIG\_STATUS\_FAILURE** - if initialization fails.

**Description:**

This function configures USIC registers based on the settings provided in the GUI.

Example Usage:

```
#include <DAVE.h> // Declarations from DAVE Code Generation
(includes SFR declaration)
int main(void)
{
    VADC_GROUP_CONFIG_STATUS_t init_status;
    init_status =
    (VADC_GROUP_CONFIG_STATUS_t)VADC_GROUP_CONFIG_Init(&\
    if(init_status == VADC_GROUP_CONFIG_STATUS_SUCCESS)
    {
        while(1U)
        {
        }
    }
    else
    {
        XMC_DEBUG("main: Application initialization failed");
        while(1U)
        {
        }
    }
    return 1U;
}
```

### Parameters

[in] **handle** Pointer to static content of APP configuration.

### Returns

VADC\_GROUP\_CONFIG\_STATUS\_t: Status of the SPI driver initialization.

**VADC\_GROUP\_CONFIG\_STATUS\_SUCCESS** - on successful initialization.

**VADC\_GROUP\_CONFIG\_STATUS\_FAILURE** - if initialization

fails.

Definition at line **97** of file **VADC\_GROUP\_CONFIG.c**.

References **VADC\_GROUP\_CONFIG::init\_func**, and  
**VADC\_GROUP\_CONFIG\_STATUS\_SUCCESS**.

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## Enumerations

```
enum {  
    VADC_GROUP_CONFIG_STATU  
    VADC_GROUP_CONFIG_STATU  
    = 0U,  
    VADC_GROUP_CONFIG_STATU  
}
```

Return value of an API. [More...](#)

```
typedef enum  
VADC_GROUP_CONFIG_STATUS {  
    VADC_GROUP_CONFIG_STATU
```

Return value of an API.



## Detailed Description

## Enumeration Type Documentation

### enum `VADC_GROUP_CONFIG_STATUS`

Return value of an API.

#### Enumerator

<code>VADC_GROUP_CONFIG_STATUS_SUCCESS</code>	Indicates App initialization state successful
<code>VADC_GROUP_CONFIG_STATUS_FAILURE</code>	Unknown error

Definition at line **80** of file `VADC_GROUP_CONFIG.h`.

