

SDDS

SDDS Cheat Sheet

© ByteFerry <byteferry@qq.com>

Root Structure

```
{
  "meta": {
    "comment": "Summary of the schema",
    "version": "version of schema ",
  },
  "options": {
    "endianness": 2,
    "min_length": 15,
    "debug": true,
    "top_node": "message"
  },
  "sdds": {
    "decode": {
      "message": {
      }
    },
    "encode": {
      "message": {
      }
    }
  }
}
```

byte_fields branch

```
"message": {
  "comment": "",
  "id": "message",
  "name": "message",
  "position": 0,
  "byte_fields": {
    "stx": {},
    "head": {},
    "body": {},
    "tail": {},
    "etx": {},
  }
}
```

Node of base type

```
"stx":{  
  "comment": "start flag"  
  "type":"int8",  
  "unsigned":true,  
  "length":1,  
  "position":0,  
  "value":125  
}
```

bit_fields branch

```
"body_property_detail":{  
  "comment": " ",  
  "id":"body_property_detail",  
  "type":"bytes",  
  "length":2,  
  "position":3,  
  "bit_fields":{  
    "body_length":{},  
    "message_type":{},  
    " crypt ":{}  
  }  
}
```

Node of custom type

```
"body_property":{  
  "comment": "..."  
  "type":"property_detail ",  
  "length":2,  
  "position":3  
}
```

one_of branch

```
"message_body": {  
  "id": "message_body",  
  "one_of": {  
    "key": {  
      "comment": "",  
      "name": "message_key",  
      "value": "#message_type",  
      "format": "ox%06X",  
      "id": "message_key"  
    },  
    "list": {  
      "ox200201": {},  
      "ox200402": {}  
    }  
  }  
}
```

Repeat structure

```
"message_body_history": {  
  "id": "history",  
  "name": "history",  
  "position": 0,  
  "length": "#body_length",  
  "repeat": true,  
  "count": null,  
  "until": "",  
  "type": "history_data"  
}
```

Index of attributes of SDDS

Name	Data type	comment
after_change	string	Define the functions which will be called after the operation of reading or writing. The string is split by coma.
before_change	string	Define the functions which will be called before the operation of reading or writing. The string is split by coma.
bit_fields	JSON	Define the branch node of bitwise reading or writing.
byte_fields	JSON	Define the branch node of byte reading or writing.
comment	string	Comment of the node or schema.
count	integer	Define the repeat count.
debug	bool	Show the debug information and terminate the parsing if the attribute debug is true.
default	mixed	Define the default value
format	string	Define the format of the value and format the value after reading.
formula	string	Define the formula used before writing or after reading.
id	string	Define the identify of the node for the later access using id selector.
ignore_errors	bool	Define the node if ignore errors.
key	string	Define the key of the node one_of.

Index of attributes of SDDS

length	integer	Define the length of the value. Depending the node data type
list	JSON	Define the list of the Node one_of.
name	string	Define the variable name.
one_of	JSON	one_of is a child node, and must with the children key and list .
position	string	Define the offset for stream reading and writing.
repeat	bool	If the value is true, reading or writing will repeat.
required	bool	Define if the value is required.
selector	string	define the selector, the value could be "id" or "index"
trace	string	Trace the values of the attributes of current node.
type	string	Define the data type of the node value. If is not base type , there should be a node with same name in the schema.
unsigned	string	Define if the data type is unsigned.
until	string	Define the until condition of repeat node.
value	mixed	The value of current node. It is required while writing.