

# DCPAM Reference Manual

GFD Dennou Club

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# 1 Module axis\_type\_mod

- Developers: Morikawa Yasuhiro
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## 1.1 Overview

This module provide derived types including all information about Axes data, and utility to treat the derived type variables.

座標軸に関する全ての情報を包括する構造体、およびその構造体変数を扱うためのユーティリティを提供する。

## 1.2 Error Handling

## 1.3 Known Bugs

## 1.4 Note

## 1.5 Future Plans

## 1.6 Dependency

```
use type_mod,    only: REKIND, DBKIND, INTKIND, TOKEN, STRING
use gt4_history, only: GT_HISTORY_AXIS, GT_HISTORY_ATTR
```

## 1.7 Public Interface

```
private
public :: AXISINFO                ! derived types
public :: axis_type_copy, axis_attrs_copy ! subroutines
public :: axis_attrs_init          ! subroutines
```

## 1.8 Generic Procedure

```
interface axis_type_copy
  module procedure axis_type_copy0, axis_type_copy1
```

```

end interface

interface axis_attrs_init
  module procedure axis_attrs_init0, axis_attrs_init1
end interface

```

## 1.9 Derived Types

次元に関する情報、およびデータを格納

```

type AXISINFO
  type(GT_HISTORY_AXIS)           :: axisinfo ! gt4 変数情報
  type(GT_HISTORY_ATTR), allocatable:: attrs(:) ! 属性情報群
  real(DBKIND)                   , allocatable:: a_Dim(:) ! 次元データ
  logical                         :: stored = .false. ! 格納完了フラグ
end type AXISINFO

```

## 1.10 Procedure Interface

### 1.10.1 Copy AXISINFO data (for 0 dimensional data)

```

subroutine axis_type_copy0(from, to)

```

#### Dependency

```

use type_mod, only: STRING
use dc_trace, only: BeginSub, EndSub

```

#### Input

```

type(AXISINFO), intent(in) :: from

```

#### Output

```

type(AXISINFO), intent(out) :: to

```

### 1.10.2 Copy AXISINFO data (for 1 dimensional data)

```

subroutine axis_type_copy1(from, to)

```

### Dependency

```
use type_mod, only: STRING, INTKIND
use dc_trace, only: BeginSub, EndSub
```

### Input

```
type(AXISINFO), intent(in) :: from(:)
```

### Output

```
type(AXISINFO), intent(out) :: to(:)
```

### 1.10.3 Copy AXISATTR (in gt4f90io) data (for 1 dimensional data)

```
subroutine axis_attrs_copy(from, to)
```

### Dependency

```
use type_mod, only: STRING, INTKIND
use gt4_history, only: GT_HISTORY_ATTR
use dc_trace, only: BeginSub, EndSub, DbgMessage
```

### Input

```
type(GT_HISTORY_ATTR), intent(in) :: from(:)
```

### Output

```
type(GT_HISTORY_ATTR), intent(out) :: to(:)
```

### 1.10.4 Initialize AXISATTR (in gt4f90io) data (for 0 dimensional data)

```
subroutine axis_attrs_init0(attrs)
```

### Dependency

```
use type_mod, only: STRING, INTKIND
use gt4_history, only: GT_HISTORY_ATTR
use dc_trace, only: BeginSub, EndSub, DbgMessage
```

### **In/Out**

```
type(GT_HISTORY_ATTR), intent(inout):: attrs
```

#### **1.10.5 Initialize AXISATTR (in gt4f90io) data (for 1 dimensional data)**

```
subroutine axis_attrs_init1(attrs)
```

### **Dependency**

```
use type_mod, only: STRING, INTKIND  
use gt4_history, only: GT_HISTORY_ATTR  
use dc_trace, only: BeginSub, EndSub, DbgMessage
```

### **In/Out**

```
type(GT_HISTORY_ATTR), intent(inout):: attrs(:)
```