# InflowWind

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# Contents

# 1 Data Type Index

## 1.1 Data Types List

Here are the data types with brief descriptions:

# 2 File Index

## 2.1 File List

Here is a list of all files with brief descriptions:



# 3 Data Type Documentation

## 3.1 ctwind::ct_backgr Type Reference

### Public Attributes

- character(1024) windfile
- integer windfiletype
- logical coherentstr

#### 3.1.1 Detailed Description

Definition at line 448 of file tempassembled.f90.

#### 3.1.2 Member Data Documentation

##### 3.1.2.1 logical ctwind::ct_backgr::coherentstr

Definition at line 451 of file tempassembled.f90.

#### 3.1.2.2 character(1024) ctwind::ct_backgr::windfile

Definition at line 449 of file tempassembled.f90.

#### 3.1.2.3 integer ctwind::ct_backgr::windfiletype

Definition at line 450 of file tempassembled.f90.

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

- tempassembled.f90

## 3.2 ctwind Module Reference

### Data Types

- type ct_backgr
- type ctwindfiles

### Public Member Functions

- subroutine, public ct_init (UnWind, WindFile, BackGrndValues, ErrStat)
- subroutine, public ct_setrefval (Height, HWidth, ErrStat)
- type(inflintrpout) function, public ct_getwindspeed (Time, InputPosition, ErrStat)
- subroutine, public ct_terminate (ErrStat)

### Private Member Functions

- subroutine readctdata (UnWind, CTFileNo, Itime, ErrStat)
- subroutine loadctdata (UnWind, FileName, ITime, IComp, Vel, ErrStat)
- subroutine readctp (UnWind, FileName, CTPscaling, ErrStat)
- subroutine readcts (UnWind, FileName, CT_SC_ext, ErrStat)
- subroutine readctscales (UnWind, FileName, ErrStat)

### Private Attributes

- integer, parameter numcomps = 3
- real(reki) delyctgrid
- real(reki) delzctgrid
- real(reki) ctdistsc
- real(reki), dimension(numcomps) ctoffset
- real(reki), dimension(numcomps) ctscale
- real(reki), dimension(:,:,:), allocatable ctvelu
- real(reki), dimension(:,:,:), allocatable ctvelv
- real(reki), dimension(:,:,:), allocatable ctvelw
- real(reki) ctly
- real(reki) ctlz
- real(reki) ctscalevel

- real(reki), dimension(:), allocatable tdata
- real(reki) ct_zref
- real(reki) ctyhwid
- real(reki) ctymax
- real(reki) ctyt
- real(reki) ctzmax
- real(reki) invmctws
- integer ct_df_y
- integer ct_df_z
- integer, dimension(2) ctvel_files
- integer indct_hi
- integer indct_lo
- integer numctt
- integer numcty
- integer numctyd
- integer numctyd1
- integer numctz
- integer numctzd
- integer numctzd1
- integer, save timeindx = 0
- integer, dimension(:), allocatable timestpct
- integer ctwindunit
- logical ctvertshft
- character(3) ctext
- character(1024) ctspath

#### 3.2.1 Detailed Description

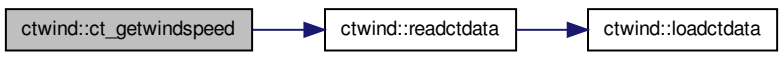
Definition at line 370 of file tempassembled.f90.

#### 3.2.2 Member Function/Subroutine Documentation

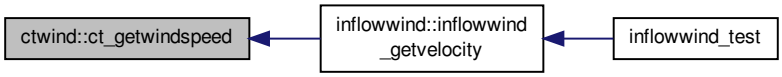
##### 3.2.2.1 type(inflintrpout) function, public ctwind::ct_getwindspeed ( real(reki), intent(in) *Time,* real(reki), dimension(3), intent(in) *InputPosition,* integer, intent(out) *ErrStat* )

Definition at line 667 of file tempassembled.f90.

Here is the call graph for this function:



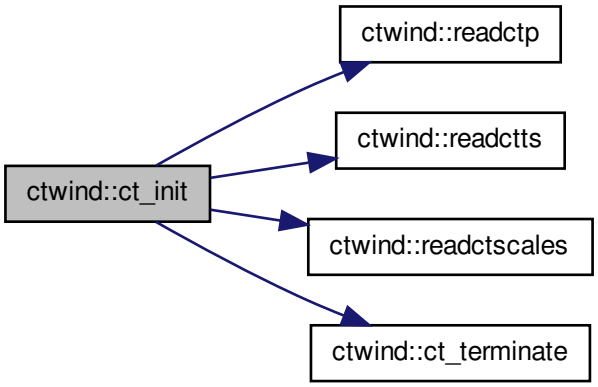
Here is the caller graph for this function:



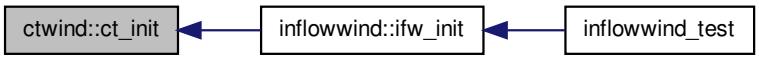

#### 3.2.2.2 subroutine, public ctwind::ct_init ( integer, intent(in) *UnWind,* character(∗), intent(in) *WindFile,* type(ct_backgr), intent(out) *BackGrndValues,* integer, intent(out) *ErrStat* )

Definition at line 462 of file tempassembled.f90.

Here is the call graph for this function:



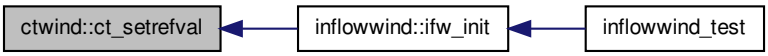

Here is the caller graph for this function:




#### 3.2.2.3 subroutine, public ctwind::ct_setrefval ( real(reki), intent(in) *Height,* real(reki), intent(in), optional *HWidth,* integer, intent(out) *ErrStat* )

Definition at line 613 of file tempassembled.f90.

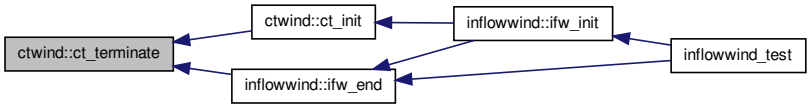
Here is the caller graph for this function:




#### 3.2.2.4 subroutine, public ctwind::ct_terminate ( integer, intent(out) *ErrStat* )

Definition at line 1347 of file tempassembled.f90.

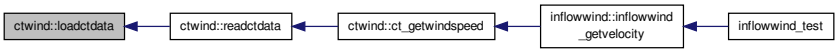
Here is the caller graph for this function:




#### 3.2.2.5 subroutine ctwind::loadctdata ( integer, intent(in) *UnWind,* character(∗), intent(in) *FileName,* integer, intent(in) *ITime,* integer, intent(in) *IComp,* real(reki), dimension (numctyd,numctzd,2), intent(inout) *Vel,* integer, intent(out) *ErrStat* ) [private]

Definition at line 997 of file tempassembled.f90.

Here is the caller graph for this function:

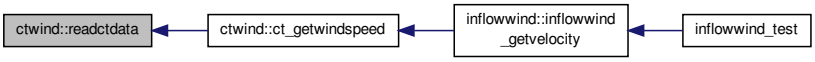



#### 3.2.2.6 subroutine ctwind::readctdata ( integer, intent(in) *UnWind,* integer, intent(in) *CTFileNo,* integer, intent(in) *Itime,* integer, intent(out) *ErrStat* ) [private]

Definition at line 944 of file tempassembled.f90.

Here is the call graph for this function:

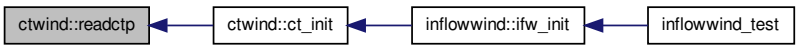

Here is the caller graph for this function:




#### 3.2.2.7 subroutine ctwind::readctp ( integer, intent(in) *UnWind,* character(∗), intent(in) *FileName,* type(**ctwindfiles**), intent(out) *CTPscaling,* integer, intent(out) *ErrStat* ) [private]

Definition at line 1065 of file tempassembled.f90.

Here is the caller graph for this function:




#### 3.2.2.8 subroutine ctwind::readctscales ( integer, intent(in) *UnWind,* character(∗), intent(in) *FileName,* integer, intent(out) *ErrStat* ) [private]

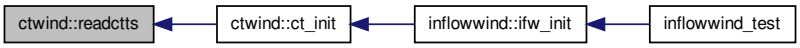
Definition at line 1287 of file tempassembled.f90.

Here is the caller graph for this function:

#### 3.2.2.9 subroutine ctwind::readctts ( integer, intent(in) *UnWind,* character(∗), intent(in) *FileName,* character(3), intent(out) *CT_SC_ext,* integer, intent(out) *ErrStat* ) [private]

Definition at line 1145 of file tempassembled.f90.

Here is the caller graph for this function:




### 3.2.3 Member Data Documentation

#### 3.2.3.1 integer ctwind::ct_df_y [private]

Definition at line 418 of file tempassembled.f90.

#### 3.2.3.2 integer ctwind::ct_df_z [private]

Definition at line 419 of file tempassembled.f90.

#### 3.2.3.3 real(reki) ctwind::ct_zref [private]

Definition at line 411 of file tempassembled.f90.

#### 3.2.3.4 real(reki) ctwind::ctdistsc [private]

Definition at line 398 of file tempassembled.f90.

#### 3.2.3.5 character(3) ctwind::ctext [private]

Definition at line 439 of file tempassembled.f90.

#### 3.2.3.6 real(reki) ctwind::ctly [private]

Definition at line 406 of file tempassembled.f90.

#### 3.2.3.7 real(reki) ctwind::ctlz [private]

Definition at line 407 of file tempassembled.f90.

#### 3.2.3.8 real(reki), dimension (numcomps) ctwind::ctoffset [private]

Definition at line 399 of file tempassembled.f90.

#### 3.2.3.9 real(reki), dimension (numcomps) ctwind::ctscale [private]

Definition at line 400 of file tempassembled.f90.

#### 3.2.3.10 real(reki) ctwind::ctscalevel [private]

Definition at line 408 of file tempassembled.f90.

#### 3.2.3.11 character(1024) ctwind::ctspath [private]

Definition at line 440 of file tempassembled.f90.

#### 3.2.3.12 integer, dimension(2) ctwind::ctvel_files [private]

Definition at line 420 of file tempassembled.f90.

#### 3.2.3.13 real(reki), dimension (:,:,:), allocatable ctwind::ctvelu [private]

Definition at line 403 of file tempassembled.f90.

#### 3.2.3.14 real(reki), dimension (:,:,:), allocatable ctwind::ctvelv [private]

Definition at line 404 of file tempassembled.f90.

#### 3.2.3.15 real(reki), dimension (:,:,:), allocatable ctwind::ctvelw [private]

Definition at line 405 of file tempassembled.f90.

#### 3.2.3.16 logical ctwind::ctvertshft [private]

Definition at line 437 of file tempassembled.f90.

#### 3.2.3.17 integer ctwind::ctwindunit [private]

Definition at line 435 of file tempassembled.f90.

#### 3.2.3.18 real(reki) ctwind::ctyhwid [private]

Definition at line 412 of file tempassembled.f90.

#### 3.2.3.19 real(reki) ctwind::ctymax [private]

Definition at line 413 of file tempassembled.f90.

#### 3.2.3.20 real(reki) ctwind::ctyt [private]

Definition at line 414 of file tempassembled.f90.

#### 3.2.3.21 real(reki) ctwind::ctzmax [private]

Definition at line 415 of file tempassembled.f90.

#### 3.2.3.22 real(reki) ctwind::delyctgrid [private]

Definition at line 396 of file tempassembled.f90.

#### 3.2.3.23 real(reki) ctwind::delzctgrid [private]

Definition at line 397 of file tempassembled.f90.

#### 3.2.3.24 integer ctwind::indct_hi [private]

Definition at line 422 of file tempassembled.f90.

#### 3.2.3.25 integer ctwind::indct_lo [private]

Definition at line 423 of file tempassembled.f90.

#### 3.2.3.26 real(reki) ctwind::invmctws [private]

Definition at line 416 of file tempassembled.f90.

#### 3.2.3.27 integer, parameter ctwind::numcomps = 3 [private]

Definition at line 393 of file tempassembled.f90.

#### 3.2.3.28 integer ctwind::numctt [private]

Definition at line 425 of file tempassembled.f90.

#### 3.2.3.29 integer ctwind::numcty [private]

Definition at line 426 of file tempassembled.f90.

#### 3.2.3.30 integer ctwind::numctyd [private]

Definition at line 427 of file tempassembled.f90.

#### 3.2.3.31 integer ctwind::numctyd1 [private]

Definition at line 428 of file tempassembled.f90.

#### 3.2.3.32 integer ctwind::numctz [private]

Definition at line 429 of file tempassembled.f90.

#### 3.2.3.33 integer ctwind::numctzd [private]

Definition at line 430 of file tempassembled.f90.

#### 3.2.3.34 integer ctwind::numctzd1 [private]

Definition at line 431 of file tempassembled.f90.

#### 3.2.3.35 real(reki), dimension (:), allocatable ctwind::tdata [private]

Definition at line 409 of file tempassembled.f90.

#### 3.2.3.36 integer, save ctwind::timeindx = 0 [private]

Definition at line 432 of file tempassembled.f90.

#### 3.2.3.37 integer, dimension (:), allocatable ctwind::timestpct [private]

Definition at line 433 of file tempassembled.f90.

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

- tempassembled.f90

## 3.3 ctwind::ctwindfiles Type Reference

#### Private Attributes

- character(1024) cttsfile
- character(1024) ctbackgr

### 3.3.1 Detailed Description

Definition at line 442 of file tempassembled.f90.

### 3.3.2 Member Data Documentation

#### 3.3.2.1 character(1024) ctwind::ctwindfiles::ctbackgr [private]

Definition at line 444 of file tempassembled.f90.

#### 3.3.2.2 character(1024) ctwind::ctwindfiles::cttsfile [private]

Definition at line 443 of file tempassembled.f90.

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

- tempassembled.f90

## 3.4 fdwind Module Reference

#### Public Member Functions

- subroutine, public fd_init (UnWind, WindFile, RefHt, ErrStat)
- real(reki) function, public fd_getvalue (RVarName, ErrStat)
- type(inflintrpout) function, public fd_getwindspeed (Time, InputPosition, ErrStat)
- subroutine, public fd_terminate (ErrStat)

#### Private Member Functions

- subroutine readfdp (UnWind, FileName, FDTSfile, ErrStat)
- subroutine read4dtimes (UnWind, FileName, ErrStat)
- subroutine readall4ddata (UnWind, ErrStat)
- subroutine loadlesdata (UnWind, FileNo, Indx, ErrStat)
- subroutine read4ddata (UnWind, FileName, Comp, Indx4, Scale, Offset, ErrStat)
- subroutine load4ddata (InpIndx)

#### Private Attributes

- real(reki) delxgrid
- real(reki) delygrid
- real(reki) delzgrid
- real(reki) fdper
- real(reki), dimension(2) fdtime
- real(reki), dimension(:,:,:,:), allocatable fdu

- real(reki), dimension(:,:,:,:), allocatable fdv
- real(reki), dimension(:,:,:,:), allocatable fdw
- real(reki), dimension(:,:,:,:), allocatable fdudata
- real(reki), dimension(:,:,:,:), allocatable fdvdata
- real(reki), dimension(:,:,:,:), allocatable fdwdata
- real(reki) lx
- real(reki) ly
- real(reki) lz
- real(reki), dimension(3) offsets
- real(reki), save prevtime
- real(reki) rotdiam
- real(reki), dimension(3) scalfact
- real(reki) scalevel
- real(reki), dimension(:), allocatable times4d
- real(reki) tm_max
- real(reki) tsclfact
- real(reki) t_4d_en
- real(reki) t_4d_st
- real(reki) xmax
- real(reki) xt
- real(reki) ymax
- real(reki) yt
- real(reki) zmax
- real(reki) zt
- real(reki) zref
- integer fd_df_x
- integer fd_df_y
- integer fd_df_z
- integer fdfileno
- integer fdrecl
- integer ind4dadv
- integer ind4dnew
- integer ind4dold
- integer num4dt
- integer, parameter num4dtd = 2
- integer num4dx
- integer num4dxd
- integer num4dxd1
- integer num4dy
- integer num4dyd
- integer num4dyd1
- integer num4dz
- integer num4dzd
- integer num4dzd1
- integer numadvect

- integer shft4dnew
- integer, dimension(:), allocatable times4dix
- integer fdunit
- logical advect
- logical vertshft
- logical, save initialized = .FALSE.
- character(5), dimension(:), allocatable advfiles
- character(1024) fdspath

### 3.4.1 Detailed Description

Definition at line 1369 of file tempassembled.f90.

### 3.4.2 Member Function/Subroutine Documentation

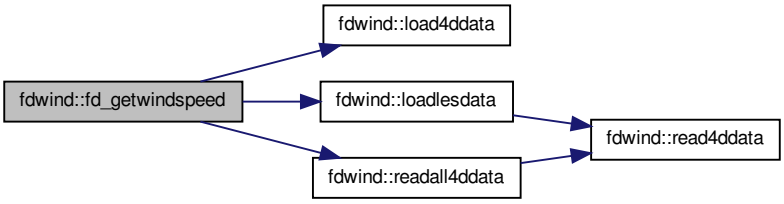
#### 3.4.2.1 real(reki) function, public fdwind::fd_getvalue ( character(∗), intent(in) *RVarName,* integer, intent(out) *ErrStat* )

Definition at line 2229 of file tempassembled.f90.

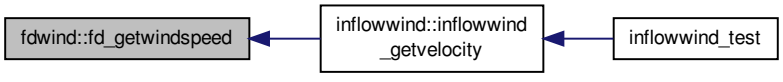
#### 3.4.2.2 type(inflintrpout) function, public fdwind::fd_getwindspeed ( real(reki), intent(in) *Time,* real(reki), dimension(3), intent(in) *InputPosition,* integer, intent(out) *ErrStat* )

Definition at line 2275 of file tempassembled.f90.

Here is the call graph for this function:



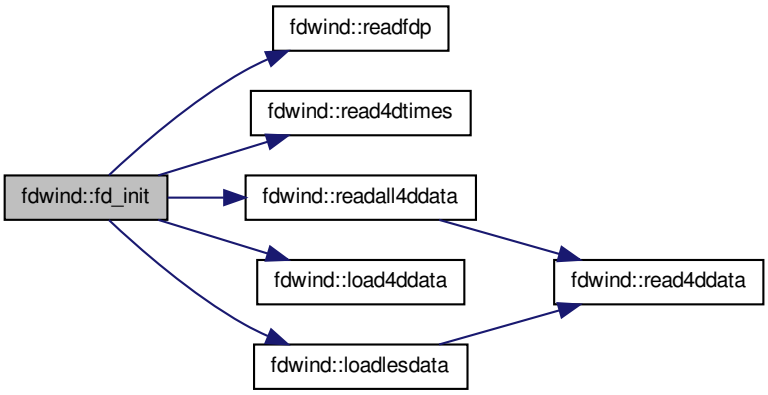

Here is the caller graph for this function:



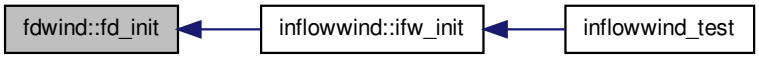
#### 3.4.2.3 subroutine, public fdwind::fd_init ( integer, intent(in) *UnWind,* character(∗), intent(in) *WindFile,* real(reki), intent(in) *RefHt,* integer, intent(out) *ErrStat* )

Definition at line 1462 of file tempassembled.f90.

Here is the call graph for this function:



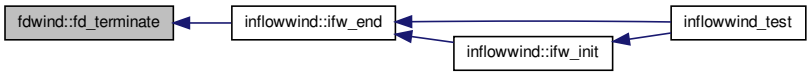

Here is the caller graph for this function:




#### 3.4.2.4 subroutine, public fdwind::fd_terminate ( integer, intent(out) *ErrStat* )

Definition at line 2607 of file tempassembled.f90.

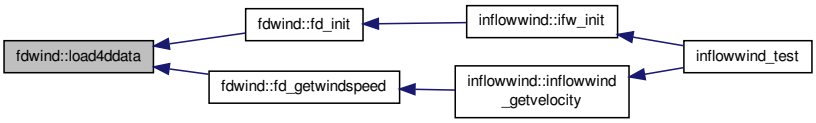
Here is the caller graph for this function:



#### 3.4.2.5 subroutine fdwind::load4ddata ( integer, intent(in) *InpIndx* ) [private]

Definition at line 2202 of file tempassembled.f90.

Here is the caller graph for this function:

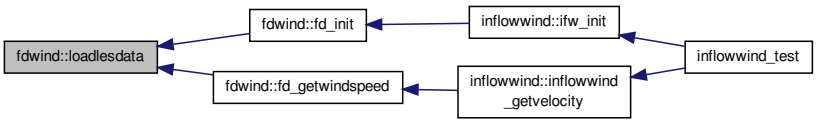



#### 3.4.2.6 subroutine fdwind::loadlesdata ( integer, intent(in) *UnWind,* integer, intent(in) *FileNo,* integer, intent(in) *Indx,* integer, intent(out) *ErrStat* ) [private]

Definition at line 2080 of file tempassembled.f90.

Here is the call graph for this function:


Here is the caller graph for this function:




#### 3.4.2.7 subroutine fdwind::read4ddata ( integer, intent(in) *UnWind,* character(∗), intent(in) *FileName,* real(reki), dimension (:,:,:,:), intent(inout) *Comp,* integer, intent(in) *Indx4,* real(reki), intent(in) *Scale,* real(reki), intent(in) *Offset,* integer, intent(out) *ErrStat* ) [private]

Definition at line 2117 of file tempassembled.f90.

Here is the caller graph for this function:


#### 3.4.2.8 subroutine fdwind::read4dtimes ( integer, intent(in) *UnWind,* character(∗), intent(in) *FileName,* integer, intent(out) *ErrStat* ) [private]

Definition at line 1966 of file tempassembled.f90.

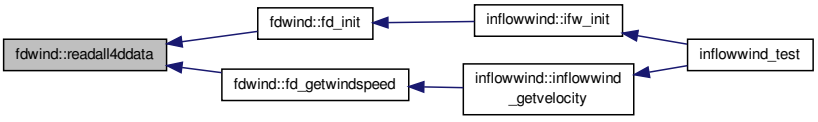
Here is the caller graph for this function:


#### 3.4.2.9 subroutine fdwind::readall4ddata ( integer, intent(in) *UnWind,* integer, intent(out) *ErrStat* ) [private]

Definition at line 2045 of file tempassembled.f90.

Here is the call graph for this function:

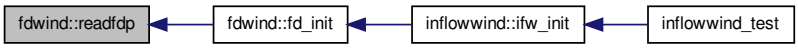

Here is the caller graph for this function:



#### 3.4.2.10 subroutine fdwind::readfdp ( integer, intent(in) *UnWind,* character(∗), intent(in) *FileName,* character(∗), intent(out) *FDTSfile,* integer, intent(out) *ErrStat* ) [private]

Definition at line 1705 of file tempassembled.f90.

Here is the caller graph for this function:




### 3.4.3 Member Data Documentation

#### 3.4.3.1 logical fdwind::advect [private]

Definition at line 1445 of file tempassembled.f90.

#### 3.4.3.2 character(5), dimension (:), allocatable fdwind::advfiles [private]

Definition at line 1450 of file tempassembled.f90.

#### 3.4.3.3 real(reki) fdwind::delxgrid [private]

Definition at line 1388 of file tempassembled.f90.

#### 3.4.3.4 real(reki) fdwind::delygrid [private]

Definition at line 1389 of file tempassembled.f90.

#### 3.4.3.5 real(reki) fdwind::delzgrid [private]

Definition at line 1390 of file tempassembled.f90.

#### 3.4.3.6 integer fdwind::fd_df_x [private]

Definition at line 1420 of file tempassembled.f90.

#### 3.4.3.7 integer fdwind::fd_df_y [private]

Definition at line 1421 of file tempassembled.f90.

#### 3.4.3.8 integer fdwind::fd_df_z [private]

Definition at line 1422 of file tempassembled.f90.

#### 3.4.3.9 integer fdwind::fdfileno [private]

Definition at line 1423 of file tempassembled.f90.

#### 3.4.3.10 real(reki) fdwind::fdper [private]

Definition at line 1391 of file tempassembled.f90.

#### 3.4.3.11 integer fdwind::fdrecl [private]

Definition at line 1424 of file tempassembled.f90.

#### 3.4.3.12 character(1024) fdwind::fdspath [private]

Definition at line 1451 of file tempassembled.f90.

#### 3.4.3.13 real(reki), dimension (2) fdwind::fdtime [private]

Definition at line 1392 of file tempassembled.f90.

#### 3.4.3.14 real(reki), dimension (:,:,:,:), allocatable fdwind::fdu [private]

Definition at line 1393 of file tempassembled.f90.

#### 3.4.3.15 real(reki), dimension (:,:,:,:), allocatable fdwind::fdudata [private]

Definition at line 1396 of file tempassembled.f90.

#### 3.4.3.16 integer fdwind::fdunit [private]

Definition at line 1443 of file tempassembled.f90.

#### 3.4.3.17 real(reki), dimension (:,:,:,:), allocatable fdwind::fdv [private]

Definition at line 1394 of file tempassembled.f90.

#### 3.4.3.18 real(reki), dimension (:,:,:,:), allocatable fdwind::fdvdata [private]

Definition at line 1397 of file tempassembled.f90.

#### 3.4.3.19 real(reki), dimension (:,:,:,:), allocatable fdwind::fdw [private]

Definition at line 1395 of file tempassembled.f90.

#### 3.4.3.20 real(reki), dimension (:,:,:,:), allocatable fdwind::fdwdata [private]

Definition at line 1398 of file tempassembled.f90.

#### 3.4.3.21 integer fdwind::ind4dadv [private]

Definition at line 1425 of file tempassembled.f90.

#### 3.4.3.22 integer fdwind::ind4dnew [private]

Definition at line 1426 of file tempassembled.f90.

#### 3.4.3.23 integer fdwind::ind4dold [private]

Definition at line 1427 of file tempassembled.f90.

#### 3.4.3.24 logical, save fdwind::initialized = .FALSE. [private]

Definition at line 1448 of file tempassembled.f90.

#### 3.4.3.25 real(reki) fdwind::lx [private]

Definition at line 1399 of file tempassembled.f90.

#### 3.4.3.26 real(reki) fdwind::ly [private]

Definition at line 1400 of file tempassembled.f90.

#### 3.4.3.27 real(reki) fdwind::lz [private]

Definition at line 1401 of file tempassembled.f90.

#### 3.4.3.28 integer fdwind::num4dt [private]

Definition at line 1428 of file tempassembled.f90.

#### 3.4.3.29 integer, parameter fdwind::num4dtd = 2 [private]

Definition at line 1429 of file tempassembled.f90.

#### 3.4.3.30 integer fdwind::num4dx [private]

Definition at line 1430 of file tempassembled.f90.

#### 3.4.3.31 integer fdwind::num4dxd [private]

Definition at line 1431 of file tempassembled.f90.

#### 3.4.3.32 integer fdwind::num4dxd1 [private]

Definition at line 1432 of file tempassembled.f90.

#### 3.4.3.33 integer fdwind::num4dy [private]

Definition at line 1433 of file tempassembled.f90.

#### 3.4.3.34 integer fdwind::num4dyd [private]

Definition at line 1434 of file tempassembled.f90.

#### 3.4.3.35 integer fdwind::num4dyd1 [private]

Definition at line 1435 of file tempassembled.f90.

#### 3.4.3.36 integer fdwind::num4dz [private]

Definition at line 1436 of file tempassembled.f90.

#### 3.4.3.37 integer fdwind::num4dzd [private]

Definition at line 1437 of file tempassembled.f90.

#### 3.4.3.38 integer fdwind::num4dzd1 [private]

Definition at line 1438 of file tempassembled.f90.

#### 3.4.3.39 integer fdwind::numadvect [private]

Definition at line 1439 of file tempassembled.f90.

#### 3.4.3.40 real(reki), dimension (3) fdwind::offsets [private]

Definition at line 1402 of file tempassembled.f90.

#### 3.4.3.41 real(reki), save fdwind::prevtime [private]

Definition at line 1403 of file tempassembled.f90.

#### 3.4.3.42 real(reki) fdwind::rotdiam [private]

Definition at line 1404 of file tempassembled.f90.

#### 3.4.3.43 real(reki) fdwind::scalevel [private]

Definition at line 1406 of file tempassembled.f90.

#### 3.4.3.44 real(reki), dimension (3) fdwind::scalfact [private]

Definition at line 1405 of file tempassembled.f90.

#### 3.4.3.45 integer fdwind::shft4dnew [private]

Definition at line 1440 of file tempassembled.f90.

#### 3.4.3.46 real(reki) fdwind::t_4d_en [private]

Definition at line 1410 of file tempassembled.f90.

#### 3.4.3.47 real(reki) fdwind::t_4d_st [private]

Definition at line 1411 of file tempassembled.f90.

#### 3.4.3.48 real(reki), dimension (:), allocatable fdwind::times4d [private]

Definition at line 1407 of file tempassembled.f90.

#### 3.4.3.49 integer, dimension (:), allocatable fdwind::times4dix [private]

Definition at line 1441 of file tempassembled.f90.

#### 3.4.3.50 real(reki) fdwind::tm_max [private]

Definition at line 1408 of file tempassembled.f90.

#### 3.4.3.51 real(reki) fdwind::tsclfact [private]

Definition at line 1409 of file tempassembled.f90.

#### 3.4.3.52 logical fdwind::vertshft [private]

Definition at line 1446 of file tempassembled.f90.

#### 3.4.3.53 real(reki) fdwind::xmax [private]

Definition at line 1412 of file tempassembled.f90.

#### 3.4.3.54 real(reki) fdwind::xt [private]

Definition at line 1413 of file tempassembled.f90.

#### 3.4.3.55 real(reki) fdwind::ymax [private]

Definition at line 1414 of file tempassembled.f90.

#### 3.4.3.56 real(reki) fdwind::yt [private]

Definition at line 1415 of file tempassembled.f90.

#### 3.4.3.57 real(reki) fdwind::zmax [private]

Definition at line 1416 of file tempassembled.f90.

#### 3.4.3.58 real(reki) fdwind::zref [private]

Definition at line 1418 of file tempassembled.f90.

#### 3.4.3.59 real(reki) fdwind::zt [private]

Definition at line 1417 of file tempassembled.f90.

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

- tempassembled.f90

## 3.5 ffwind::ff_getvalue Interface Reference

### Private Member Functions

- real(reki) function ff_getrvalue (RVarName, ErrStat)

### 3.5.1 Detailed Description

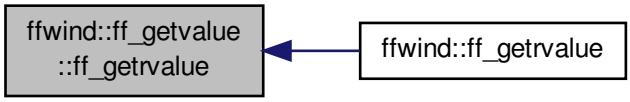
Definition at line 2682 of file tempassembled.f90.

### 3.5.2 Member Function/Subroutine Documentation

#### 3.5.2.1 real(reki) function ffwind::ff_getvalue::ff_getrvalue ( character(∗), intent(in) *RVarName,* integer, intent(out) *ErrStat* ) [private]

Definition at line 4237 of file tempassembled.f90.

Here is the caller graph for this function:




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

- tempassembled.f90

## 3.6 ffwind Module Reference

### Data Types

- interface ff_getvalue

### Public Member Functions

- subroutine, public ff_init (UnWind, BinFile, ErrStat)
- type(inflintrpout) function, public ff_getwindspeed (Time, InputPosition, ErrStat)
- subroutine, public ff_terminate (ErrStat)

### Private Member Functions

- subroutine read_bladed_ff_header0 (UnWind, ErrStat)
- subroutine read_bladed_ff_header1 (UnWind, TI, ErrStat)
- subroutine read_bladed_grids (UnWind, CWise, TI, ErrStat)
- subroutine read_summary_ff (UnWind, FileName, CWise, ZCenter, TI, ErrStat)
- subroutine read_turbsim_ff (UnWind, WindFile, ErrStat)
- subroutine read_ff_tower (UnWind, WindFile, ErrStat)
- real(reki) function ff_getrvalue (RVarName, ErrStat)
- real(reki) function, dimension(3) ff_interp (Time, Position, ErrStat)

### Private Attributes

- real(reki), dimension(:,:,:,:), allocatable ffdata
- real(reki), dimension(:,:,:), allocatable fftower
- real(reki) ffdtime
- real(reki) ffrate
- real(reki) ffyhwid

- real(reki) ffzhwid
- real(reki) refht
- real(reki) gridbase
- real(reki) initxposition
- real(reki) invffyd
- real(reki) invffzd
- real(reki) invmffws
- real(reki) meanffws
- real(reki) totaltime
- integer nffcomp
- integer nffsteps
- integer nygrids
- integer nzgrids
- integer ntgrids
- logical, save initialized = .FALSE.
- logical periodic = .FALSE.

#### 3.6.1 Detailed Description

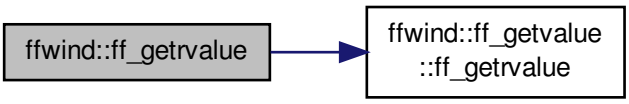
Definition at line 2633 of file tempassembled.f90.

#### 3.6.2 Member Function/Subroutine Documentation

##### 3.6.2.1 real(reki) function ffwind::ff_getrvalue ( character(*), intent(in) *RVarName,* integer, intent(out) *ErrStat* ) [private]

Definition at line 4237 of file tempassembled.f90.

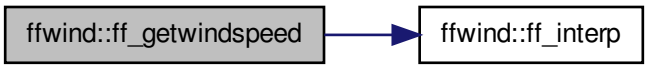
Here is the call graph for this function:



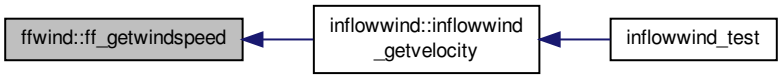

##### 3.6.2.2 type(inflintrpout) function, public ffwind::ff_getwindspeed ( real(reki), intent(in) *Time,* real(reki), dimension(3), intent(in) *InputPosition,* integer, intent(out) *ErrStat* )

Definition at line 4292 of file tempassembled.f90.

Here is the call graph for this function:



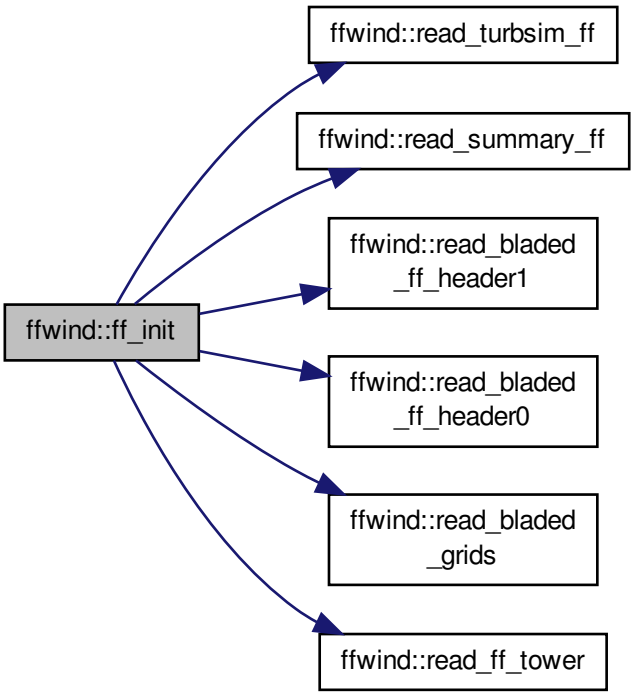

Here is the caller graph for this function:



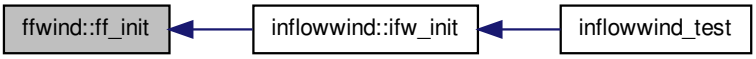

#### 3.6.2.3 subroutine, public ffwind::ff_init ( integer, intent(in) *UnWind,* character(∗), intent(in) *BinFile,* integer, intent(out) *ErrStat* )

Definition at line 2694 of file tempassembled.f90.

Here is the call graph for this function:



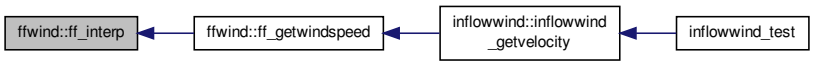

Here is the caller graph for this function:




#### 3.6.2.4 real(reki) function, dimension(3) ffwind::ff_interp ( real(reki), intent(in) *Time,* real(reki), dimension(3), intent(in) *Position,* integer, intent(out) *ErrStat* ) [private]

Definition at line 4354 of file tempassembled.f90.

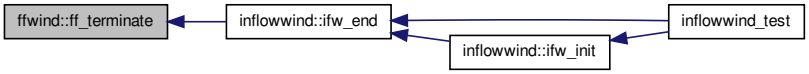
Here is the caller graph for this function:




#### 3.6.2.5 subroutine, public ffwind::ff_terminate ( integer, intent(out) *ErrStat* )

Definition at line 4655 of file tempassembled.f90.

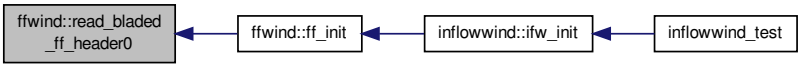
Here is the caller graph for this function:




#### 3.6.2.6 subroutine ffwind::read_bladed_ff_header0 ( integer, intent(in) *UnWind,* integer, intent(out) *ErrStat* ) [private]

Definition at line 2874 of file tempassembled.f90.

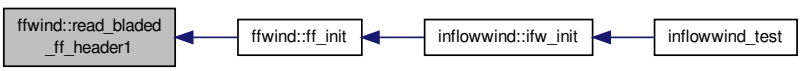
Here is the caller graph for this function:




#### 3.6.2.7 subroutine ffwind::read_bladed_ff_header1 ( integer, intent(in) *UnWind,* real(reki), dimension(3), intent(out) *TI,* integer, intent(out) *ErrStat* ) [private]

Definition at line 3014 of file tempassembled.f90.

Here is the caller graph for this function:



#### 3.6.2.8 subroutine ffwind::read_bladed_grids ( integer, intent(in) *UnWind,* logical, intent(in) *CWise,* real(reki), dimension (3), intent(in) *TI,* integer, intent(out) *ErrStat* ) [private]

Definition at line 3354 of file tempassembled.f90.

Here is the caller graph for this function:


#### 3.6.2.9 subroutine ffwind::read_ff_tower ( integer, intent(in) *UnWind,* character(∗), intent(in) *WindFile,* integer, intent(out) *ErrStat* ) [private]

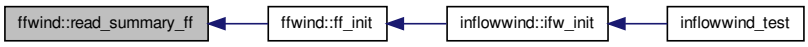
Definition at line 4032 of file tempassembled.f90.

Here is the caller graph for this function:


#### 3.6.2.10 subroutine ffwind::read_summary_ff ( integer, intent(in) *UnWind,* character(∗), intent(in) *FileName,* logical, intent(out) *CWise,* real(reki), intent(out) *ZCenter,* real(reki), dimension (3), intent(out) *TI,* integer, intent(out) *ErrStat* ) [private]

Definition at line 3492 of file tempassembled.f90.

Here is the caller graph for this function:




#### 3.6.2.11 subroutine ffwind::read_turbsim_ff ( integer, intent(in) *UnWind,* character(∗), intent(in) *WindFile,* integer, intent(out) *ErrStat* ) [private]

Definition at line 3726 of file tempassembled.f90.

Here is the caller graph for this function:


### 3.6.3 Member Data Documentation

#### 3.6.3.1 real(reki), dimension (:,:,:,:), allocatable ffwind::ffdata [private]

Definition at line 2656 of file tempassembled.f90.

#### 3.6.3.2 real(reki) ffwind::ffdtime [private]

Definition at line 2659 of file tempassembled.f90.

#### 3.6.3.3 real(reki) ffwind::ffrate [private]

Definition at line 2660 of file tempassembled.f90.

#### 3.6.3.4 real(reki), dimension (:,:,:), allocatable ffwind::fftower [private]

Definition at line 2657 of file tempassembled.f90.

#### 3.6.3.5 real(reki) ffwind::ffyhwid [private]

Definition at line 2661 of file tempassembled.f90.

#### 3.6.3.6 real(reki) ffwind::ffzhwid [private]

Definition at line 2662 of file tempassembled.f90.

#### 3.6.3.7 real(reki) ffwind::gridbase [private]

Definition at line 2664 of file tempassembled.f90.

#### 3.6.3.8 logical, save ffwind::initialized = .FALSE. [private]

Definition at line 2678 of file tempassembled.f90.

#### 3.6.3.9 real(reki) ffwind::initxposition [private]

Definition at line 2665 of file tempassembled.f90.

#### 3.6.3.10 real(reki) ffwind::invffyd [private]

Definition at line 2666 of file tempassembled.f90.

#### 3.6.3.11 real(reki) ffwind::invffzd [private]

Definition at line 2667 of file tempassembled.f90.

#### 3.6.3.12 real(reki) ffwind::invmffws [private]

Definition at line 2668 of file tempassembled.f90.

#### 3.6.3.13 real(reki) ffwind::meanffws [private]

Definition at line 2669 of file tempassembled.f90.

#### 3.6.3.14 integer ffwind::nffcomp [private]

Definition at line 2672 of file tempassembled.f90.

#### 3.6.3.15 integer ffwind::nffsteps [private]

Definition at line 2673 of file tempassembled.f90.

#### 3.6.3.16 integer ffwind::ntgrids [private]

Definition at line 2676 of file tempassembled.f90.

#### 3.6.3.17 integer ffwind::nygrids [private]

Definition at line 2674 of file tempassembled.f90.

#### 3.6.3.18 integer ffwind::nzgrids [private]

Definition at line 2675 of file tempassembled.f90.

#### 3.6.3.19 logical ffwind::periodic = .FALSE. [private]

Definition at line 2679 of file tempassembled.f90.

#### 3.6.3.20 real(reki) ffwind::refht [private]

Definition at line 2663 of file tempassembled.f90.

#### 3.6.3.21 real(reki) ffwind::totaltime [private]

Definition at line 2670 of file tempassembled.f90.

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

- tempassembled.f90

## 3.7 hawcwind Module Reference

### Public Member Functions

- subroutine, public hw_init (UnWind, InpFileName, ErrStat)
- real(reki) function, public hw_getvalue (RVarName, ErrStat)
- type(inflintrpout) function, public hw_getwindspeed (Time, InputPosition, ErrStat)
- subroutine, public hw_terminate (ErrStat)

### Private Member Functions

- real(reki) function, dimension(3) hw_linearinterp (Time, Position, ErrStat)

**Private Attributes**

- real(reki), dimension(:,:,:,:), allocatable winddata
- real(reki) deltaxinv
- real(reki) deltayinv
- real(reki) deltazinv
- integer, parameter nc = 3
- integer nx
- integer ny
- integer nz
- real(reki) gridbase
- real(reki) lengthx
- real(reki) lengthyhalf
- real(reki) refht
- real(reki) uref
- logical, save initialized = .FALSE.

### 3.7.1 Detailed Description

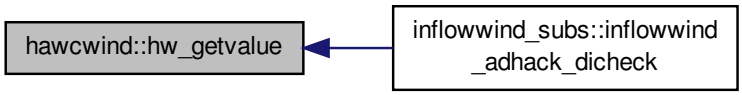
Definition at line 4674 of file tempassembled.f90.

### 3.7.2 Member Function/Subroutine Documentation

#### 3.7.2.1 real(reki) function, public hawcwind::hw_getvalue ( character(*), intent(in) *RVarName,* integer, intent(out) *ErrStat* )

Definition at line 5044 of file tempassembled.f90.

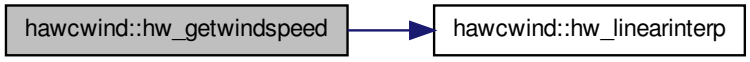
Here is the caller graph for this function:



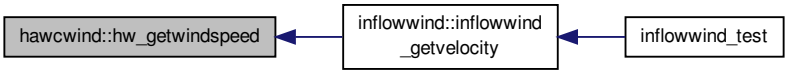

#### 3.7.2.2 type(inflintrpout) function, public hawcwind::hw_getwindspeed ( real(reki), intent(in) *Time,* real(reki), dimension(3), intent(in) *InputPosition,* integer, intent(out) *ErrStat* )

Definition at line 5099 of file tempassembled.f90.

Here is the call graph for this function:



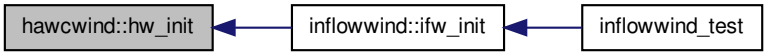

Here is the caller graph for this function:




#### 3.7.2.3 subroutine, public hawcwind::hw_init ( integer, intent(in) *UnWind,* character(∗), intent(in) *InpFileName,* integer, intent(out) *ErrStat* )

Definition at line 4723 of file tempassembled.f90.

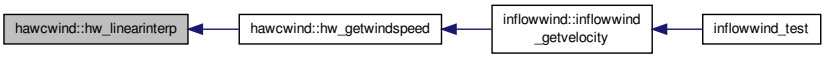
Here is the caller graph for this function:




#### 3.7.2.4 real(reki) function, dimension(3) hawcwind::hw_linearinterp ( real(reki), intent(in) *Time,* real(reki), dimension(3), intent(in) *Position,* integer, intent(out) *ErrStat* ) [private]

Definition at line 5133 of file tempassembled.f90.

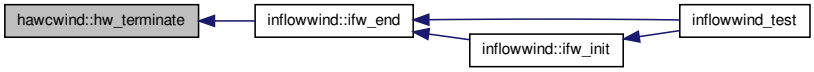
Here is the caller graph for this function:



#### 3.7.2.5 subroutine, public hawcwind::hw_terminate ( integer, intent(out) *ErrStat* )

Definition at line 5338 of file tempassembled.f90.

Here is the caller graph for this function:




### 3.7.3 Member Data Documentation

#### 3.7.3.1 real(reki) hawcwind::deltaxinv [private]

Definition at line 4697 of file tempassembled.f90.

#### 3.7.3.2 real(reki) hawcwind::deltayinv [private]

Definition at line 4698 of file tempassembled.f90.

#### 3.7.3.3 real(reki) hawcwind::deltazinv [private]

Definition at line 4699 of file tempassembled.f90.

#### 3.7.3.4 real(reki) hawcwind::gridbase [private]

Definition at line 4706 of file tempassembled.f90.

#### 3.7.3.5 logical, save hawcwind::initialized = .FALSE. [private]

Definition at line 4713 of file tempassembled.f90.

#### 3.7.3.6 real(reki) hawcwind::lengthx [private]

Definition at line 4707 of file tempassembled.f90.

#### 3.7.3.7 real(reki) hawcwind::lengthyhalf [private]

Definition at line 4708 of file tempassembled.f90.

#### 3.7.3.8 integer, parameter hawcwind::nc = 3 [private]

Definition at line 4701 of file tempassembled.f90.

#### 3.7.3.9 integer hawcwind::nx [private]

Definition at line 4702 of file tempassembled.f90.

#### 3.7.3.10 integer hawcwind::ny [private]

Definition at line 4703 of file tempassembled.f90.

#### 3.7.3.11 integer hawcwind::nz [private]

Definition at line 4704 of file tempassembled.f90.

#### 3.7.3.12 real(reki) hawcwind::refht [private]

Definition at line 4709 of file tempassembled.f90.

#### 3.7.3.13 real(reki) hawcwind::uref [private]

Definition at line 4710 of file tempassembled.f90.

#### 3.7.3.14 real(reki), dimension (:,:,:,:), allocatable hawcwind::winddata [private]

Definition at line 4695 of file tempassembled.f90.

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

- tempassembled.f90

## 3.8 hhwind::hh_info Type Reference

### Public Attributes

- real(reki) referenceheight
- real(reki) width

### 3.8.1 Detailed Description

Definition at line 5405 of file tempassembled.f90.

### 3.8.2 Member Data Documentation

#### 3.8.2.1 real(reki) hhwind::hh_info::referenceheight

Definition at line 5406 of file tempassembled.f90.

#### 3.8.2.2 real(reki) hhwind::hh_info::width

Definition at line 5407 of file tempassembled.f90.

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

- tempassembled.f90

## 3.9 hhwind Module Reference

### Data Types

- type hh_info

#### Public Member Functions

- subroutine, public hh_init (UnWind, WindFile, WindInfo, ErrStat)
- type(inflintrpout) function, public hh_getwindspeed (Time, InputPosition, ErrStat)
- type(inflintrpout) function, public hh_get_adhack_windspeed (Time, InputPosition, ErrStat)
- subroutine, public hh_setlinearizedels (Perturbations, ErrStat)
- subroutine, public hh_terminate (ErrStat)

#### Private Attributes

- real(reki), dimension(:), allocatable tdata
- real(reki), dimension(:), allocatable delta
- real(reki), dimension(:), allocatable v
- real(reki), dimension(:), allocatable vz
- real(reki), dimension(:), allocatable hshr
- real(reki), dimension(:), allocatable vshr
- real(reki), dimension(:), allocatable vlinshr
- real(reki), dimension(:), allocatable vgust
- real(reki), dimension(7) linearizedels
- real(reki) refht
- real(reki) refwid
- integer numdatalines
- integer, save timeindx = 0
- logical, save linearize = .FALSE.

### 3.9.1 Detailed Description

Definition at line 5355 of file tempassembled.f90.

### 3.9.2 Member Function/Subroutine Documentation

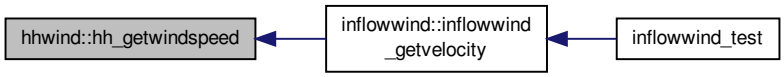
#### 3.9.2.1 type(inflintrpout) function, public hhwind::hh_get_adhack_windspeed ( real(reki), intent(in) *Time,* real(reki), dimension(3), intent(in) *InputPosition,* integer, intent(out) *ErrStat* )

Definition at line 5816 of file tempassembled.f90.

#### 3.9.2.2 type(inflintrpout) function, public hhwind::hh_getwindspeed ( real(reki), intent(in) *Time,* real(reki), dimension(3), intent(in) *InputPosition,* integer, intent(out) *ErrStat* )

Definition at line 5685 of file tempassembled.f90.

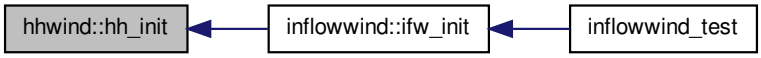
Here is the caller graph for this function:




#### 3.9.2.3 subroutine, public hhwind::hh_init ( integer, intent(in) *UnWind,* character(∗), intent(in) *WindFile,* type(hh_info), intent(in) *WindInfo,* integer, intent(out) *ErrStat* )

Definition at line 5418 of file tempassembled.f90.

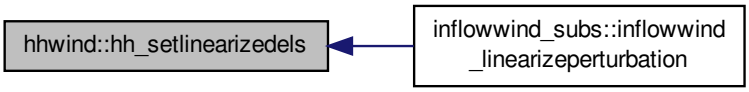
Here is the caller graph for this function:




#### 3.9.2.4 subroutine, public hhwind::hh_setlinearizedels ( real(reki), dimension(7), intent(in) *Perturbations,* integer, intent(out) *ErrStat* )

Definition at line 5909 of file tempassembled.f90.

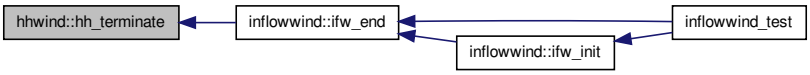
Here is the caller graph for this function:




#### 3.9.2.5 subroutine, public hhwind::hh_terminate ( integer, intent(out) *ErrStat* )

Definition at line 5935 of file tempassembled.f90.

Here is the caller graph for this function:




### 3.9.3 Member Data Documentation

#### 3.9.3.1 real(reki), dimension (:), allocatable hhwind::delta [private]

Definition at line 5388 of file tempassembled.f90.

#### 3.9.3.2 real(reki), dimension (:), allocatable hhwind::hshr [private]

Definition at line 5391 of file tempassembled.f90.

#### 3.9.3.3 logical, save hhwind::linearize = .FALSE. [private]

Definition at line 5403 of file tempassembled.f90.

#### 3.9.3.4 real(reki), dimension(7) hhwind::linearizedels [private]

Definition at line 5396 of file tempassembled.f90.

#### 3.9.3.5 integer hhwind::numdatalines [private]

Definition at line 5400 of file tempassembled.f90.

#### 3.9.3.6 real(reki) hhwind::refht [private]

Definition at line 5397 of file tempassembled.f90.

#### 3.9.3.7 real(reki) hhwind::refwid [private]

Definition at line 5398 of file tempassembled.f90.

#### 3.9.3.8 real(reki), dimension (:), allocatable hhwind::tdata [private]

Definition at line 5387 of file tempassembled.f90.

#### 3.9.3.9 integer, save hhwind::timeindx = 0 [private]

Definition at line 5401 of file tempassembled.f90.

#### 3.9.3.10 real(reki), dimension (:), allocatable hhwind::v [private]

Definition at line 5389 of file tempassembled.f90.

#### 3.9.3.11 real(reki), dimension (:), allocatable hhwind::vgust [private]

Definition at line 5394 of file tempassembled.f90.

#### 3.9.3.12 real(reki), dimension(:), allocatable hhwind::vlinshr [private]

Definition at line 5393 of file tempassembled.f90.

#### 3.9.3.13 real(reki), dimension (:), allocatable hhwind::vshr [private]

Definition at line 5392 of file tempassembled.f90.

#### 3.9.3.14 real(reki), dimension (:), allocatable hhwind::vz [private]

Definition at line 5390 of file tempassembled.f90.

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

- tempassembled.f90

## 3.10 sharedinflowdefs::ifw_constraintstatetype Type Reference

### Public Attributes

- real(reki) dummyconstrstate

### 3.10.1 Detailed Description

Definition at line 130 of file tempassembled.f90.

### 3.10.2 Member Data Documentation

#### 3.10.2.1 real(reki) sharedinflowdefs::ifw_constraintstatetype::dummyconstrstate

Definition at line 132 of file tempassembled.f90.

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

- tempassembled.f90

## 3.11 sharedinflowdefs::ifw_continuousstatetype Type Reference

### Public Attributes

- real(reki) dummycontstate

### 3.11.1 Detailed Description

Definition at line 116 of file tempassembled.f90.

### 3.11.2 Member Data Documentation

#### 3.11.2.1 real(reki) sharedinflowdefs::ifw_continuousstatetype::dummycontstate

Definition at line 118 of file tempassembled.f90.

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

- tempassembled.f90

## 3.12 sharedinflowdefs::ifw_discretestatetype Type Reference

### Public Attributes

- real(reki) dummydiscstate

#### 3.12.1 Detailed Description

Definition at line 124 of file tempassembled.f90.

#### 3.12.2 Member Data Documentation

##### 3.12.2.1 real(reki) sharedinflowdefs::ifw_discretestatetype::dummydiscstate

Definition at line 126 of file tempassembled.f90.

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

- tempassembled.f90

## 3.13 sharedinflowdefs::ifw_initinputtype Type Reference

### Public Attributes

- real(reki) dummyreal

#### 3.13.1 Detailed Description

Definition at line 107 of file tempassembled.f90.

#### 3.13.2 Member Data Documentation

##### 3.13.2.1 real(reki) sharedinflowdefs::ifw_initinputtype::dummyreal

Definition at line 110 of file tempassembled.f90.

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

- tempassembled.f90

## 3.14 sharedinflowdefs::ifw_inputtype Type Reference

### Public Attributes

- real(reki) dummyinput

#### 3.14.1 Detailed Description

Definition at line 161 of file tempassembled.f90.

#### 3.14.2 Member Data Documentation

##### 3.14.2.1 real(reki) sharedinflowdefs::ifw_inputtype::dummyinput

Definition at line 165 of file tempassembled.f90.

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

- tempassembled.f90

## 3.15 sharedinflowdefs::ifw_otherstatetype Type Reference

### Public Attributes

- integer(intki) dummyotherstate

#### 3.15.1 Detailed Description

Definition at line 136 of file tempassembled.f90.

#### 3.15.2 Member Data Documentation

##### 3.15.2.1 integer(intki) sharedinflowdefs::ifw_otherstatetype::dummyotherstate

Definition at line 139 of file tempassembled.f90.

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

- tempassembled.f90

## 3.16 sharedinflowdefs::ifw_outputtype Type Reference

### Public Attributes

- real(reki) dummyoutput

#### 3.16.1 Detailed Description

Definition at line 171 of file tempassembled.f90.

#### 3.16.2 Member Data Documentation

##### 3.16.2.1 real(reki) sharedinflowdefs::ifw_outputtype::dummyoutput

Definition at line 175 of file tempassembled.f90.

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

- tempassembled.f90

## 3.17 sharedinflowdefs::ifw_parametertype Type Reference

### Public Attributes

- integer windtype = 0
- logical ct_flag = .FALSE.
- logical initialized = .FALSE.

#### 3.17.1 Detailed Description

Definition at line 145 of file tempassembled.f90.

#### 3.17.2 Member Data Documentation

##### 3.17.2.1 logical sharedinflowdefs::ifw_parametertype::ct_flag = .FALSE.

Definition at line 153 of file tempassembled.f90.

##### 3.17.2.2 logical sharedinflowdefs::ifw_parametertype::initialized = .FALSE.

Definition at line 154 of file tempassembled.f90.

##### 3.17.2.3 integer sharedinflowdefs::ifw_parametertype::windtype = 0

Definition at line 150 of file tempassembled.f90.

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

- tempassembled.f90

## 3.18 inflowwind::inflinitinfo Type Reference

### Public Attributes

- character(1024) windfilename
- integer windfiletype
- real(reki) referenceheight
- real(reki) width

#### 3.18.1 Detailed Description

Definition at line 6871 of file tempassembled.f90.

#### 3.18.2 Member Data Documentation

##### 3.18.2.1 real(reki) inflowwind::inflinitinfo::referenceheight

Definition at line 6874 of file tempassembled.f90.

#### 3.18.2.2 real(reki) inflowwind::inflinitinfo::width

Definition at line 6875 of file tempassembled.f90.

#### 3.18.2.3 character(1024) inflowwind::inflinitinfo::windfilename

Definition at line 6872 of file tempassembled.f90.

#### 3.18.2.4 integer inflowwind::inflinitinfo::windfiletype

Definition at line 6873 of file tempassembled.f90.

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

- tempassembled.f90

## 3.19 sharedinflowdefs::inflintrpout Type Reference

### Public Attributes

- real(reki), dimension(3) velocity

### 3.19.1 Detailed Description

Definition at line 191 of file tempassembled.f90.

### 3.19.2 Member Data Documentation

#### 3.19.2.1 real(reki), dimension(3) sharedinflowdefs::inflintrpout::velocity

Definition at line 192 of file tempassembled.f90.

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

- tempassembled.f90

## 3.20 inflowwind Module Reference

### Data Types

- type inflinitinfo

### Public Member Functions

- subroutine, public ifw_init (ParamData, FileInfo, ErrStat, ErrMsg)
- type(inflintrpout) function, public inflowwind_getvelocity (ParamData, Time, InputPosition, ErrStat)
- subroutine, public ifw_end (ParamData, ErrStat)

#### Private Attributes

- integer(intki), parameter dataformatid = 1
- type(progdesc), parameter ifw_progdesc = ProgDesc( 'InflowWind', 'v1.00.00', '27-Dec-2012' )
- integer unwind = 91

### 3.20.1 Detailed Description

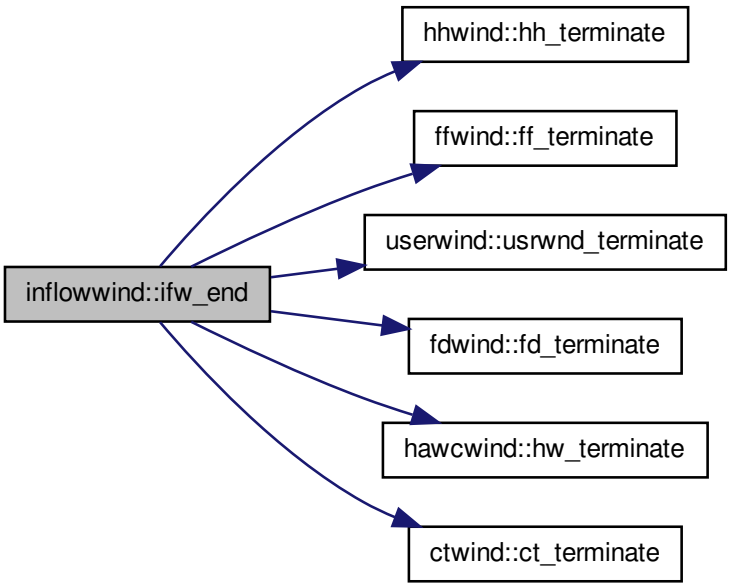
Definition at line 6796 of file tempassembled.f90.

### 3.20.2 Member Function/Subroutine Documentation

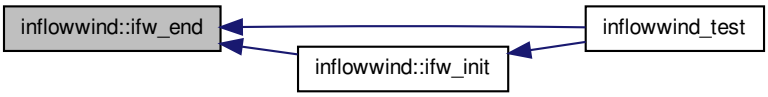
#### 3.20.2.1 subroutine, public inflowwind::ifw_end ( type(ifw_parametertype), intent(inout) *ParamData,* integer, intent(out) *ErrStat* )

Definition at line 7168 of file tempassembled.f90.

Here is the call graph for this function:



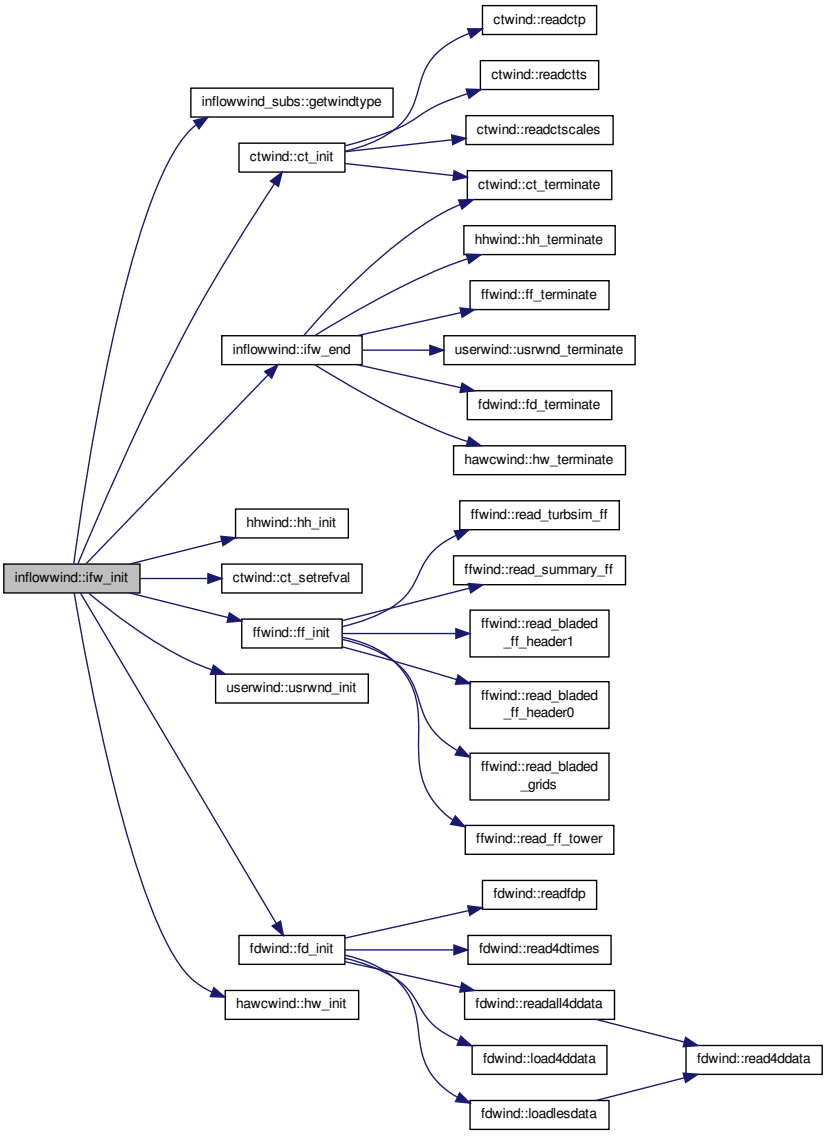
Here is the caller graph for this function:



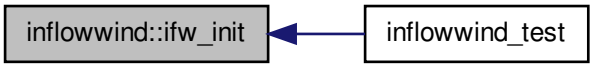

#### 3.20.2.2 subroutine, public inflowwind::ifw_init ( type( ifw_parametertype ), intent(inout) *ParamData,* type(inflinitinfo), intent(in) *FileInfo,* integer(intki), intent(out) *ErrStat,* character(∗), intent(out) *ErrMsg* )

Definition at line 6898 of file tempassembled.f90.

Here is the call graph for this function:



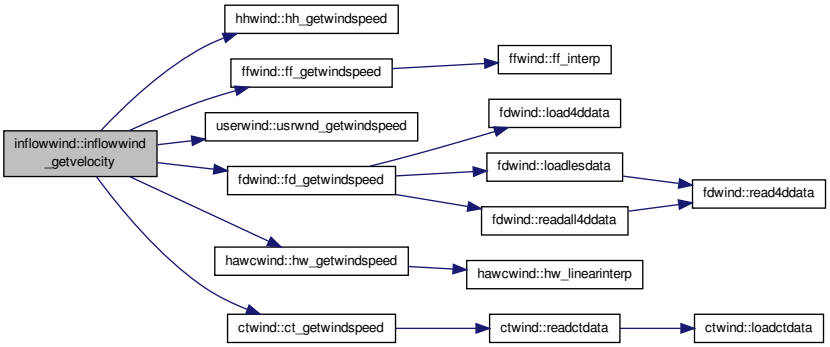

Here is the caller graph for this function:



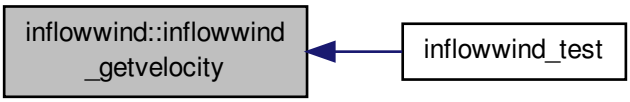
#### 3.20.2.3 type(inflintrpout) function, public inflowwind::inflowwind_getvelocity ( type(ifw_parametertype), intent(in) *ParamData,* real(reki), intent(in) *Time,* real(reki), dimension(3), intent(in) *InputPosition,* integer, intent(out) *ErrStat* )

Definition at line 7104 of file tempassembled.f90.

Here is the call graph for this function:




Here is the caller graph for this function:




### 3.20.3 Member Data Documentation

#### 3.20.3.1 integer(intki), parameter inflowwind::dataformatid = 1 [private]

Definition at line 6828 of file tempassembled.f90.

#### 3.20.3.2 type(progdesc), parameter inflowwind::ifw_progdesc = ProgDesc( 'InflowWind', 'v1.00.00', '27-Dec-2012' ) [private]

Definition at line 6830 of file tempassembled.f90.

#### 3.20.3.3 integer inflowwind::unwind = 91 [private]

Definition at line 6864 of file tempassembled.f90.

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

- tempassembled.f90

## 3.21 inflowwind_subs Module Reference

### Public Member Functions

- integer function getwindtype (FileName, ErrStat)
- subroutine inflowwind_linearizeperturbation (IfW_ParamData, LinPerturbations, ErrStat)
- real(reki) function inflowwind_adhack_dicheck (IfW_ParamData, ErrStat)

#### 3.21.1 Detailed Description

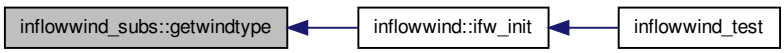
Definition at line 6170 of file tempassembled.f90.

#### 3.21.2 Member Function/Subroutine Documentation

##### 3.21.2.1 integer function inflowwind_subs::getwindtype ( character(∗), intent(inout) *FileName,* integer, intent(out) *ErrStat* )

Definition at line 6207 of file tempassembled.f90.

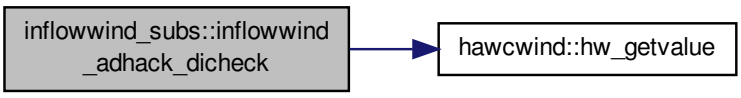
Here is the caller graph for this function:




##### 3.21.2.2 real(reki) function inflowwind_subs::inflowwind_adhack_dicheck ( type( ifw_parametertype), intent(inout) *IfW_ParamData,* integer, intent(out) *ErrStat* )

Definition at line 6482 of file tempassembled.f90.

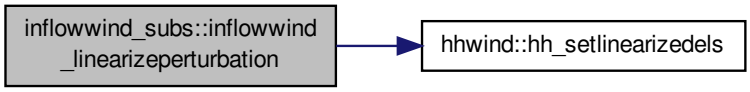
Here is the call graph for this function:




##### 3.21.2.3 subroutine inflowwind_subs::inflowwind_linearizeperturbation ( type( ifw_parametertype), intent(inout) *IfW_ParamData,* real(reki), dimension(7), intent(in) *LinPerturbations,* integer, intent(out) *ErrStat* )

Definition at line 6322 of file tempassembled.f90.

Here is the call graph for this function:




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

- tempassembled.f90

## 3.22 sharedinflowdefs Module Reference

### Data Types

- type ifw_constraintstatetype
- type ifw_continuousstatetype
- type ifw_discretestatetype
- type ifw_initinputtype
- type ifw_inputtype
- type ifw_otherstatetype
- type ifw_outputtype
- type ifw_parametertype
- type inflintrpout

#### 3.22.1 Detailed Description

Definition at line 97 of file tempassembled.f90.

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

- tempassembled.f90

## 3.23 userwind Module Reference

### Public Member Functions

- subroutine, public usrwnd_init (ErrStat)
- real(reki) function, public usrwnd_getvalue (VarName, ErrStat)
- type(inflintrpout) function, public usrwnd_getwindspeed (Time, InputPosition, ErrStat)
- subroutine, public usrwnd_terminate (ErrStat)

**Private Attributes**

- logical, save initialized = .FALSE.
- real(reki) uwmeanu
- real(reki) uwmeanv
- real(reki) uwmeanw

### 3.23.1 Detailed Description

Definition at line 5973 of file tempassembled.f90.

### 3.23.2 Member Function/Subroutine Documentation

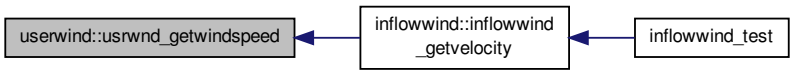
#### 3.23.2.1 real(reki) function, public userwind::usrwnd_getvalue ( character(*), intent(in) *VarName,* integer, intent(out) *ErrStat* )

Definition at line 6047 of file tempassembled.f90.

#### 3.23.2.2 type(inflintrpout) function, public userwind::usrwnd_getwindspeed ( real(reki), intent(in) *Time,* real(reki), dimension(3), intent(in) *InputPosition,* integer, intent(out) *ErrStat* )

Definition at line 6101 of file tempassembled.f90.

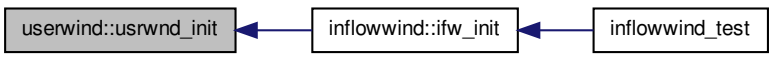
Here is the caller graph for this function:




#### 3.23.2.3 subroutine, public userwind::usrwnd_init ( integer, intent(out) *ErrStat* )

Definition at line 6003 of file tempassembled.f90.

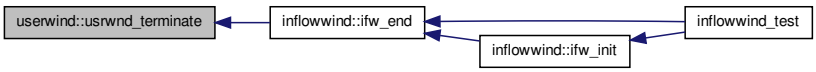
Here is the caller graph for this function:




#### 3.23.2.4 subroutine, public userwind::usrwnd_terminate ( integer, intent(out) *ErrStat* )

Definition at line 6142 of file tempassembled.f90.

Here is the caller graph for this function:




#### 3.23.3 Member Data Documentation

##### 3.23.3.1 logical, save userwind::initialized = .FALSE. [private]

Definition at line 5987 of file tempassembled.f90.

##### 3.23.3.2 real(reki) userwind::uwmeanu [private]

Definition at line 5989 of file tempassembled.f90.

##### 3.23.3.3 real(reki) userwind::uwmeanv [private]

Definition at line 5990 of file tempassembled.f90.

##### 3.23.3.4 real(reki) userwind::uwmeanw [private]

Definition at line 5991 of file tempassembled.f90.

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

- tempassembled.f90

### 3.24 windfile_types Module Reference

#### Public Attributes

- integer, parameter default_wind = -1
- integer, parameter undef_wind = 0
- integer, parameter hh_wind = 1
- integer, parameter ff_wind = 2
- integer, parameter ud_wind = 3
- integer, parameter fd_wind = 4
- integer, parameter ctp_wind = 5
- integer, parameter hawc_wind = 6

#### 3.24.1 Detailed Description

Definition at line 353 of file tempassembled.f90.

#### 3.24.2 Member Data Documentation

#### 3.24.2.1 integer, parameter windfile_types::ctp_wind = 5

Definition at line 366 of file tempassembled.f90.

#### 3.24.2.2 integer, parameter windfile_types::default_wind = -1

Definition at line 360 of file tempassembled.f90.

#### 3.24.2.3 integer, parameter windfile_types::fd_wind = 4

Definition at line 365 of file tempassembled.f90.

#### 3.24.2.4 integer, parameter windfile_types::ff_wind = 2

Definition at line 363 of file tempassembled.f90.

#### 3.24.2.5 integer, parameter windfile_types::hawc_wind = 6

Definition at line 367 of file tempassembled.f90.

#### 3.24.2.6 integer, parameter windfile_types::hh_wind = 1

Definition at line 362 of file tempassembled.f90.

#### 3.24.2.7 integer, parameter windfile_types::ud_wind = 3

Definition at line 364 of file tempassembled.f90.

#### 3.24.2.8 integer, parameter windfile_types::undef_wind = 0

Definition at line 361 of file tempassembled.f90.

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

- tempassembled.f90

# 4 File Documentation

## 4.1 tempassembled.f90 File Reference

**Data Types**

- module sharedinflowdefs
- type sharedinflowdefs::ifw_initinputtype
- type sharedinflowdefs::ifw_continuousstatetype
- type sharedinflowdefs::ifw_discretestatetype
- type sharedinflowdefs::ifw_constraintstatetype
- type sharedinflowdefs::ifw_otherstatetype
- type sharedinflowdefs::ifw_parametertype
- type sharedinflowdefs::ifw_inputtype
- type sharedinflowdefs::ifw_outputtype
- type sharedinflowdefs::inflintrpout
- module windfile_types
- module ctwind

- type ctwind::ctwindfiles
- type ctwind::ct_backgr
- module fdwind
- module ffwind
- interface ffwind::ff_getvalue
- module hawcwind
- module hhwind
- type hhwind::hh_info
- module userwind
- module inflowwind_subs
- module inflowwind
- type inflowwind::inflinitinfo

#### Functions/Subroutines

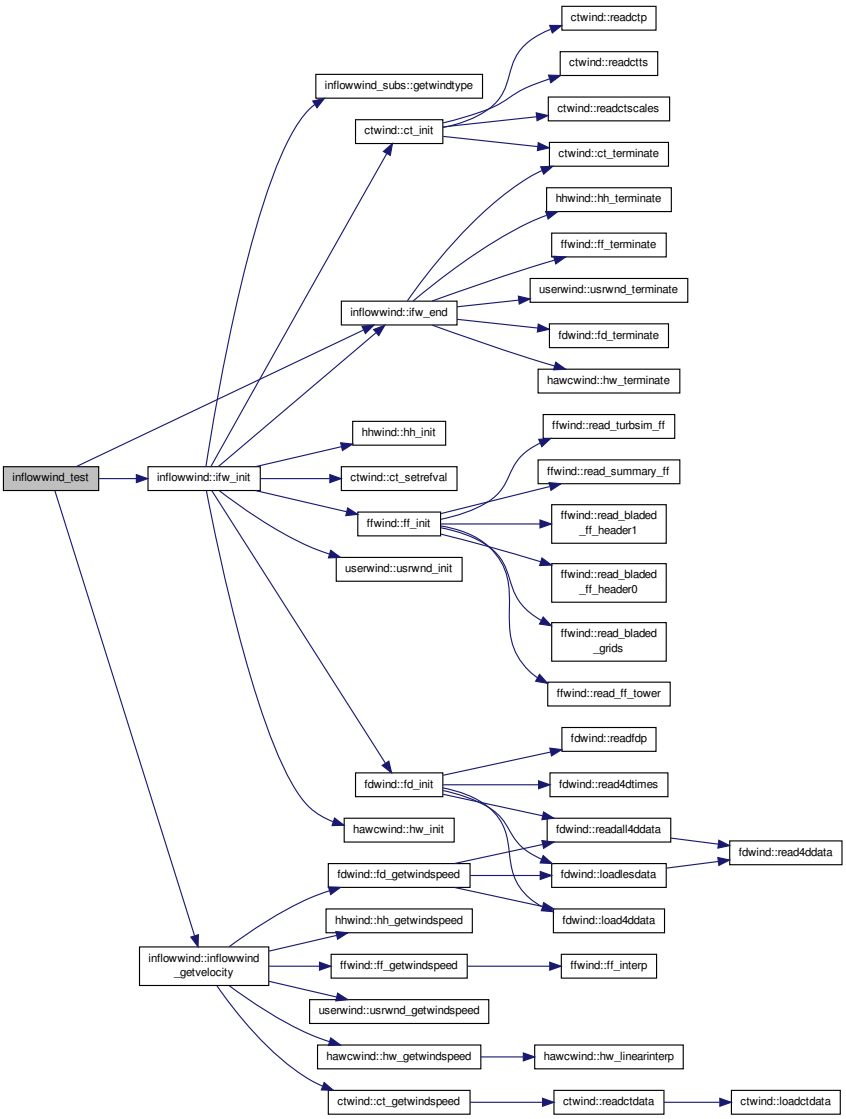
- program inflowwind_test

### 4.1.1 Function/Subroutine Documentation

#### 4.1.1.1 program inflowwind_test ( )

Definition at line 7 of file tempassembled.f90.

Here is the call graph for this function:



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