OpenPR

0.0

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Contents

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Main Page

The bitLib bitstream library provides access to XDL configuration settings at the bitstream level. Currently the library supports Xilinx Virtex4 (routing and CLB logic) and Virtex5 (routing) devices. For information on how to use the library, see the bit_test.cc and v5_bit_test.cc examples, as well as the bitstream class documentation.

Chapter 2

Todo List

Member openpr::AntiCoreBase::allocateMask() Replace integer matrix with dynamic_bitset.

Replace integer matrix with dynamic_bitset.

Member openpr::bitstream::device::bramcoord_to_major(int x, int y) Change this so it isn't a dirty hack

Member openpr::bitstream::v4_bitstream::writePackets(std::fstream &outStream) test whether this actually works

Member openpr::bitstream::v4_bitstream::writePacketsPartial(std::fstream &outStream) get actual partial bitstream sequence and write this function

Member openpr::bitstream::virtex4::~virtex4() Remove if not used

Member openpr::bitstream::virtex5::~virtex5() Remove if not used

Chapter 3

Namespace Index

3.1 Namespace List

Here is a list of all namespaces with brief descriptions:

Chapter 4

Class Index

4.1 Class Hierarchy

This inheritance list is sorted roughly, but not completely, alphabetically:

Chapter 5

Class Index

5.1 Class List

Here are the classes, structs, unions and interfaces with brief descriptions:

Chapter 6

File Index

6.1 File List

Here is a list of all files with brief descriptions:

Chapter 7

Namespace Documentation

7.1 openpr Namespace Reference

Namespaces

- namespace bitstream
- namespace netlist

Classes

- class AntiCoreBase
- class AntiCoreV4
- class AntiCoreV5
- class openPR
- class OpenPRTree
- struct prohibitRange

Typedefs

- typedef std::string string
- typedef boost::unordered_map< string, string > bmNameToTypeMap

Enumerations

- enum eMode { eStatic, ePartial }

Functions

- const std::string cEdaNameConst ("eda")
- const std::string cArchitectureNameConst ("architecture")
- const std::string cXilinxNameConst ("xilinx")

7.1.1 Detailed Description

XC4VLX15 Part

This constructor takes in a single string that is in the format of "pip CLBLM_X36Y59 CLBLM_X36Y59 -> CLBLM_X36Y59 ,"

Parameters

input the input string

7.1.2 Typedef Documentation

7.1.2.1 typedef boost::unordered_map<string, string> openpr::bmNameToTypeMap

Stores relationship between the name of a bus macro to its type

Definition at line 41 of file AntiCoreBase.hpp.

7.1.2.2 typedef std::string openpr::string

Definition at line 35 of file AntiCoreBase.hpp.

7.1.3 Enumeration Type Documentation

7.1.3.1 enum openpr::eMode

Whether object is in Static or Partial mode determines behavior.

Enumerator:

eStatic

ePartial

Definition at line 37 of file AntiCoreBase.hpp.

7.1.4 Function Documentation

7.1.4.1 const std::string openpr::cArchitectureNameConst ("architecture")

7.1.4.2 const std::string openpr::cEdaNameConst ("eda")

7.1.4.3 const std::string openpr::cXilinxNameConst ("xilinx")

7.2 openpr::bitstream Namespace Reference

Classes

- struct frame_addr
- class architecture
- class bitstream

- class device
- struct tile_coord
- struct tile_data
- class v4_bitstream
- class xc4vlx15
- class xc4vlx60
- class xc4vfx60
- class v5_bitstream
- class xc5vlx50
- class xc5vlx50t
- class xc5vsx95t
- class xc5vlx110t
- class virtex4
- class virtex5

Enumerations

- enum tile_types {
  IOB, GCLK, CLB, DSP48,
  BRAM, BRAM_INT, TRANSCV, PAD,
  NUM_TILE_TYPES, MULTIPLE, INVALID }

7.2.1 Enumeration Type Documentation

7.2.1.1 enum openpr::bitstream::tile_types

Enumerator:

IOB

GCLK

CLB

DSP48

BRAM

BRAM_INT

TRANSCV

PAD

NUM_TILE_TYPES

MULTIPLE

INVALID

Definition at line 24 of file architecture.h.

7.3 openpr::netlist Namespace Reference

Classes

- struct hash_pip
- struct eq_pip
- struct hash_point
- struct eq_point
- struct hash_segment
- struct eq_segment
- class InPin
- class Net
- struct hash_net
- struct eq_net
- class NetList
- class OutPin
- class Pin
- class Pip
- class Point

Typedefs

- typedef boost::tokenizer< boost::char_separator< char > > tokenizer

Functions

- std::size_t hash_value (Pin &pin)
- std::size_t hash_value (Pin *pin)

7.3.1 Typedef Documentation

7.3.1.1 typedef boost::tokenizer<boost::char_separator<char> > openpr::netlist::tokenizer

Definition at line 33 of file Pin.h.

7.3.2 Function Documentation

7.3.2.1 std::size_t openpr::netlist::hash_value (Pin & *pin*)

Definition at line 30 of file Pin.cpp.

7.3.2.2 std::size_t openpr::netlist::hash_value (Pin * *pin*)

Definition at line 34 of file Pin.cpp.

Chapter 8

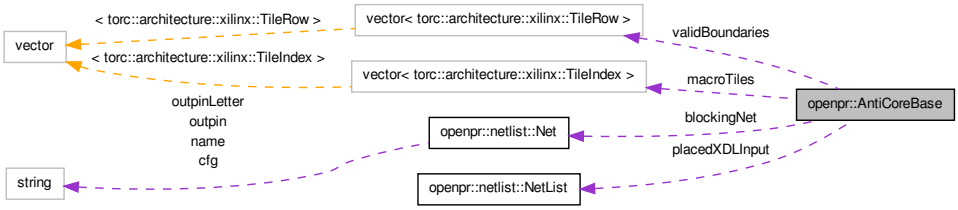
Class Documentation

8.1 openpr::AntiCoreBase Class Reference

`#include <AntiCoreBase.hpp>`

Inherited by openpr::AntiCoreV4, and openpr::AntiCoreV5.

Collaboration diagram for openpr::AntiCoreBase:



Public Member Functions

- AntiCoreBase (torc::architecture::DDB &inDB)
- AntiCoreBase (torc::architecture::DDB &inDB, string sliceA, string sliceB)
- void allocateMask ()
- void setMode (eMode newMode)
- void buildValidBoundaries (const int tilesPerRegion)
- std::string exportPipFromArc (torc::architecture::Tilewire source, torc::architecture::Tilewire sink, torc::architecture::DDB &mDB)
- void buildSiteMap ()
- void importXDL (void)
- void getRegionVertices (torc::architecture::xilinx::TileCol &_xMin, torc::architecture::xilinx::TileCol &_xMax, torc::architecture::xilinx::TileRow &_yMin, torc::architecture::xilinx::TileRow &_yMax)
- void setRegionVertices (torc::architecture::xilinx::TileCol _xMin, torc::architecture::xilinx::TileCol _xMax, torc::architecture::xilinx::TileRow _yMin, torc::architecture::xilinx::TileRow _yMax)

- void updateRegion (string siteA, string siteB)
- void updateRegionExpand (string siteA, string siteB)
- void expandRegionToINT ()
- void expandRegion (int increment)
- void shrinkRegion (int decrement)
- bool validateRegion ()
- void blockSites (void)
- void genProhibitConstraints ()
- bool retrieveDynamicRegion (fstream &constraintsFile, string dynamicAGName)
- void genProhibitConstraints (fstream &ucfFile)
- virtual bmNameToTypeMap & genMacroPlacement (int busWidth, fstream &ucfFile, string busMacroPrefix)=0
- void genPlaceConstraints (int busWidth, fstream &ucfFile)
- virtual string placeMacro (torc::architecture::xilinx::TileIndex ti, bool minOrMax)=0
- string getSiteType (string site)
- bool inRegion (torc::architecture::xilinx::TileIndex queryTileIndex)
- torc::architecture::xilinx::TileIndex siteNameToTileIndex (string siteName)
- void setupRouteBlocker ()
- void dumpMask (void)
- vector< string > getRegionTiles ()
- void blockTileRoutes (torc::architecture::xilinx::TileRow r, torc::architecture::xilinx::TileCol c)
- void blockTileRoutesPartial (torc::architecture::xilinx::TileRow r, torc::architecture::xilinx::TileCol c)
- void blockRoutes ()
- boost::uint32_t checkEfficacy (torc::architecture::xilinx::TileRow r, torc::architecture::xilinx::TileCol c, boost::uint32_t &noSourceCount)
- void blockRoutes (string placedXDLPath, string blockedXDLPath, string blockingNetName)
- bool mergeClockTree (string staticFullXdlPath, string partialPlacedXdlPath, string partialMergedXdlPath, vector< string > clockNetNames)
- ~AntiCoreBase ()

Protected Types

- typedef std::multimap< torc::architecture::xilinx::TileIndex, torc::architecture::Sites::Site > tileToSiteMap

Protected Attributes

- torc::architecture::DDB & mDB
- const torc::architecture::Tiles & mTiles
- const torc::architecture::Segments & mSegments
- torc::architecture::TilewireVector wires_buf
- torc::architecture::TilewireVector sinks_buf
- torc::architecture::TilewireVector sources_buf
- torc::architecture::TileInfo startTile
- torc::architecture::TileInfo endTile
- torc::architecture::xilinx::TileCol xMin
- torc::architecture::xilinx::TileCol xMax
- torc::architecture::xilinx::TileRow yMin
- torc::architecture::xilinx::TileRow yMax

- eMode currentMode
- map< std::string, openpr::prohibitRange > prohibitedSites
- std::multimap< torc::architecture::xilinx::TileIndex, torc::architecture::Sites::Site > siteMap
- vector< torc::architecture::xilinx::TileIndex > macroTiles
- const int macroWidth
- bmNameToTypeMap busMacroMap
- openpr::netlist::NetList * placedXDLInput
- openpr::netlist::Net * blockingNet
- int ** mask
- vector< torc::architecture::xilinx::TileRow > validBoundaries

8.1.1 Detailed Description

Definition at line 43 of file AntiCoreBase.hpp.

8.1.2 Member Typedef Documentation

8.1.2.1 typedef std::multimap<torc::architecture::xilinx::TileIndex, torc::architecture::Sites::Site> openpr::AntiCoreBase::tileToSiteMap [protected]

Maps between Tile indices and the sites within that tile.

Definition at line 75 of file AntiCoreBase.hpp.

8.1.3 Constructor & Destructor Documentation

8.1.3.1 openpr::AntiCoreBase::AntiCoreBase (torc::architecture::DDB & *inDB*)

construct Anticore object.

Parameters

inDB CDB database.

Definition at line 25 of file AntiCoreBase.cpp.

Here is the call graph for this function:

8.1.3.2 openpr::AntiCoreBase::AntiCoreBase (torc::architecture::DDB & *inDB*, string *sliceA*, string *sliceB*)

Construct an AntiCore object, and define boundaries of AntiCore based upon sliceA and sliceB tile coordinates.

Parameters

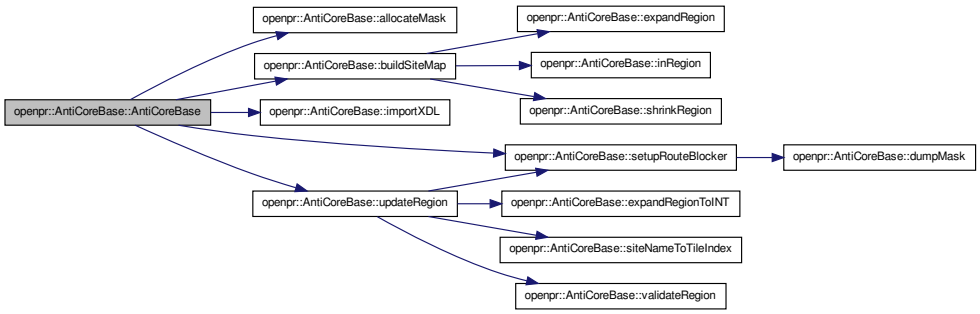
inDB CDB enabled database for access to browser data.

sliceA String representing bottom corner of AntiCore region.

sliceB String representing top corner of AntiCore region.

Definition at line 41 of file AntiCoreBase.cpp.

Here is the call graph for this function:



8.1.3.3 openpr::AntiCoreBase::~AntiCoreBase ( )

Definition at line 1186 of file AntiCoreBase.cpp.

8.1.4 Member Function Documentation

8.1.4.1 void openpr::AntiCoreBase::allocateMask ( )

Allocate memory for bitmask.

Todo

Replace integer matrix with dynamic_bitset.

Allocate memory for bitmask.

Todo

Replace integer matrix with dynamic_bitset.

Definition at line 54 of file AntiCoreBase.cpp.

8.1.4.2 void openpr::AntiCoreBase::blockRoutes (string *placedXDLPath,* string *blockedXDLPath,* string *blockingNetName*)

Block routing access to the tiles that surround the region.

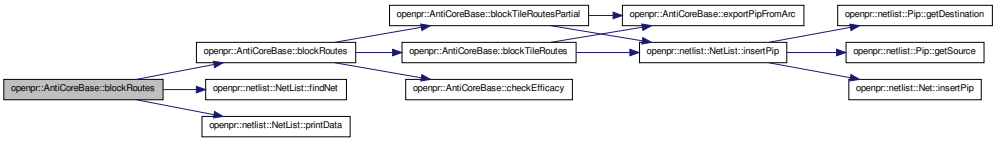
Parameters

placedXDL Pointer to a NetList object that represents the XDL file.

blockingNet name of the net that blocking routes should be added to.

Definition at line 1117 of file AntiCoreBase.cpp.

Here is the call graph for this function:

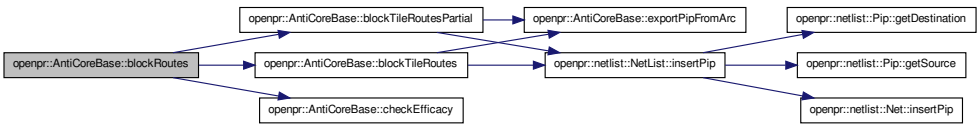


8.1.4.3 void openpr::AntiCoreBase::blockRoutes ( )

Block routing access to the tiles that surround the region.

Definition at line 988 of file AntiCoreBase.cpp.

Here is the call graph for this function:

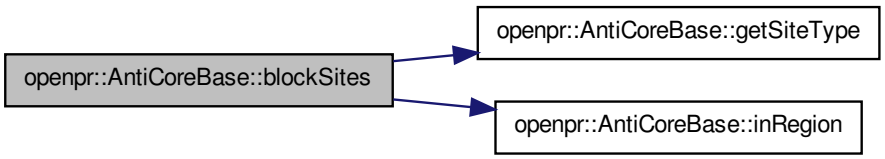


8.1.4.4 void openpr::AntiCoreBase::blockSites (void)

Generate PROHIBIT constraints that can be copied into the ucf file.

Definition at line 392 of file AntiCoreBase.cpp.

Here is the call graph for this function:



8.1.4.5 void openpr::AntiCoreBase::blockTileRoutes (torc::architecture::xilinx::TileRow *r*, torc::architecture::xilinx::TileCol *c*)

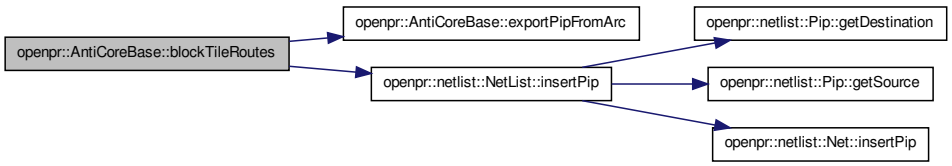
Block routing access to the to the tile specified by r,c.

Parameters

- ***r*** Row of tile to be blocked.
- ***c*** Column of tile to be blocked.

Definition at line 770 of file AntiCoreBase.cpp.

Here is the call graph for this function:



8.1.4.6 void openpr::AntiCoreBase::blockTileRoutesPartial (torc::architecture::xilinx::TileRow *r*, torc::architecture::xilinx::TileCol *c*)

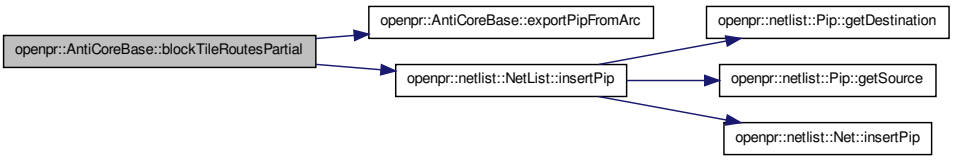
Block routing access to the to the tile specified by r,c.

Parameters

- ***r*** Row of tile to be blocked.
- ***c*** Column of tile to be blocked.

Definition at line 879 of file AntiCoreBase.cpp.

Here is the call graph for this function:

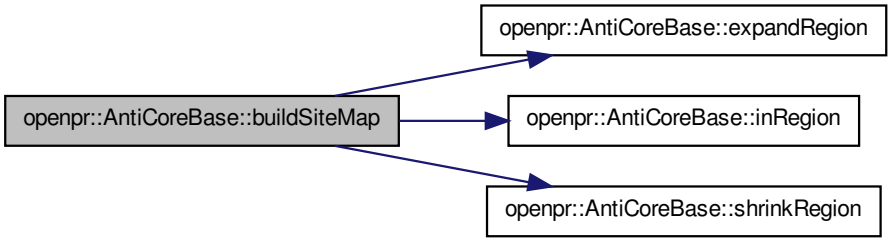


8.1.4.7 void openpr::AntiCoreBase::buildSiteMap ( )

Build map between tile index and sites contained within.

Definition at line 104 of file AntiCoreBase.cpp.

Here is the call graph for this function:



8.1.4.8 void openpr::AntiCoreBase::buildValidBoundaries (const int *tilesPerRegion*)

Build vector which stores all valid boundary rows for this device.

Parameters

tilesPerRegion Number of tile rows per clock region.

Definition at line 73 of file AntiCoreBase.cpp.

8.1.4.9 boost::uint32_t openpr::AntiCoreBase::checkEfficacy (torc::architecture::xilinx::TileRow *r*, torc::architecture::xilinx::TileCol *c*, boost::uint32_t & *noSourceCount*)

Check how effectively par was blocked from entering the region. There are two important measurements here, first is how many region-crossing segments are left or "unused segments", this is the return value from this function. Another important measurement is whether these segments were unused because of a bug,

or because no suitable sources were available. If there were no sources available, then we have effectively blocked the segment even if it is unused!

Parameters

r Row of tile to be analysed.

c Column of tile to be analysed.

noSourceCount Keep track of how many segments are unused because the sources have been exhausted.

Definition at line 1038 of file AntiCoreBase.cpp.

8.1.4.10 void openpr::AntiCoreBase::dumpMask (void)

Dump the bitmask as ASCII art using 1s and 0s.

Definition at line 718 of file AntiCoreBase.cpp.

8.1.4.11 void openpr::AntiCoreBase::expandRegion (int *increment*)

Expand the region by the specified number of tiles.

Parameters

increment The number of tiles the region needs to be expanded by.

Definition at line 298 of file AntiCoreBase.cpp.

8.1.4.12 void openpr::AntiCoreBase::expandRegionToINT ( )

Expand the region so that the first column includes the interconnect tiles.

Definition at line 264 of file AntiCoreBase.cpp.

8.1.4.13 std::string openpr::AntiCoreBase::exportPipFromArc (torc::architecture::Tilewire *source,* torc::architecture::Tilewire *sink,* torc::architecture::DDB & *mDB*)

Definition at line 90 of file AntiCoreBase.cpp.

8.1.4.14 virtual bmNameToTypeMap& openpr::AntiCoreBase::genMacroPlacement (int *busWidth,* fstream & *ucfFile,* string *busMacroPrefix*) [pure virtual]

Generate placement of bus macros, and return map representing relationship of busmacro name to type.

Parameters

busWidth The width of bus entering the region.

ucfFile fstream for output of constraints

busMacroPrefix String containing the prefix of teh busMacro name.

Implemented in openpr::AntiCoreV4, and openpr::AntiCoreV5.

8.1.4.15 void openpr::AntiCoreBase::genPlaceConstraints (int *busWidth*, fstream & *ucfFile*)

Generate placement constraints to block site placement within the region.

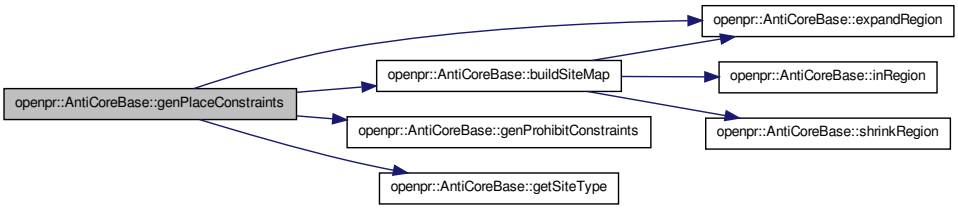
Parameters

busWidth The width of bus entering the region.

ucfFile fstream for output of constraints

Definition at line 527 of file AntiCoreBase.cpp.

Here is the call graph for this function:



8.1.4.16 void openpr::AntiCoreBase::genProhibitConstraints ( )

Write the necessary Prohibit constraints to stdout

Definition at line 444 of file AntiCoreBase.cpp.

8.1.4.17 void openpr::AntiCoreBase::genProhibitConstraints (fstream & *ucfFile*)

Write the necessary Prohibit constraints to a specified ucf file.

Parameters

ucfFile fstream object representing the ucf file

Definition at line 502 of file AntiCoreBase.cpp.

8.1.4.18 vector< string > openpr::AntiCoreBase::getRegionTiles ( )

Return a vector of tilenames for all tiles that exist within the region.

Definition at line 735 of file AntiCoreBase.cpp.

8.1.4.19 void openpr::AntiCoreBase::getRegionVertices (torc::architecture::xilinx::TileCol & *_xMin*, torc::architecture::xilinx::TileCol & *_xMax*, torc::architecture::xilinx::TileRow & *_yMin*, torc::architecture::xilinx::TileRow & *_yMax*)

Return values of four region vertices by reference.

Parameters

_xMin Minimum x-coordinate.

_xMax Maximum x-coordinate.

_yMin Miniumum y-coordinate.

_yMax Maximum y-coordinate.

Definition at line 168 of file AntiCoreBase.cpp.

8.1.4.20 string openpr::AntiCoreBase::getSiteType (string *site*)

Return site type (CLB, IOB, etc.).

Parameters

site Site to be queried.

Definition at line 618 of file AntiCoreBase.cpp.

8.1.4.21 void openpr::AntiCoreBase::importXDL (void)

Import an XDL file and reserve all currently used pips.

Definition at line 135 of file AntiCoreBase.cpp.

8.1.4.22 bool openpr::AntiCoreBase::inRegion (torc::architecture::xilinx::TileIndex *queryTileIndex*)

Determine whether tile is within the dynamic region. This function is used by the blockSites function currently.

Parameters

queryTileIndex Tile index to be queried.

Definition at line 629 of file AntiCoreBase.cpp.

8.1.4.23 bool openpr::AntiCoreBase::mergeClockTree (string *staticFullXdlPath,* string *partialPlacedXdlPath,* string *partialMergedXdlPath,* vector< string > *clockNetNames*)

Merge the clock tree net from the static design into the partial design's xdl file.

Parameters

staticFullXdlPath string storing full path to static xdl file.

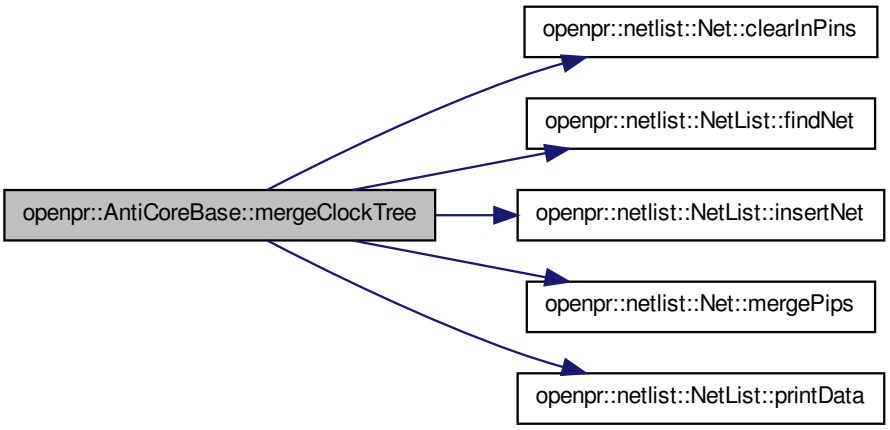
partialPlacedXdlPath string storing full path to partial design's placed xdl file.

partialMergedXdlPath string storing full path to desired output file.

clockNetName Name of clock net in both design files...these MUST be the same (for now).

Definition at line 1152 of file AntiCoreBase.cpp.

Here is the call graph for this function:



8.1.4.24 virtual string openpr::AntiCoreBase::placeMacro (torc::architecture::xilinx::TileIndex *ti*, bool *minOrMax*) [pure virtual]

Given a specific tile, find a SLICE to place the macro in.

Parameters

ti torc::architecture::xilinx::TileIndex of tile to look in.

minOrMax Indicates whether macro should be placed at most extreme slice or least extreme slice in tile.

Implemented in openpr::AntiCoreV4, and openpr::AntiCoreV5.

8.1.4.25 bool openpr::AntiCoreBase::retrieveDynamicRegion (fstream & *constraintsFile*, string *dynamicAGName*)

Parse the specified UCF file and update the region to reflect the AREA_GROUP constraints found within.

Parameters

ucfFile Path/filename of UCF File.

dynamicAGName the name of the PR region in the UCF file.

Definition at line 467 of file AntiCoreBase.cpp.

Here is the call graph for this function:

8.1.4.26 void openpr::AntiCoreBase::setMode (eMode *newMode*)

Set the mode to determine behavior of anticore.

Parameters

newMode enum value of mode to switch to.

Definition at line 66 of file AntiCoreBase.cpp.

8.1.4.27 void openpr::AntiCoreBase::setRegionVertices (torc::architecture::xilinx::TileCol *_xMin,* torc::architecture::xilinx::TileCol *_xMax,* torc::architecture::xilinx::TileRow *_yMin,* torc::architecture::xilinx::TileRow *_yMax*)

Set values of four region vertices.

Parameters

_xMin Minimum x-coordinate.

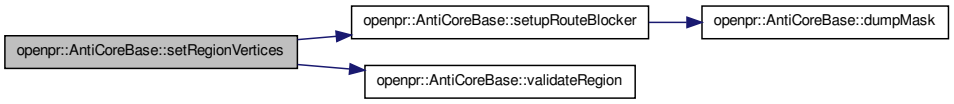
_xMax Maximum x-coordinate.

_yMin Miniumum y-coordinate.

_yMax Maximum y-coordinate.

Definition at line 184 of file AntiCoreBase.cpp.

Here is the call graph for this function:

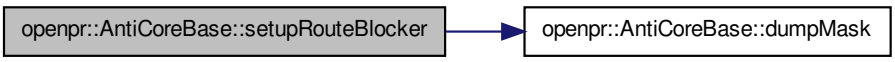


8.1.4.28 void openpr::AntiCoreBase::setupRouteBlocker ( )

Setup bitmask.

Definition at line 689 of file AntiCoreBase.cpp.

Here is the call graph for this function:



8.1.4.29 void openpr::AntiCoreBase::shrinkRegion (int *decrement*)

Shrink the region by the specified number of tiles.

Parameters

decrement The number of tiles the region needs to be shrunken by.

Definition at line 331 of file AntiCoreBase.cpp.

8.1.4.30 torc::architecture::xilinx::TileIndex openpr::AntiCoreBase::siteNameToTileIndex (string *siteName*)

Translate site name to tile index.

Parameters

siteName Name of site to be translated.

Definition at line 661 of file AntiCoreBase.cpp.

8.1.4.31 void openpr::AntiCoreBase::updateRegion (string *siteA*, string *siteB*)

Update boundaries of Anticore region based upon siteA and siteB tile coordinates.

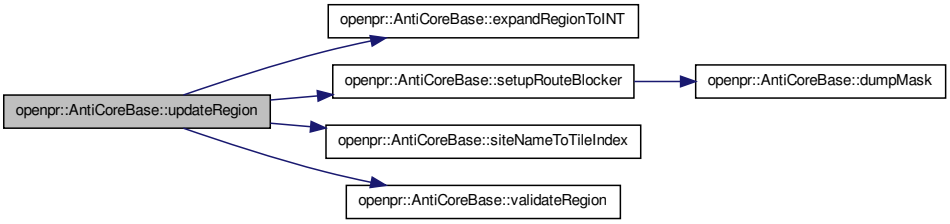
Parameters

siteA String representing bottom corner of AntiCore region.

siteB String representing top corner of AntiCore region.

Definition at line 201 of file AntiCoreBase.cpp.

Here is the call graph for this function:



8.1.4.32 void openpr::AntiCoreBase::updateRegionExpand (string *siteA*, string *siteB*)

Update boundaries of Anticore region based upon sliceA and sliceB tile coordinates.

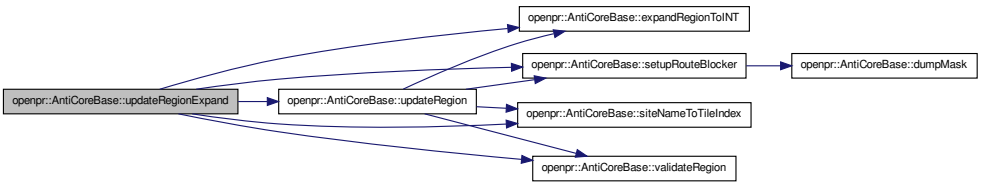
Parameters

siteA String representing bottom corner of AntiCore region.

siteB String representing top corner of AntiCore region.

Definition at line 226 of file AntiCoreBase.cpp.

Here is the call graph for this function:



8.1.4.33 bool openpr::AntiCoreBase::validateRegion ( )

Ensure that region spans multiples of clock regions.

Definition at line 363 of file AntiCoreBase.cpp.

8.1.5 Member Data Documentation

8.1.5.1 openpr::netlist::Net* openpr::AntiCoreBase::blockingNet [protected]

Pointer to Net object representing the net on which we will insert blocking pips.

Definition at line 88 of file AntiCoreBase.hpp.

8.1.5.2 bmNameToTypeMap openpr::AntiCoreBase::busMacroMap [protected]

Maps between the uniquely generated name of the bus macro and the type of bus macro.

Definition at line 83 of file AntiCoreBase.hpp.

8.1.5.3 eMode openpr::AntiCoreBase::currentMode [protected]

Stores the current operating mode of the AntiCore

Definition at line 69 of file AntiCoreBase.hpp.

8.1.5.4 torc::architecture::TileInfo openpr::AntiCoreBase::endTile [protected]

Definition at line 61 of file AntiCoreBase.hpp.

8.1.5.5 vector<torc::architecture::xilinx::TileIndex> openpr::AntiCoreBase::macroTiles [protected]

A Vector of the tiles that contain bus macros. Currently this only knows about macros generated by AntiCore code.

Definition at line 79 of file AntiCoreBase.hpp.

8.1.5.6 const int openpr::AntiCoreBase::macroWidth [protected]

Current macros have a fixed width of 8, perhaps this will change in the future.

Definition at line 81 of file AntiCoreBase.hpp.

8.1.5.7 int** openpr::AntiCoreBase::mask [protected]

Mask representing which tiles are within the region and which are without.

Definition at line 91 of file AntiCoreBase.hpp.

8.1.5.8 torc::architecture::DDB& openpr::AntiCoreBase::mDB [protected]

database reference

Definition at line 46 of file AntiCoreBase.hpp.

8.1.5.9 const torc::architecture::Segments& openpr::AntiCoreBase::mSegments [protected]

segment information reference

Definition at line 50 of file AntiCoreBase.hpp.

8.1.5.10 const torc::architecture::Tiles& openpr::AntiCoreBase::mTiles [protected]

tile and tile type information reference

Definition at line 48 of file AntiCoreBase.hpp.

8.1.5.11 openpr::netlist::NetList* openpr::AntiCoreBase::placedXDLInput [protected]

Pointer to NetList object representing a post-place XDL netlist to be route blocked.

Definition at line 86 of file AntiCoreBase.hpp.

8.1.5.12 map<std::string, openpr::prohibitRange> openpr::AntiCoreBase::prohibitedSites [protected]

Maps between a site type CLB, IOB, etc. and a range of those sites to be prohibited.

Definition at line 72 of file AntiCoreBase.hpp.

8.1.5.13 torc::architecture::TilewireVector openpr::AntiCoreBase::sinks_buf [protected]

scratch sink buffer

Definition at line 55 of file AntiCoreBase.hpp.

8.1.5.14 std::multimap<torc::architecture::xilinx::TileIndex, torc::architecture::Sites::Site> openpr::AntiCoreBase::siteMap [protected]

Definition at line 77 of file AntiCoreBase.hpp.

8.1.5.15 torc::architecture::TilewireVector openpr::AntiCoreBase::sources_buf [protected]

scratch source buffer

Definition at line 57 of file AntiCoreBase.hpp.

8.1.5.16 torc::architecture::TileInfo openpr::AntiCoreBase::startTile [protected]

Two tile info objects store x,y coordinates that define AntiCore rectangle.

Definition at line 60 of file AntiCoreBase.hpp.

8.1.5.17 vector<torc::architecture::xilinx::TileRow> openpr::AntiCoreBase::validBoundaries [protected]

Vector storing valid row indices for region boundaries.

Definition at line 94 of file AntiCoreBase.hpp.

8.1.5.18 torc::architecture::TilewireVector openpr::AntiCoreBase::wires_buf [protected]

scratch segment buffer

Definition at line 53 of file AntiCoreBase.hpp.

8.1.5.19 torc::architecture::xilinx::TileCol openpr::AntiCoreBase::xMax [protected]

Definition at line 65 of file AntiCoreBase.hpp.

8.1.5.20 torc::architecture::xilinx::TileCol openpr::AntiCoreBase::xMin [protected]

Local variables to integrate with torc's col and row

Definition at line 64 of file AntiCoreBase.hpp.

8.1.5.21 torc::architecture::xilinx::TileRow openpr::AntiCoreBase::yMax [protected]

Definition at line 67 of file AntiCoreBase.hpp.

8.1.5.22 torc::architecture::xilinx::TileRow openpr::AntiCoreBase::yMin [protected]

Definition at line 66 of file AntiCoreBase.hpp.

The documentation for this class was generated from the following files:

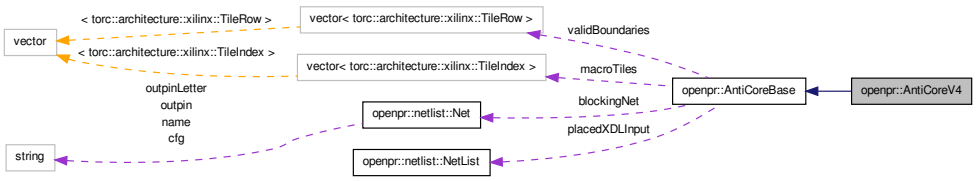
- openpr/anticore/AntiCoreBase.hpp
- openpr/anticore/AntiCoreBase.cpp

8.2 openpr::AntiCoreV4 Class Reference

`#include <AntiCoreV4.hpp>`

Inherits openpr::AntiCoreBase.

Collaboration diagram for openpr::AntiCoreV4:



Public Member Functions

- AntiCoreV4 (torc::architecture::DDB &inDB)
- AntiCoreV4 (torc::architecture::DDB &inDB, string siteA, string siteB)
- virtual bmNameToTypeMap & genMacroPlacement (int busWidth, fstream &ucfFile, string busMacroPrefix)
- virtual string placeMacro (torc::architecture::xilinx::TileIndex ti, bool minOrMax)

Private Attributes

- const int tilesPerRegion

8.2.1 Detailed Description

Definition at line 18 of file AntiCoreV4.hpp.

8.2.2 Constructor & Destructor Documentation

8.2.2.1 openpr::AntiCoreV4::AntiCoreV4 (torc::architecture::DDB & *inDB*)

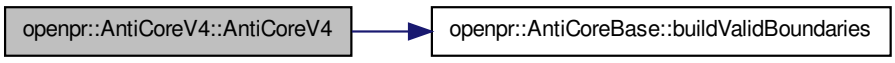
construct Anticore object.

Parameters

inDB torc::architecture::DDB database.

Definition at line 24 of file AntiCoreV4.cpp.

Here is the call graph for this function:



8.2.2.2 openpr::AntiCoreV4::AntiCoreV4 (torc::architecture::DDB & *inDB*, string *siteA*, string *siteB*)

Construct an AntiCore object, and define boundaries of AntiCore based upon sliceA and sliceB tile coordinates.

Parameters

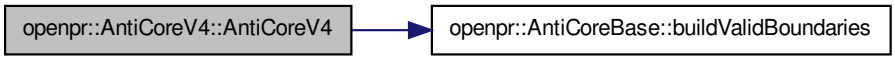
inDB torc::architecture::DDB enabled database for access to browser data.

sliceA String representing bottom corner of AntiCore region.

sliceB String representing top corner of AntiCore region.

Definition at line 36 of file AntiCoreV4.cpp.

Here is the call graph for this function:



8.2.3 Member Function Documentation

8.2.3.1 bmNameToTypeMap & openpr::AntiCoreV4::genMacroPlacement (int *busWidth,* fstream & *ucfFile,* string *busMacroPrefix*) [virtual]

Generate placement of bus macros, and return map representing relationship of busmacro name to type.

Parameters

busWidth The width of bus entering the region.

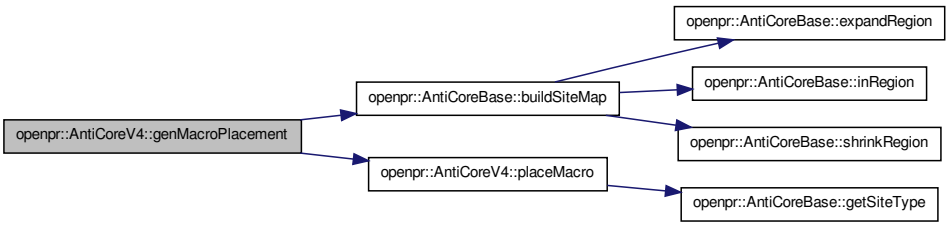
ucfFile fstream for output of constraints

busMacroPrefix String containing the prefix of teh busMacro name.

Implements openpr::AntiCoreBase.

Definition at line 47 of file AntiCoreV4.cpp.

Here is the call graph for this function:



8.2.3.2 string openpr::AntiCoreV4::placeMacro (torc::architecture::xilinx::TileIndex *ti,* bool *minOrMax*) [virtual]

Given a specific tile, find a SLICE to place the macro in.

Parameters

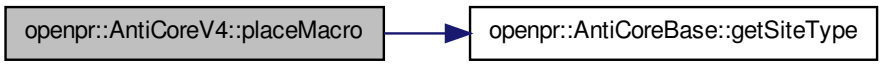
ti torc::architecture::xilinx::TileIndex of tile to look in.

minOrMax Indicates whether macro should be placed at most extreme slice or least extreme slice in tile.

Implements openpr::AntiCoreBase.

Definition at line 115 of file AntiCoreV4.cpp.

Here is the call graph for this function:



8.2.4 Member Data Documentation

8.2.4.1 const int openpr::AntiCoreV4::tilesPerRegion [private]

Definition at line 20 of file AntiCoreV4.hpp.

The documentation for this class was generated from the following files:

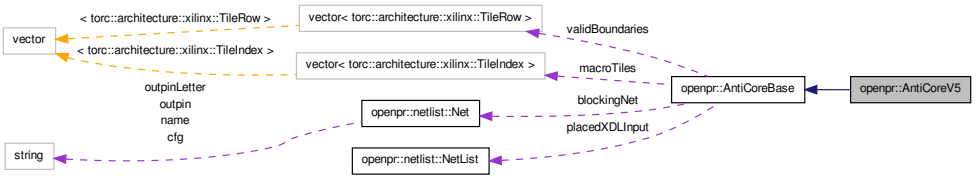
- openpr/anticore/AntiCoreV4.hpp
- openpr/anticore/AntiCoreV4.cpp

8.3 openpr::AntiCoreV5 Class Reference

`#include <AntiCoreV5.hpp>`

Inherits openpr::AntiCoreBase.

Collaboration diagram for openpr::AntiCoreV5:



Public Member Functions

- AntiCoreV5 (torc::architecture::DDB &inDB)
- AntiCoreV5 (torc::architecture::DDB &inDB, string siteA, string siteB)
- virtual bmNameToTypeMap & genMacroPlacement (int busWidth, fstream &ucfFile, string busMacroPrefix)

Private Member Functions

- virtual string placeMacro (torc::architecture::xilinx::TileIndex ti, bool minOrMax)

Private Attributes

- const int tilesPerRegion

8.3.1 Detailed Description

Definition at line 18 of file AntiCoreV5.hpp.

8.3.2 Constructor & Destructor Documentation

8.3.2.1 openpr::AntiCoreV5::AntiCoreV5 (torc::architecture::DDB & *inDB*)

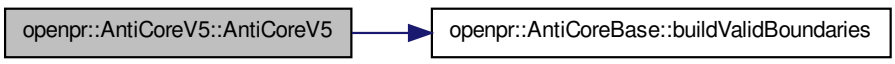
construct Anticore object.

Parameters

inDB CDB database.

Definition at line 58 of file AntiCoreV5.cpp.

Here is the call graph for this function:



8.3.2.2 openpr::AntiCoreV5::AntiCoreV5 (torc::architecture::DDB & *inDB,* string *siteA,* string *siteB*)

Construct an AntiCore object, and define boundaries of AntiCore based upon sliceA and sliceB tile coordinates.

Parameters

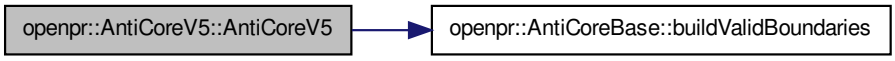
inDB CDB enabled database for access to browser data.

sliceA String representing bottom corner of AntiCore region.

sliceB String representing top corner of AntiCore region.

Definition at line 70 of file AntiCoreV5.cpp.

Here is the call graph for this function:



8.3.3 Member Function Documentation

8.3.3.1 bmNameToTypeMap & openpr::AntiCoreV5::genMacroPlacement (int *busWidth,* fstream & *ucfFile,* string *busMacroPrefix*) [virtual]

Generate placement of bus macros, and return map representing relationship of busmacro name to type.

Parameters

busWidth The width of bus entering the region.

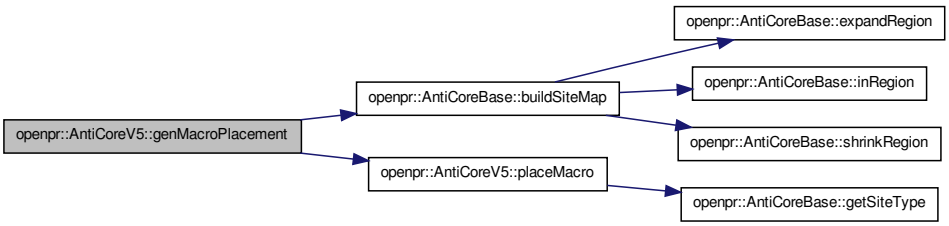
ucfFile fstream for output of constraints

busMacroPrefix String containing the prefix of teh busMacro name.

Implements openpr::AntiCoreBase.

Definition at line 81 of file AntiCoreV5.cpp.

Here is the call graph for this function:



8.3.3.2 string openpr::AntiCoreV5::placeMacro (torc::architecture::xilinx::TileIndex *ti,* bool *minOrMax*) [private, virtual]

Given a specific tile, find a SLICE to place the macro in.

Parameters

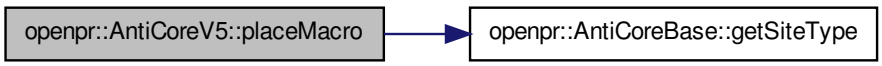
ti torc::architecture::xilinx::TileIndex of tile to look in.

minOrMax Indicates whether macro should be placed at most extreme slice or least extreme slice in tile.

Implements openpr::AntiCoreBase.

Definition at line 20 of file AntiCoreV5.cpp.

Here is the call graph for this function:



8.3.4 Member Data Documentation

8.3.4.1 const int openpr::AntiCoreV5::tilesPerRegion [private]

Definition at line 22 of file AntiCoreV5.hpp.

The documentation for this class was generated from the following files:

- openpr/anticore/AntiCoreV5.hpp
- openpr/anticore/AntiCoreV5.cpp

8.4 openpr::bitstream::architecture Class Reference

`#include <architecture.h>`

Protected Attributes

- int frame_words
- int frame_height
- int tile_frames [NUM_TILE_TYPES]

Friends

- class virtex4
- class virtex5
- class device

8.4.1 Detailed Description

Definition at line 75 of file architecture.h.

8.4.2 Friends And Related Function Documentation

8.4.2.1 friend class device [friend]

Definition at line 86 of file architecture.h.

8.4.2.2 friend class virtex4 [friend]

Definition at line 84 of file architecture.h.

8.4.2.3 friend class virtex5 [friend]

Definition at line 85 of file architecture.h.

8.4.3 Member Data Documentation

8.4.3.1 int openpr::bitstream::architecture::frame_height [protected]

Definition at line 80 of file architecture.h.

8.4.3.2 int openpr::bitstream::architecture::frame_words [protected]

Definition at line 78 of file architecture.h.

8.4.3.3 int openpr::bitstream::architecture::tile_frames[NUM_TILE_TYPES] [protected]

Definition at line 82 of file architecture.h.

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

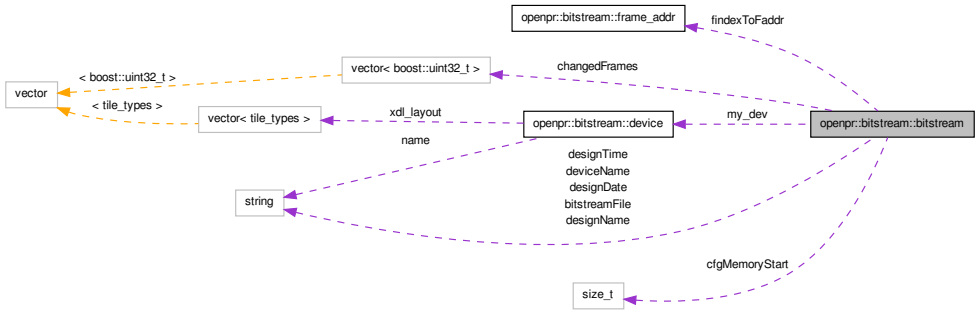
- openpr/bitstream/architecture.h

8.5 openpr::bitstream::bitstream Class Reference

`#include <bitstream.h>`

Inherited by openpr::bitstream::v4_bitstream, and openpr::bitstream::v5_bitstream.

Collaboration diagram for openpr::bitstream::bitstream:



Public Member Functions

- bitstream (string device_name, bool frame_ecc=false)
- bool loadFile (string bitstream_name)
- bool writeFrames (fstream &outStream, int startFrame, int numFrames)
- bool writeBitstream (const string &outBitstream)
- int mapBitstream ()
- int mapBRAM (int x, int y)
- string buildXDLName (string tileType, openpr::bitstream::tile_coord coord)
- void buildPartial (vector< string > regionTiles)
- ~bitstream ()

Protected Member Functions

- void buildItoaMap (openpr::bitstream::frame_addr majorAddress, boost::uint32_t startIndex, boost::uint32_t tileFrames)
- void buildGCLKItoaMap ()
- bool writeHeader (fstream &outStream)
- virtual bool readPackets (fstream &inStream)=0
- virtual bool writePackets (fstream &outStream)=0
- virtual bool writePacketsPartial (fstream &outStream)=0
- virtual openpr::bitstream::frame_addr farToStruct (boost::uint32_t far)=0
- virtual boost::uint32_t structToFar (openpr::bitstream::frame_addr far)=0
- bitstream (void)

Static Protected Member Functions

- static bool expect (fstream &inStream, boost::uint8_t inExpected)
- static bool expect (fstream &inStream, boost::uint16_t inExpected)
- static bool expect (fstream &inStream, boost::uint32_t inExpected)
- static void readXilinxString (fstream &inStream, string &outString)
- static bool readHeader (fstream &inStream, string &outDesignName, string &outDeviceName, string &outDesignDate, string &outDesignTime, boost::uint32_t &outBitstreamLength)

- static bool write (fstream &outStream, boost::uint8_t outVal)
- static bool write (fstream &outStream, boost::uint16_t outVal)
- static bool write (fstream &outStream, boost::uint32_t outVal)
- static void writeXilinxString (fstream &outStream, string inString)

Protected Attributes

- string bitstreamFile
- bool frameECC
- openpr::bitstream::device * my_dev
- char ** frame_array
- boost::uint8_t * mFrameData
- int num_frames
- openpr::bitstream::frame_addr * findexToFaddr
- boost::unordered_map< openpr::bitstream::tile_coord, openpr::bitstream::tile_data *, boost::hash< openpr::bitstream::tile_coord > > tile_map
- boost::unordered_map< std::string, openpr::bitstream::tile_data *, boost::hash< std::string > > tileMap
- string designName
- string deviceName
- string designDate
- string designTime
- boost::uint32_t bitstreamLength
- boost::uint32_t bitstreamWordCount
- size_t cfgMemoryStart
- bool isPartial
- vector< boost::uint32_t > changedFrames
- boost::dynamic_bitset frameBitmap

8.5.1 Detailed Description

The bitstream class acts as the interface/controller class for bitLib. Most useful bitstream exploration can be done via the public functions of this class. A typical use case for this class will look like this:

- Pass a device name to the bitstream::bitstream(string device_name) constructor
- Call the bitstream::mapBitstream function
- Call the bistream::loadFile function with the bitstream filename as the parameter.
- Use the bitstream::getArc,bitstream::setArc,bitstream::getCfg,bitstream::setCfg functions to view or modify routing and logic configuration bits.

Examples of how to use the bitstream class can be found in bit_test.cc and v5_bit_test.cc

Definition at line 59 of file bitstream.h.

8.5.2 Constructor & Destructor Documentation

8.5.2.1 openpr::bitstream::bitstream::bitstream (void) [inline, protected]

Null constructor used by the standalone bitstream reader

Definition at line 128 of file bitstream.h.

8.5.2.2 openpr::bitstream::bitstream::bitstream (string *device_name*, bool *frame_ecc* = `false`)

Create and return a new bitstream compatible with the supplied bitstream file.

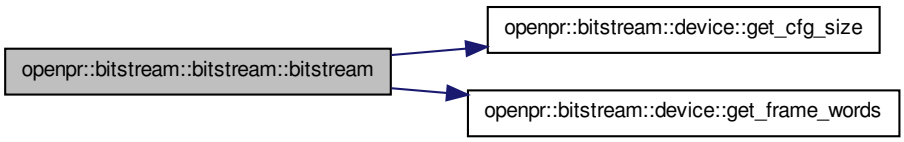
Parameters

inFilename Name of the reference bitstream. Allocate device object based on supplied name.

device_name Specific part to be used.

Definition at line 22 of file bitstream.cpp.

Here is the call graph for this function:



8.5.2.3 openpr::bitstream::bitstream::~bitstream ( )

Compare two unsigned bytes of data and find the bits that differ.

Parameters

a The first byte to compare.

b The second byte to compare. Free all dynamically allocated memory

Definition at line 192 of file bitstream.cpp.

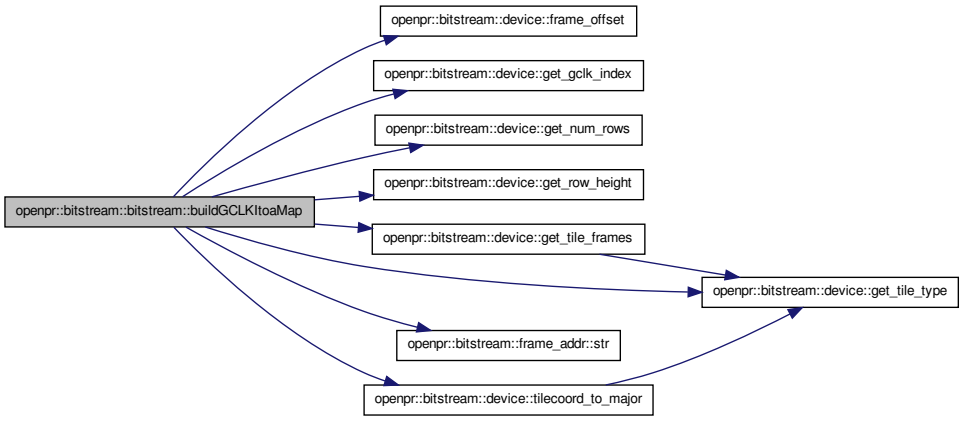
8.5.3 Member Function Documentation

8.5.3.1 void openpr::bitstream::bitstream::buildGCLKItoaMap ( ) `[protected]`

Fill in the appropriate addresses for GCLK columns.

Definition at line 166 of file bitstream.cpp.

Here is the call graph for this function:



8.5.3.2 void openpr::bitstream::bitstream::buildItoaMap (openpr::bitstream::frame_addr *majorAddress*, boost::uint32_t *startIndex*, boost::uint32_t *tileFrames*) [protected]

Build a mapping from frame index to frame address.

Parameters

majorAddress Frame Address for the major column

startIndex Starting Index for the tile frames

tileFrames number of frame for the tileType

Definition at line 156 of file bitstream.cpp.

8.5.3.3 void openpr::bitstream::bitstream::buildPartial (vector< string > *regionTiles*)

Take a tileName string and return the tile_data struct that corresponds to it.

Parameters

tileName string containing the XDL name of the tile. Return struct containing Frame Address, Frame Number, Byte Offset, and number of frames the tile spans along with a pointer to the first frame in the frame_array with data for this tile

x X Coordinate of Tile

y Y Coordinate of Tile Dump all frames in the bitstream in a human readable manner. Dump the requested frames to stdout.

startFrame The first frame to print out.

endFrame The last frame to print + 1. Compare two bitstreams and find the bits that differ.

bitstreamA The first bitstream to compare.

bitstreamB The second bitstream to compare. Build vector representing all frames in static bitstream.

regionTiles vector of all tiles in the region, use CDB to generate this list.

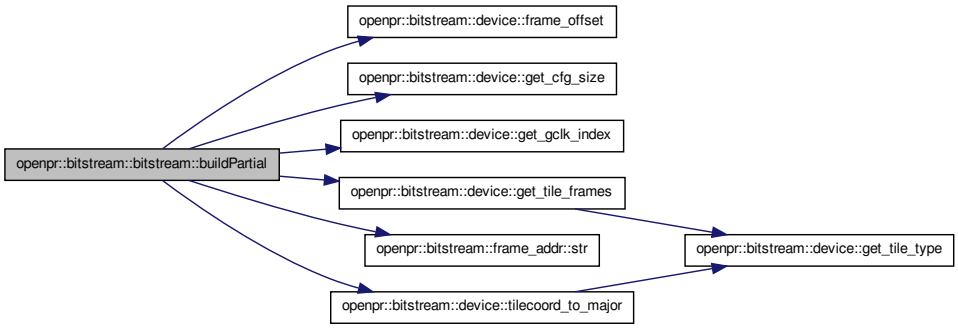
Build the frameBitmap structure to represent which frames should be written out to the bitstream when necessary.

Parameters

regionTiles A vector of all the tiles in a partial region.

Definition at line 456 of file bitstream.cpp.

Here is the call graph for this function:



8.5.3.4 string openpr::bitstream::bitstream::buildXDLName (string *tileType*, openpr::bitstream::tile_coord *coord*)

Extract XDL tile type from tileName and return string.

Parameters

tileName string containing XDL name of tile. Extract XDL coordinates from tileName and return tile_coord object.

tileName string containing XDL name of tile. Build an XDL name using the tile type and tile coordinate.

tileType String containing tile type info.

coord XDL coordinates of tile.

Definition at line 185 of file bitstream.cpp.

8.5.3.5 bool openpr::bitstream::bitstream::expect (fstream & *inStream*, boost::uint16_t *inExpected*) [static, protected]

Definition at line 225 of file bitstream.cpp.

8.5.3.6 bool openpr::bitstream::bitstream::expect (fstream & *inStream*, boost::uint32_t *inExpected*) [static, protected]

Definition at line 233 of file bitstream.cpp.

8.5.3.7 bool openpr::bitstream::bitstream::expect (fstream & *inStream*, boost::uint8_t *inExpected*) [static, protected]

Definition at line 217 of file bitstream.cpp.

8.5.3.8 virtual openpr::bitstream::frame_addr openpr::bitstream::bitstream::farToStruct (boost::uint32_t *far*) [protected, pure virtual]

Write a packet header to the bitstream.

Parameters

outStream Bitstream to be written.

packetType uint indicating type 1 or type 2 packet.

opcode Operation to be performed on register.

address Register address to be written.

reserved Param for reserved opcodes.

count Number of words to be written in packet.

Implemented in openpr::bitstream::v4_bitstream, and openpr::bitstream::v5_bitstream.

8.5.3.9 bool openpr::bitstream::bitstream::loadFile (string *bitstream_name*)

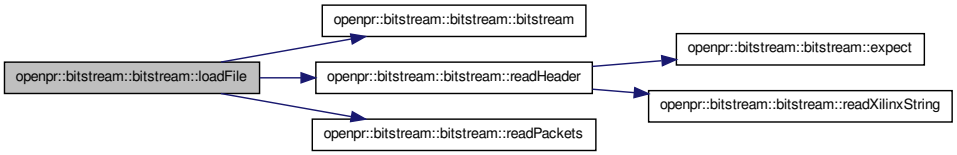
Allocate memory for frame_array and sequentially load bitstream.

Parameters

bitstream_name File name of bitstream to load

Definition at line 413 of file bitstream.cpp.

Here is the call graph for this function:

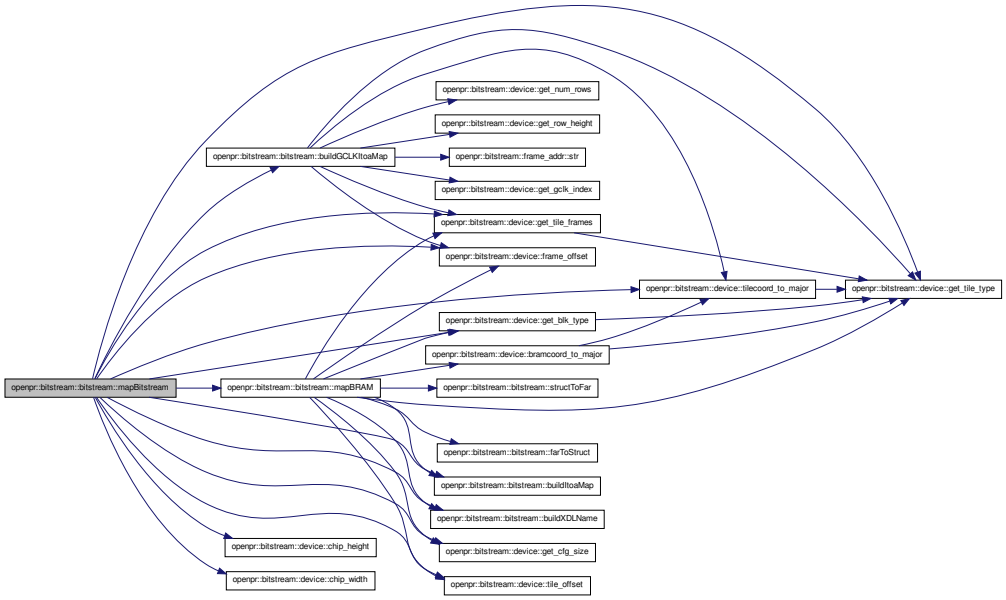


8.5.3.10 int openpr::bitstream::bitstream::mapBitstream ( )

Build tilemap using CDB. Map tile coordinates to frame_array indices

Definition at line 71 of file bitstream.cpp.

Here is the call graph for this function:



8.5.3.11 int openpr::bitstream::bitstream::mapBRAM (int *x*, int *y*)

Map bram to tile name.

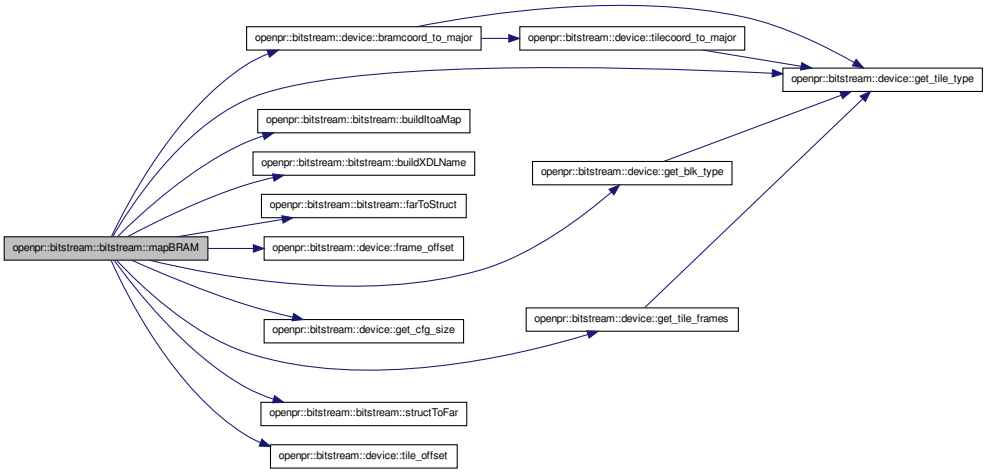
Parameters

x X Coordinate of BRAM

y Y Coordinate of BRAM.

Definition at line 132 of file bitstream.cpp.

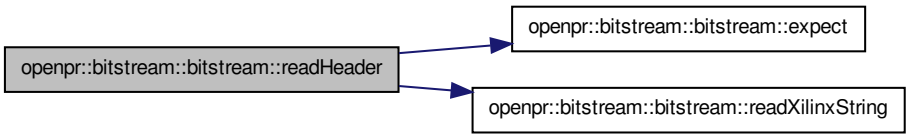
Here is the call graph for this function:



8.5.3.12 bool openpr::bitstream::bitstream::readHeader (fstream & *inStream*, string & *outDesignName*, string & *outDeviceName*, string & *outDesignDate*, string & *outDesignTime*, boost::uint32_t & *outBitstreamLength*) [static, protected]

Definition at line 260 of file bitstream.cpp.

Here is the call graph for this function:



8.5.3.13 virtual bool openpr::bitstream::bitstream::readPackets (fstream & *inStream*) [protected, pure virtual]

Implemented in openpr::bitstream::v5_bitstream.

8.5.3.14 void openpr::bitstream::bitstream::readXilinxString (fstream & *inStream*, string & *outString*) [static, protected]

Definition at line 242 of file bitstream.cpp.

8.5.3.15 virtual boost::uint32_t openpr::bitstream::bitstream::structToFar (openpr::bitstream::frame_addr *far*) [protected, pure virtual]

Implemented in openpr::bitstream::v4_bitstream, and openpr::bitstream::v5_bitstream.

8.5.3.16 bool openpr::bitstream::bitstream::write (fstream & *outStream*, boost::uint8_t *outVal*) [static, protected]

Definition at line 313 of file bitstream.cpp.

8.5.3.17 bool openpr::bitstream::bitstream::write (fstream & *outStream*, boost::uint16_t *outVal*) [static, protected]

Definition at line 320 of file bitstream.cpp.

8.5.3.18 bool openpr::bitstream::bitstream::write (fstream & *outStream*, boost::uint32_t *outVal*) [static, protected]

Definition at line 328 of file bitstream.cpp.

8.5.3.19 bool openpr::bitstream::bitstream::writeBitstream (const string & *outBitstream*)

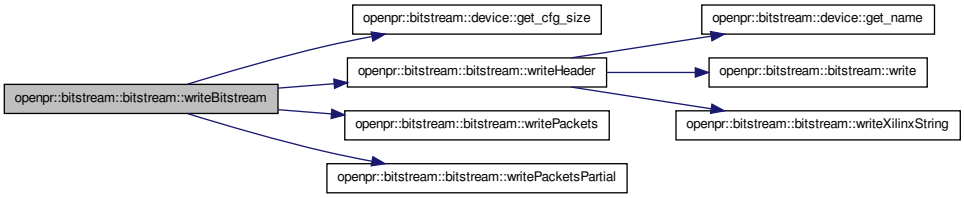
Write a bitstream to the specified file.

Parameters

outBitstream Bitstream file to be written.

Definition at line 390 of file bitstream.cpp.

Here is the call graph for this function:



8.5.3.20 bool openpr::bitstream::bitstream::writeFrames (fstream & *outStream*, int *startFrame*, int *numFrames*)

Write configuration memory back to bitstream. Write out partial bitstream.

Parameters

outStream bitstream file to be written Write out frames to to outStream file.

outStream Bitstream file to be written

startFrame first frame to be written

numFrames number of frames to be written

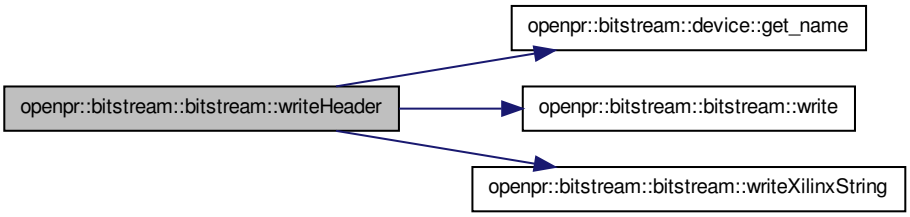
Definition at line 484 of file bitstream.cpp.

Here is the call graph for this function:

8.5.3.21 bool openpr::bitstream::bitstream::writeHeader (fstream & *outStream*) [protected]

Definition at line 350 of file bitstream.cpp.

Here is the call graph for this function:



8.5.3.22 virtual bool openpr::bitstream::bitstream::writePackets (fstream & *outStream*) [protected, pure virtual]

Implemented in openpr::bitstream::v5_bitstream.

8.5.3.23 virtual bool openpr::bitstream::bitstream::writePacketsPartial (fstream & *outStream*) [protected, pure virtual]

Implemented in openpr::bitstream::v5_bitstream.

8.5.3.24 void openpr::bitstream::bitstream::writeXilinxString (fstream & *outStream*, string *inString*) [static, protected]

Definition at line 336 of file bitstream.cpp.

8.5.4 Member Data Documentation

8.5.4.1 string openpr::bitstream::bitstream::bitstreamFile [protected]

Definition at line 62 of file bitstream.h.

8.5.4.2 boost::uint32_t openpr::bitstream::bitstream::bitstreamLength [protected]

Definition at line 76 of file bitstream.h.

8.5.4.3 boost::uint32_t openpr::bitstream::bitstream::bitstreamWordCount [protected]

Definition at line 77 of file bitstream.h.

8.5.4.4 size_t openpr::bitstream::bitstream::cfgMemoryStart [protected]

Definition at line 78 of file bitstream.h.

8.5.4.5 vector<boost::uint32_t> openpr::bitstream::bitstream::changedFrames [protected]

Definition at line 80 of file bitstream.h.

8.5.4.6 string openpr::bitstream::bitstream::designDate [protected]

Definition at line 74 of file bitstream.h.

8.5.4.7 string openpr::bitstream::bitstream::designName [protected]

Definition at line 72 of file bitstream.h.

8.5.4.8 string openpr::bitstream::bitstream::designTime [protected]

Definition at line 75 of file bitstream.h.

8.5.4.9 string openpr::bitstream::bitstream::deviceName [protected]

Definition at line 73 of file bitstream.h.

8.5.4.10 openpr::bitstream::frame_addr* openpr::bitstream::bitstream::findexToFaddr [protected]

Map between frame indices and frameAddresses for fast lookup

Definition at line 69 of file bitstream.h.

8.5.4.11 char** openpr::bitstream::bitstream::frame_array [protected]

Definition at line 65 of file bitstream.h.

8.5.4.12 boost::dynamic_bitset openpr::bitstream::bitstream::frameBitmap [protected]

Definition at line 81 of file bitstream.h.

8.5.4.13 bool openpr::bitstream::bitstream::frameECC [protected]

Definition at line 63 of file bitstream.h.

8.5.4.14 bool openpr::bitstream::bitstream::isPartial [protected]

Definition at line 79 of file bitstream.h.

8.5.4.15 boost::uint8_t* openpr::bitstream::bitstream::mFrameData [protected]

Definition at line 66 of file bitstream.h.

8.5.4.16 openpr::bitstream::device* openpr::bitstream::bitstream::my_dev [protected]

Definition at line 64 of file bitstream.h.

8.5.4.17 int openpr::bitstream::bitstream::num_frames [protected]

Definition at line 67 of file bitstream.h.

8.5.4.18 boost::unordered_map< openpr::bitstream::tile_coord, openpr::bitstream::tile_data*, boost::hash < openpr::bitstream::tile_coord > > openpr::bitstream::bitstream::tile_map [protected]

Definition at line 70 of file bitstream.h.

8.5.4.19 boost::unordered_map< std::string, openpr::bitstream::tile_data*, boost::hash < std::string > > openpr::bitstream::bitstream::tileMap [protected]

Definition at line 71 of file bitstream.h.

The documentation for this class was generated from the following files:

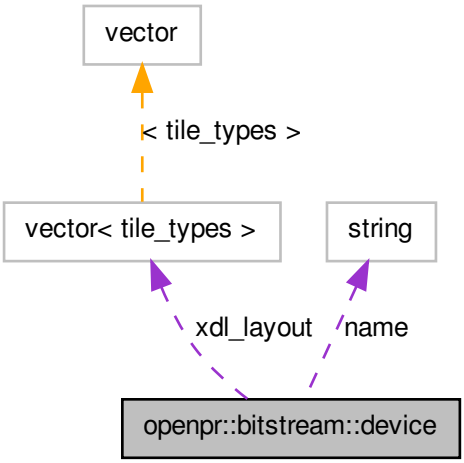
- openpr/bitstream/bitstream.h
- openpr/bitstream/bitstream.cpp

8.6 openpr::bitstream::device Class Reference

`#include <device.h>`

Inherited by openpr::bitstream::virtex4, and openpr::bitstream::virtex5.

Collaboration diagram for openpr::bitstream::device:



Public Member Functions

- int get_chip_id ()
- string get_name () const
- int get_num_rows () const
- int get_row_width (int type)
- int chip_height ()
- int get_row_height ()
- int chip_width ()
- int get_cfg_size (int type)
- int get_cfg_size ()
- int get_gclk_index ()
- tile_types get_tile_type (int x)
- int get_blk_type (int x)
- int get_blk_type (tile_types tile_type)
- virtual int get_addressable_blk_types ()
- frame_addr tilecoord_to_major (int x, int y)

- frame_addr bramcoord_to_major (int x, int y)
- int frame_offset (frame_addr frame_address)
- virtual int tile_offset (int x, int y)=0
- int get_tile_frames (int x)
- int get_tile_frames (tile_types tile_type)
- int get_frame_words (void)
- ~device ()

Public Attributes

- const char * routing_table
- const char * logic_table

Protected Member Functions

- device (const int num_rows, const int num_cols, const tile_types row_layout[ ], const string name, const int id, const int frame_words, const int frame_height, const int tile_frames[ ], const int block_type[ ], int clb_slices, int num_blk_types, const char *routing_table, const char *logic_table)
- void build_xdl_layout ()

Protected Attributes

- const string name
- const unsigned int id
- const int num_rows
- const int num_cols
- const int frame_words
- const int frame_height
- int tile_width
- const int * tile_frames
- const int * block_type
- const int clb_slices
- const int num_blk_types
- const tile_types * row_layout
- vector< tile_types > xdl_layout
- int gclk_index
- int * row_width

8.6.1 Detailed Description

Definition at line 29 of file device.h.

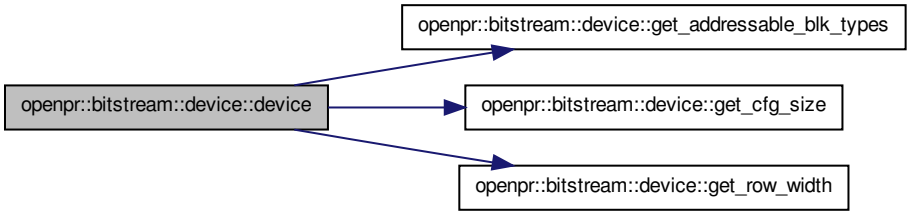
8.6.2 Constructor & Destructor Documentation

8.6.2.1 openpr::bitstream::device::device (const int *num_rows*, const int *num_cols*, const tile_types *row_layout[ ]*, const string *name*, const int *id*, const int *frame_words*, const int *frame_height*, const int *tile_frames[ ]*, const int *block_type[ ]*, int *clb_slices*, int *num_blk_types*, const char * *routing_table*, const char * *logic_table*) [inline, protected]

Inline Constructor to initialize const values passed from subclass constructors.

Definition at line 50 of file device.h.

Here is the call graph for this function:



8.6.2.2 openpr::bitstream::device::~device ( ) [inline]

Destructor frees any dynamically allocated memory.

Definition at line 195 of file device.h.

8.6.3 Member Function Documentation

8.6.3.1 frame_addr openpr::bitstream::device::bramcoord_to_major (int *x*, int *y*)

Translate BRAM XDL Style Tile coordinate to Major Frame Address.

Parameters

x X Coordinate of Tile

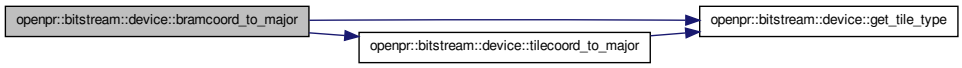
y Y Coordinate of Tile

Todo

Change this so it isn't a dirty hack

Definition at line 143 of file device.cpp.

Here is the call graph for this function:



8.6.3.2 void openpr::bitstream::device::build_xdl_layout ( ) [protected]

Initialize xdl_layout vector to make looking up tile types of XDL coordinates easier.

Definition at line 55 of file device.cpp.

8.6.3.3 int openpr::bitstream::device::chip_height ( )

Return height of chip in Tiles

Definition at line 33 of file device.cpp.

8.6.3.4 int openpr::bitstream::device::chip_width ( )

Return number of tile columns

Definition at line 37 of file device.cpp.

8.6.3.5 int openpr::bitstream::device::frame_offset (frame_addr *frame_address*)

Return offset of frame within bitstream. Currently working for CLB Block Types and BRAM INT Type

Parameters

frame_address Frame address to be located

Definition at line 163 of file device.cpp.

8.6.3.6 int openpr::bitstream::device::get_addressable_blk_types ( ) [virtual]

Return the number of addressable block types.

Reimplemented in openpr::bitstream::virtex4, and openpr::bitstream::virtex5.

Definition at line 87 of file device.cpp.

8.6.3.7 int openpr::bitstream::device::get_blk_type (int *x*)

Return block type given an XDL name X coordinate. Due to overlaps in XDL style tile coordinates, we cannot distinguish between IOBs and GCLKs or BRAM_INTs/BRAMs

Parameters

x X Coordinate of Tile

Definition at line 78 of file device.cpp.

Here is the call graph for this function:

8.6.3.8 int openpr::bitstream::device::get_blk_type (tile_types *tile_type*) [inline]

Return block type given a tiletype.

Parameters

tile_type Enumerated tile_type id.

Definition at line 137 of file device.h.

8.6.3.9 int openpr::bitstream::device::get_cfg_size (int *type*)

Return size of config block for block type (frames).

Parameters

type block type to get configuration size for

Definition at line 51 of file device.cpp.

8.6.3.10 int openpr::bitstream::device::get_cfg_size ( )

Return size of configuration memory.

Definition at line 43 of file device.cpp.

8.6.3.11 int openpr::bitstream::device::get_chip_id ( )

Return chip ID.

Definition at line 17 of file device.cpp.

8.6.3.12 int openpr::bitstream::device::get_frame_words (void) [inline]

Return the number of words per frame for the architecture.

Returns

Number of words per frame

Definition at line 191 of file device.h.

8.6.3.13 int openpr::bitstream::device::get_gclk_index ( ) [inline]

Return the index of the GCLK tile.

Definition at line 117 of file device.h.

8.6.3.14 string openpr::bitstream::device::get_name ( ) const [inline]

Return device name.

Definition at line 84 of file device.h.

8.6.3.15 int openpr::bitstream::device::get_num_rows ( ) const [inline]

Return number of frame address rows in device.

Definition at line 88 of file device.h.

8.6.3.16 int openpr::bitstream::device::get_row_height ( ) [inline]

Return height of one clock region.

Definition at line 100 of file device.h.

8.6.3.17 int openpr::bitstream::device::get_row_width (int *type*)

Return Width of Row in Frames.

Definition at line 21 of file device.cpp.

8.6.3.18 int openpr::bitstream::device::get_tile_frames (tile_types *tile_type*) [inline]

Return number of frames that this tile spans in bitstream.

Parameters

tile_type Tile type enum.

Returns

number of frames that this tile spans in bitstream.

Definition at line 186 of file device.h.

8.6.3.19 int openpr::bitstream::device::get_tile_frames (int *x*)

Return tile number within column when given byte offset.

Parameters

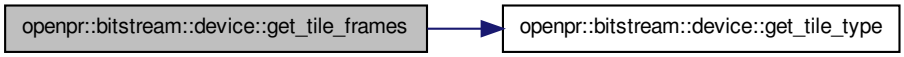
byte_offset The byte offset within the frame.

Returns

Tile index within column (-1 if in ECC word).

Definition at line 203 of file device.cpp.

Here is the call graph for this function:



8.6.3.20 tile_types openpr::bitstream::device::get_tile_type (int *x*)

Return tile type given an XDL name X coordinate. Due to overlaps in XDL style tile coordinates, cannot we distinguish between IOBs and GCLKs or BRAM_INTs/BRAMs

Parameters

x X Coordinate of Tile

Definition at line 70 of file device.cpp.

8.6.3.21 virtual int openpr::bitstream::device::tile_offset (int *x*, int *y*) [pure virtual]

Return byte offset of tile within frames. Only works for CLB Block Types

Parameters

x X coordinate of tile

y Y coordinate of tile

Returns

byte offset of tile within a frame

Implemented in openpr::bitstream::virtex4, and openpr::bitstream::virtex5.

8.6.3.22 frame_addr openpr::bitstream::device::tilecoord_to_major (int *x*, int *y*)

Translate XDL Style Tile Coordinate to Major Frame Address. Due to overlaps in XDL style tile coordinates, cannot we distinguish between IOBs and GCLKs or BRAM_INTs/BRAMs

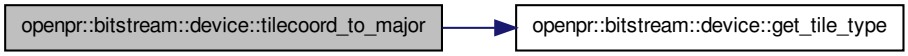
Parameters

x X Coordinate of Tile

y Y Coordinate of Tile

Definition at line 92 of file device.cpp.

Here is the call graph for this function:



8.6.4 Member Data Documentation

8.6.4.1 const int* openpr::bitstream::device::block_type [protected]

Definition at line 39 of file device.h.

8.6.4.2 const int openpr::bitstream::device::clb_slices [protected]

Definition at line 40 of file device.h.

8.6.4.3 const int openpr::bitstream::device::frame_height [protected]

Definition at line 36 of file device.h.

8.6.4.4 const int openpr::bitstream::device::frame_words [protected]

Definition at line 35 of file device.h.

8.6.4.5 int openpr::bitstream::device::gclk_index [protected]

Definition at line 44 of file device.h.

8.6.4.6 const unsigned int openpr::bitstream::device::id [protected]

Definition at line 32 of file device.h.

8.6.4.7 const char* openpr::bitstream::device::logic_table

Definition at line 76 of file device.h.

8.6.4.8 const string openpr::bitstream::device::name [protected]

Definition at line 31 of file device.h.

8.6.4.9 const int openpr::bitstream::device::num_blk_types [protected]

Reimplemented in openpr::bitstream::virtex4.

Definition at line 41 of file device.h.

8.6.4.10 const int openpr::bitstream::device::num_cols [protected]

Definition at line 34 of file device.h.

8.6.4.11 const int openpr::bitstream::device::num_rows [protected]

Definition at line 33 of file device.h.

8.6.4.12 const char* openpr::bitstream::device::routing_table

Definition at line 75 of file device.h.

8.6.4.13 const tile_types* openpr::bitstream::device::row_layout [protected]

Definition at line 42 of file device.h.

8.6.4.14 int* openpr::bitstream::device::row_width [protected]

Definition at line 45 of file device.h.

8.6.4.15 const int* openpr::bitstream::device::tile_frames [protected]

Definition at line 38 of file device.h.

8.6.4.16 int openpr::bitstream::device::tile_width [protected]

Definition at line 37 of file device.h.

8.6.4.17 vector< tile_types > openpr::bitstream::device::xdl_layout [protected]

Definition at line 43 of file device.h.

The documentation for this class was generated from the following files:

- openpr/bitstream/device.h
- openpr/bitstream/device.cpp

8.7 openpr::netlist::eq_net Struct Reference

`#include <NetHashStruct.h>`

Public Member Functions

- bool operator() (const Net *t1, const Net *t2) const

8.7.1 Detailed Description

Definition at line 26 of file NetHashStruct.h.

8.7.2 Member Function Documentation

8.7.2.1 bool openpr::netlist::eq_net::operator() (const Net * *t1*, const Net * *t2*) const [inline]

Definition at line 27 of file NetHashStruct.h.

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

- openpr/netlist/NetHashStruct.h

8.8 openpr::netlist::eq_pip Struct Reference

`#include <HashStructs.h>`

Public Member Functions

- bool operator() (const Pin *t1, const Pin *t2) const

8.8.1 Detailed Description

Definition at line 29 of file HashStructs.h.

8.8.2 Member Function Documentation

8.8.2.1 bool openpr::netlist::eq_pip::operator() (const Pin * *t1*, const Pin * *t2*) const [inline]

Definition at line 30 of file HashStructs.h.

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

- openpr/netlist/HashStructs.h

8.9 openpr::netlist::eq_point Struct Reference

`#include <HashStructs.h>`

Public Member Functions

- bool operator() (const Point *t1, const Point *t2) const

8.9.1 Detailed Description

Definition at line 43 of file HashStructs.h.

8.9.2 Member Function Documentation

8.9.2.1 bool openpr::netlist::eq_point::operator() (const Point * *t1*, const Point * *t2*) const [inline]

Definition at line 44 of file HashStructs.h.

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

- openpr/netlist/HashStructs.h

8.10 openpr::netlist::eq_segment Struct Reference

`#include <HashStructs.h>`

Public Member Functions

- bool operator() (const torc::architecture::xilinx::CompactSegmentIndex t1, const torc::architecture::xilinx::CompactSegmentIndex t2) const

8.10.1 Detailed Description

Definition at line 53 of file HashStructs.h.

8.10.2 Member Function Documentation

8.10.2.1 bool openpr::netlist::eq_segment::operator() (const torc::architecture::xilinx::CompactSegmentIndex *t1*, const torc::architecture::xilinx::CompactSegmentIndex *t2*) const [inline]

Definition at line 55 of file HashStructs.h.

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

- openpr/netlist/HashStructs.h

8.11 openpr::bitstream::frame_addr Struct Reference

`#include <architecture.h>`

Public Member Functions

- frame_addr ()
- frame_addr (int type, int tb, int row, int col, int mna)
- string str () const

Public Attributes

- int type
- int tb
- int row
- int col
- int mna

8.11.1 Detailed Description

Definition at line 39 of file architecture.h.

8.11.2 Constructor & Destructor Documentation

8.11.2.1 openpr::bitstream::frame_addr::frame_addr ( ) [inline]

Definition at line 45 of file architecture.h.

8.11.2.2 openpr::bitstream::frame_addr::frame_addr (int *type*, int *tb*, int *row*, int *col*, int *mna*) [inline]

Initialization constructor.

Parameters

type Block type.

tb Top bottom indicator.

row Row address.

col column address.

mna minor address.

Definition at line 61 of file architecture.h.

8.11.3 Member Function Documentation

8.11.3.1 string openpr::bitstream::frame_addr::str ( ) const [inline]

Definition at line 63 of file architecture.h.

8.11.4 Member Data Documentation

8.11.4.1 int openpr::bitstream::frame_addr::col

Definition at line 43 of file architecture.h.

8.11.4.2 int openpr::bitstream::frame_addr::mna

Definition at line 44 of file architecture.h.

8.11.4.3 int openpr::bitstream::frame_addr::row

Definition at line 42 of file architecture.h.

8.11.4.4 int openpr::bitstream::frame_addr::tb

Definition at line 41 of file architecture.h.

8.11.4.5 int openpr::bitstream::frame_addr::type

Definition at line 40 of file architecture.h.

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

- openpr/bitstream/architecture.h

8.12 openpr::netlist::hash_net Struct Reference

`#include <NetHashStruct.h>`

Public Member Functions

- size_t operator() (const Net *t) const

8.12.1 Detailed Description

Definition at line 21 of file NetHashStruct.h.

8.12.2 Member Function Documentation

8.12.2.1 size_t openpr::netlist::hash_net::operator() (const Net * *t*) const [inline]

Definition at line 22 of file NetHashStruct.h.

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

- openpr/netlist/NetHashStruct.h

8.13 openpr::netlist::hash_pip Struct Reference

`#include <HashStructs.h>`

Public Member Functions

- size_t operator() (const Pin *t) const

8.13.1 Detailed Description

Definition at line 23 of file HashStructs.h.

8.13.2 Member Function Documentation

8.13.2.1 size_t openpr::netlist::hash_pip::operator() (const Pin * t) const [inline]

Definition at line 24 of file HashStructs.h.

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

- openpr/netlist/HashStructs.h

8.14 openpr::netlist::hash_point Struct Reference

`#include <HashStructs.h>`

Public Member Functions

- size_t operator() (const Point *t) const

8.14.1 Detailed Description

Definition at line 38 of file HashStructs.h.

8.14.2 Member Function Documentation

8.14.2.1 size_t openpr::netlist::hash_point::operator() (const Point * t) const [inline]

Definition at line 39 of file HashStructs.h.

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

- openpr/netlist/HashStructs.h

8.15 openpr::netlist::hash_segment Struct Reference

`#include <HashStructs.h>`

Public Member Functions

- size_t operator() (const torc::architecture::xilinx::CompactSegmentIndex t) const

8.15.1 Detailed Description

Definition at line 48 of file HashStructs.h.

8.15.2 Member Function Documentation

8.15.2.1 size_t openpr::netlist::hash_segment::operator() (const torc::architecture::xilinx::CompactSegmentIndex *t*) const [inline]

Definition at line 49 of file HashStructs.h.

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

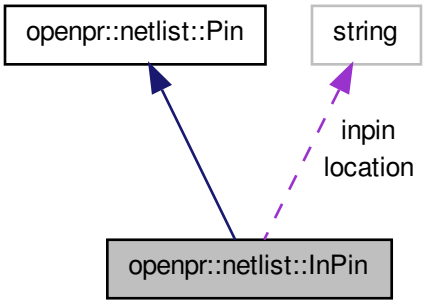
- openpr/netlist/HashStructs.h

8.16 openpr::netlist::InPin Class Reference

`#include <InPin.h>`

Inherits openpr::netlist::Pin.

Collaboration diagram for openpr::netlist::InPin:



Public Member Functions

- InPin (std::string inpin, std::string location)
- virtual ~InPin ()
- void printData (std::ofstream *outStream)
- void printData (std::ostream *outStream)

- bool operator!= (Pin &other)
- bool operator!= (Pin *other)
- bool operator== (const Pin &other) const
- bool operator== (const Pin *other) const
- bool operator< (Pin &other)
- bool operator< (Pin *other)
- bool operator> (Pin &other)
- bool operator> (Pin *other)
- Pin & operator= (Pin &other)
- Pin * operator= (Pin *other)
- size_t operator() (const Pin &x) const
- size_t operator() (const Pin *x) const

Private Attributes

- std::string inpin
- std::string location

8.16.1 Detailed Description

Definition at line 22 of file InPin.h.

8.16.2 Constructor & Destructor Documentation

8.16.2.1 openpr::netlist::InPin::InPin (std::string *inpin*, std::string *location*)

Definition at line 22 of file InPin.cpp.

8.16.2.2 openpr::netlist::InPin::~InPin ( ) [virtual]

Definition at line 28 of file InPin.cpp.

8.16.3 Member Function Documentation

8.16.3.1 bool openpr::netlist::InPin::operator!= (Pin & *other*) [virtual]

Implements openpr::netlist::Pin.

Definition at line 38 of file InPin.cpp.

8.16.3.2 bool openpr::netlist::InPin::operator!= (Pin * *other*) [virtual]

Implements openpr::netlist::Pin.

Definition at line 123 of file InPin.cpp.

8.16.3.3 std::size_t openpr::netlist::InPin::operator() (const Pin & *x*) const [virtual]

Implements openpr::netlist::Pin.

Definition at line 110 of file InPin.cpp.

8.16.3.4 std::size_t openpr::netlist::InPin::operator() (const Pin * *x*) const [virtual]

Implements openpr::netlist::Pin.

Definition at line 198 of file InPin.cpp.

8.16.3.5 bool openpr::netlist::InPin::operator< (Pin * *other*) [virtual]

Implements openpr::netlist::Pin.

Definition at line 138 of file InPin.cpp.

8.16.3.6 bool openpr::netlist::InPin::operator< (Pin & *other*) [virtual]

Implements openpr::netlist::Pin.

Definition at line 53 of file InPin.cpp.

8.16.3.7 Pin & openpr::netlist::InPin::operator= (Pin & *other*) [virtual]

Implements openpr::netlist::Pin.

Definition at line 70 of file InPin.cpp.

8.16.3.8 Pin * openpr::netlist::InPin::operator= (Pin * *other*) [virtual]

Implements openpr::netlist::Pin.

Definition at line 155 of file InPin.cpp.

8.16.3.9 bool openpr::netlist::InPin::operator== (const Pin * *other*) const [virtual]

Implements openpr::netlist::Pin.

Definition at line 167 of file InPin.cpp.

8.16.3.10 bool openpr::netlist::InPin::operator== (const Pin & *other*) const [virtual]

Implements openpr::netlist::Pin.

Definition at line 82 of file InPin.cpp.

8.16.3.11 bool openpr::netlist::InPin::operator> (Pin & *other*) [virtual]

Implements openpr::netlist::Pin.

Definition at line 94 of file InPin.cpp.

8.16.3.12 bool openpr::netlist::InPin::operator> (Pin * *other*) [virtual]

Implements openpr::netlist::Pin.

Definition at line 182 of file InPin.cpp.

8.16.3.13 void openpr::netlist::InPin::printData (std::ofstream * *outStream*) [virtual]

Implements openpr::netlist::Pin.

Definition at line 32 of file InPin.cpp.

8.16.3.14 void openpr::netlist::InPin::printData (std::ostream * *outStream*) [virtual]

Implements openpr::netlist::Pin.

Definition at line 35 of file InPin.cpp.

8.16.4 Member Data Documentation

8.16.4.1 std::string openpr::netlist::InPin::inpin [private]

Definition at line 41 of file InPin.h.

8.16.4.2 std::string openpr::netlist::InPin::location [private]

Definition at line 42 of file InPin.h.

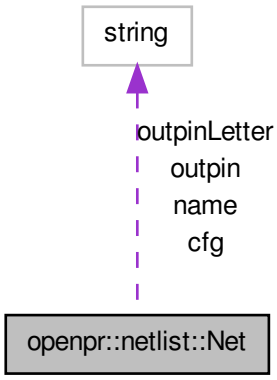
The documentation for this class was generated from the following files:

- openpr/netlist/InPin.h
- openpr/netlist/InPin.cpp

8.17 openpr::netlist::Net Class Reference

`#include <Net.h>`

Collaboration diagram for openpr::netlist::Net:



Public Member Functions

- Net ()
- ~Net ()
- Net (std::string *inputString)
- Net (const Net *other)
- void addCfg (std::string cfg)
- void addInPin (InPin *inpin)
- void addOutPin (Pin *outpin)
- void insertPip (Pip *pip)
- void remotePin (Pin *tempPin, int type)
- void clearInPins ()
- void printData (std::ofstream *outstream)
- void printData (std::ostream *outstream)
- bool operator!= (const Net &other) const
- bool operator== (const Net &other) const
- bool operator< (const Net &other) const
- bool operator> (const Net &other) const
- Net & operator= (const Net &other)
- bool operator!= (const Net *other) const
- bool operator== (const Net *other) const
- bool operator< (const Net *other) const
- bool operator> (const Net *other) const
- Net & operator= (const Net *other)
- void mergePips (const Net &other)
- std::size_t operator() (const Net *&other) const
- std::size_t operator() (const Net &other) const
- std::size_t hash_value (const Net &net) const
- std::size_t hash_value (const Net *net) const

Public Attributes

- std::string name

Private Attributes

- boost::unordered_set< Pin *, hash_pip, eq_pip > pips
- boost::unordered_set< Pin *, hash_pip, eq_pip > outPins
- boost::unordered_set< Pin *, hash_pip, eq_pip > inPins
- std::string outpin
- std::string outpinLetter
- std::string cfg
- bool configure

8.17.1 Detailed Description

Definition at line 26 of file Net.h.

8.17.2 Constructor & Destructor Documentation

8.17.2.1 openpr::netlist::Net::Net ( )

Definition at line 23 of file Net.cpp.

8.17.2.2 openpr::netlist::Net::~Net ( )

Definition at line 27 of file Net.cpp.

8.17.2.3 openpr::netlist::Net::Net (std::string * *inputString*)

Definition at line 37 of file Net.cpp.

8.17.2.4 openpr::netlist::Net::Net (const Net * *other*)

Definition at line 65 of file Net.cpp.

8.17.3 Member Function Documentation

8.17.3.1 void openpr::netlist::Net::addCfg (std::string *cfg*)

Definition at line 69 of file Net.cpp.

8.17.3.2 void openpr::netlist::Net::addInPin (InPin * *inpin*)

Definition at line 74 of file Net.cpp.

8.17.3.3 void openpr::netlist::Net::addOutPin (Pin * *outpin*)

Definition at line 77 of file Net.cpp.

8.17.3.4 void openpr::netlist::Net::clearInPins ( )

Definition at line 300 of file Net.cpp.

8.17.3.5 std::size_t openpr::netlist::Net::hash_value (const Net & *net*) const

Definition at line 207 of file Net.cpp.

8.17.3.6 std::size_t openpr::netlist::Net::hash_value (const Net * *net*) const

Definition at line 212 of file Net.cpp.

8.17.3.7 void openpr::netlist::Net::insertPip (Pip * *pip*)

Definition at line 80 of file Net.cpp.

8.17.3.8 void openpr::netlist::Net::mergePips (const Net & *other*)

Definition at line 198 of file Net.cpp.

8.17.3.9 bool openpr::netlist::Net::operator!= (const Net & *other*) const

only compares net name
Definition at line 151 of file Net.cpp.

8.17.3.10 bool openpr::netlist::Net::operator!= (const Net * *other*) const

Definition at line 217 of file Net.cpp.

8.17.3.11 std::size_t openpr::netlist::Net::operator() (const Net & *other*) const

Definition at line 270 of file Net.cpp.

8.17.3.12 std::size_t openpr::netlist::Net::operator() (const Net *& *other*) const

Definition at line 265 of file Net.cpp.

8.17.3.13 bool openpr::netlist::Net::operator< (const Net * *other*) const

Definition at line 229 of file Net.cpp.

8.17.3.14 bool openpr::netlist::Net::operator< (const Net & *other*) const

Definition at line 163 of file Net.cpp.

8.17.3.15 Net & openpr::netlist::Net::operator= (const Net * *other*)

Definition at line 241 of file Net.cpp.

8.17.3.16 Net & openpr::netlist::Net::operator= (const Net & *other*)

Definition at line 175 of file Net.cpp.

8.17.3.17 bool openpr::netlist::Net::operator== (const Net & *other*) const

Definition at line 157 of file Net.cpp.

8.17.3.18 bool openpr::netlist::Net::operator== (const Net * *other*) const

Definition at line 223 of file Net.cpp.

8.17.3.19 bool openpr::netlist::Net::operator> (const Net * *other*) const

Definition at line 235 of file Net.cpp.

8.17.3.20 bool openpr::netlist::Net::operator> (const Net & *other*) const

Definition at line 169 of file Net.cpp.

8.17.3.21 void openpr::netlist::Net::printData (std::ostream * *outstream*)

Definition at line 116 of file Net.cpp.
Here is the call graph for this function:

8.17.3.22 void openpr::netlist::Net::printData (std::ofstream * *outstream*)

Definition at line 83 of file Net.cpp.

Here is the call graph for this function:

8.17.3.23 void openpr::netlist::Net::remotePin (Pin * *tempPin,* int *type*)

Definition at line 275 of file Net.cpp.

8.17.4 Member Data Documentation

8.17.4.1 std::string openpr::netlist::Net::cfg [private]

Definition at line 62 of file Net.h.

8.17.4.2 bool openpr::netlist::Net::configure [private]

Definition at line 63 of file Net.h.

8.17.4.3 boost::unordered_set<Pin*, hash_pip, eq_pip> openpr::netlist::Net::inPins [private]

Definition at line 59 of file Net.h.

8.17.4.4 std::string openpr::netlist::Net::name

Definition at line 55 of file Net.h.

8.17.4.5 std::string openpr::netlist::Net::outpin [private]

Definition at line 60 of file Net.h.

8.17.4.6 std::string openpr::netlist::Net::outpinLetter [private]

Definition at line 61 of file Net.h.

8.17.4.7 boost::unordered_set<Pin*, hash_pip, eq_pip> openpr::netlist::Net::outPins [private]

Definition at line 58 of file Net.h.

8.17.4.8 boost::unordered_set<Pin*, hash_pip, eq_pip> openpr::netlist::Net::pips [private]

Definition at line 57 of file Net.h.

The documentation for this class was generated from the following files:

- openpr/netlist/Net.h
- openpr/netlist/Net.cpp

8.18 openpr::netlist::NetList Class Reference

`#include <NetList.h>`

Public Member Functions

- NetList ()
- NetList (std::string inputFile, torc::architecture::DDB *mDB)
- NetList (std::string inputFile, std::string outputFile, torc::architecture::DDB *mDB)
- ~NetList ()
- void printData ()
- void printData (std::ofstream *ofstream)
- Net * findNet (Net *input)
- Net * findNet (std::string input)
- Net * findNet (Pin *input)
- Pin * findPin (Pin *input)
- Pip * findPip (Point *input)
- int insertNet (Net *inputNet)
- int insertPip (Net *inputNet, Pip *inputPip)
- int removePip (Pip *inputPip)
- std::vector< Net * > * getNetList ()
- boost::unordered_map< Pin *, Net *, hash_pip, eq_pip > * getPipToNet ()

Public Attributes

- std::ofstream * outputXDL

Private Member Functions

- void topLevelParser (std::ifstream *fStream)
- void netParser (std::ifstream *fin, std::string *netString)

Private Attributes

- std::vector< Net * > netList
- boost::unordered_set< Net *, hash_net, eq_net > netToPip
- boost::unordered_map< Pin *, Net *, hash_pip, eq_pip > pipToNet
- boost::unordered_map< Point *, Pip *, hash_point, eq_point > pointToPip
- boost::unordered_map< torc::architecture::xilinx::CompactSegmentIndex, Net *, hash_segment, eq_segment > segmentToNet
- torc::architecture::DDB * mDB

8.18.1 Detailed Description

Definition at line 26 of file NetList.h.

8.18.2 Constructor & Destructor Documentation

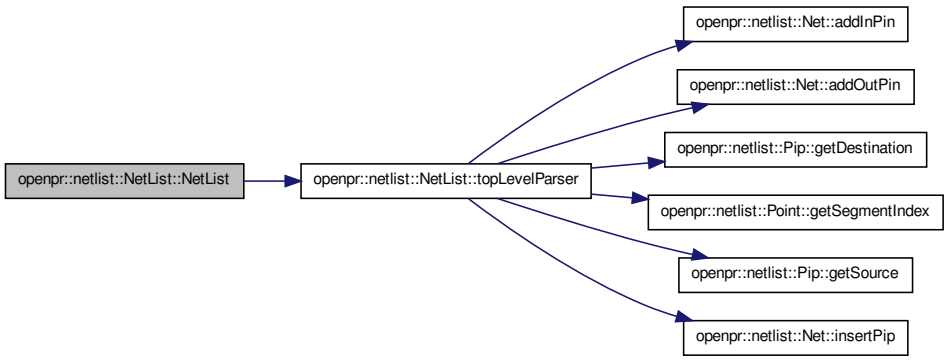
8.18.2.1 openpr::netlist::NetList::NetList ( )

Definition at line 25 of file NetList.cpp.

8.18.2.2 openpr::netlist::NetList::NetList (std::string *inputFile*, torc::architecture::DDB * *mDB*)

Definition at line 37 of file NetList.cpp.

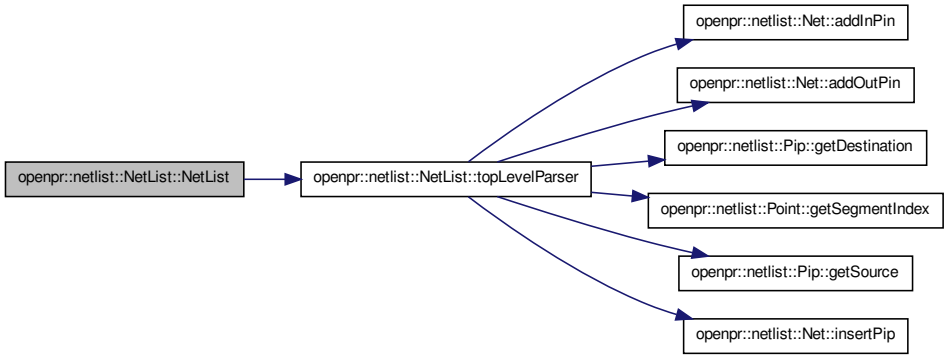
Here is the call graph for this function:



8.18.2.3 openpr::netlist::NetList::NetList (std::string *inputFile*, std::string *outputFile*, torc::architecture::DDB * *mDB*)

Definition at line 48 of file NetList.cpp.

Here is the call graph for this function:



8.18.2.4 openpr::netlist::NetList::~NetList ( )

Definition at line 29 of file NetList.cpp.

8.18.3 Member Function Documentation

8.18.3.1 Net * openpr::netlist::NetList::findNet (Net * *input*)

Definition at line 235 of file NetList.cpp.

8.18.3.2 Net * openpr::netlist::NetList::findNet (std::string *input*)

Definition at line 246 of file NetList.cpp.

Here is the call graph for this function:

8.18.3.3 Net * openpr::netlist::NetList::findNet (Pin * *input*)

Definition at line 251 of file NetList.cpp.

8.18.3.4 Pin * openpr::netlist::NetList::findPin (Pin * *input*)

Definition at line 260 of file NetList.cpp.

8.18.3.5 Pip* openpr::netlist::NetList::findPip (Point * *input*)

8.18.3.6 std::vector< Net * > * openpr::netlist::NetList::getNetList ( )

Definition at line 341 of file NetList.cpp.

8.18.3.7 boost::unordered_map< Pin *, Net *, hash_pip, eq_pip > * openpr::netlist::NetList::getPipToNet ( )

Definition at line 344 of file NetList.cpp.

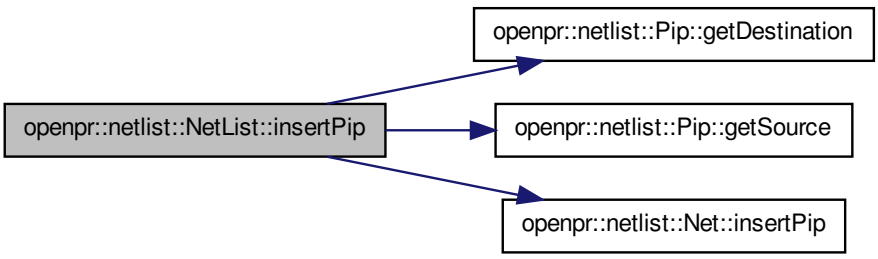
8.18.3.8 int openpr::netlist::NetList::insertNet (Net * *inputNet*)

Definition at line 270 of file NetList.cpp.

8.18.3.9 int openpr::netlist::NetList::insertPip (Net * *inputNet*, Pip * *inputPip*)

Definition at line 276 of file NetList.cpp.

Here is the call graph for this function:



8.18.3.10 void openpr::netlist::NetList::netParser (std::ifstream * *fin*, std::string * *netString*) [private]

8.18.3.11 void openpr::netlist::NetList::printData (std::ofstream * *ofstream*)

Definition at line 229 of file NetList.cpp.

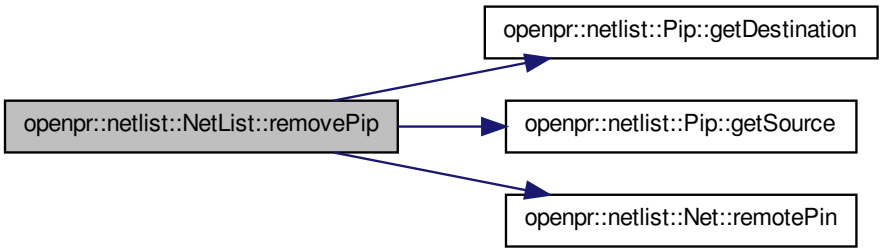
8.18.3.12 void openpr::netlist::NetList::printData ( )

Definition at line 225 of file NetList.cpp.

8.18.3.13 int openpr::netlist::NetList::removePip (Pip * *inputPip*)

Definition at line 305 of file NetList.cpp.

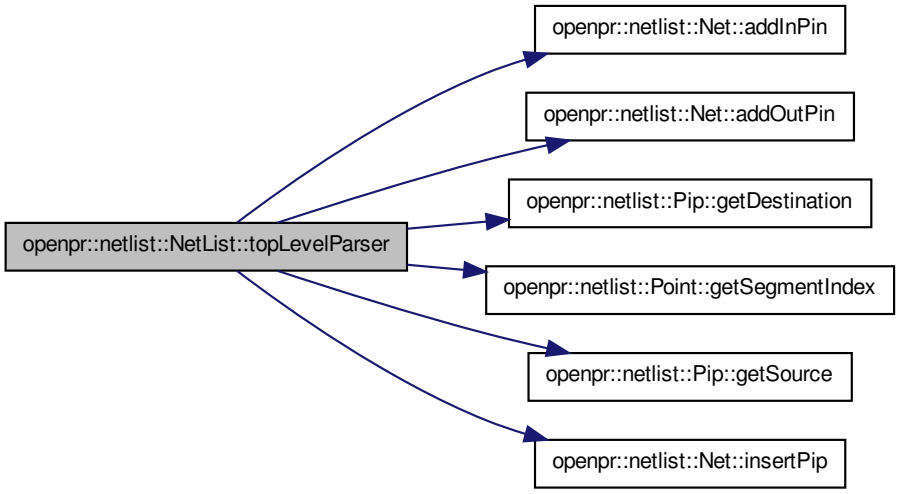
Here is the call graph for this function:



8.18.3.14 void openpr::netlist::NetList::topLevelParser (std::ifstream * *fStream*) [private]

Definition at line 59 of file NetList.cpp.

Here is the call graph for this function:



8.18.4 Member Data Documentation

8.18.4.1 torc::architecture::DDB* openpr::netlist::NetList::mDB [private]

Definition at line 55 of file NetList.h.

8.18.4.2 std::vector<Net*> openpr::netlist::NetList::netList [private]

Definition at line 50 of file NetList.h.

8.18.4.3 boost::unordered_set<Net*, hash_net, eq_net> openpr::netlist::NetList::netToPip [private]

Definition at line 51 of file NetList.h.

8.18.4.4 std::ofstream* openpr::netlist::NetList::outputXDL

Definition at line 35 of file NetList.h.

8.18.4.5 boost::unordered_map<Pin*, Net*, hash_pip, eq_pip> openpr::netlist::NetList::pipToNet [private]

Definition at line 52 of file NetList.h.

8.18.4.6 boost::unordered_map<Point*, Pip*, hash_point, eq_point> openpr::netlist::NetList::pointToPip [private]

Definition at line 53 of file NetList.h.

8.18.4.7 boost::unordered_map<torc::architecture::xilinx::CompactSegmentIndex, Net*, hash_segment, eq_segment> openpr::netlist::NetList::segmentToNet [private]

Definition at line 54 of file NetList.h.

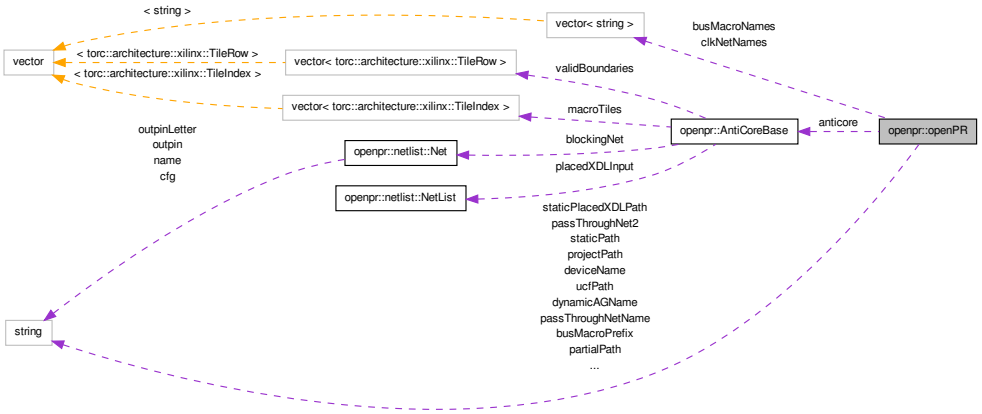
The documentation for this class was generated from the following files:

- openpr/netlist/NetList.h
- openpr/netlist/NetList.cpp

8.19 openpr::openPR Class Reference

```
#include <OpenPR.hpp>
```

Collaboration diagram for openpr::openPR:



Public Member Functions

- openPR ()
- ~openPR ()
- void buildRelativePaths ()
- void setupAntiCore ()
- void setupDynamicRegion ()
- bool genPlaceConstraints ()
- bool placeMacros ()
- bool siteBlocker ()
- bool routeBlocker ()
- bool mergeClockTree ()
- std::string buildBlockingNet ()
- bool genPassThroughScripts ()
- bool genLockConstraints ()
- bool genPartialBitstream ()

Private Member Functions

- template<class Archive >
  void serialize (Archive &ar, const unsigned int version)

Private Attributes

- string designName
- string projectPath
- string dynamicAGName
- string staticPath
- string partialPath
- string ucfPath

- string staticPlacedXDLPath
- string deviceName
- string busMacroPrefix
- string passThroughNetName
- string passThroughNet2
- vector< string > busMacroNames
- vector< string > clkNetNames
- bool regionDefined
- bool isPartial
- int busWidth
- torc::architecture::xilinx::TileRow yMin
- torc::architecture::xilinx::TileRow yMax
- torc::architecture::xilinx::TileCol xMin
- torc::architecture::xilinx::TileCol xMax
- boost::uint16_t l_yMin
- boost::uint16_t l_yMax
- boost::uint16_t l_xMin
- boost::uint16_t l_xMax
- torc::architecture::DDB * db
- openpr::AntiCoreBase * anticore
- const boost::filesystem::path buildPath
- boost::filesystem::path placedXdlPath
- boost::filesystem::path blockedXdlPath
- boost::filesystem::path mergedXdlPath
- boost::filesystem::path routedXdlPath
- boost::filesystem::path fullXdlPath
- boost::filesystem::path fullBsPath
- boost::filesystem::path partialBsPath
- boost::filesystem::path pcfPath
- boost::filesystem::path fullUcfPath
- const boost::filesystem::path busMacroPath
- const boost::filesystem::path routePTScriptPath
- const boost::filesystem::path unroutePTScriptPath

Friends

- class boost::serialization::access

8.19.1 Detailed Description

Definition at line 33 of file OpenPR.hpp.

8.19.2 Constructor & Destructor Documentation

8.19.2.1 openpr::openPR::openPR ( )

Default constructor.

Definition at line 20 of file OpenPR.cpp.

8.19.2.2 openpr::openPR::~openPR ( )

Definition at line 30 of file OpenPR.cpp.

8.19.3 Member Function Documentation

8.19.3.1 std::string openpr::openPR::buildBlockingNet ( )

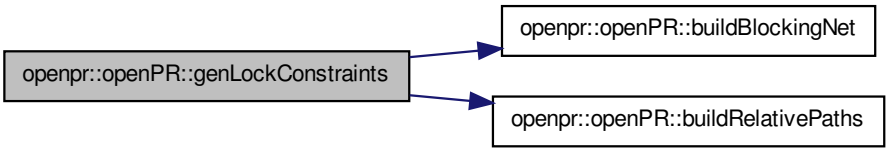
Take prefix of blocking net and create the full net name that can be blocked.
Definition at line 292 of file OpenPR.cpp.

8.19.3.2 void openpr::openPR::buildRelativePaths ( )

Definition at line 33 of file OpenPR.cpp.

8.19.3.3 bool openpr::openPR::genLockConstraints ( )

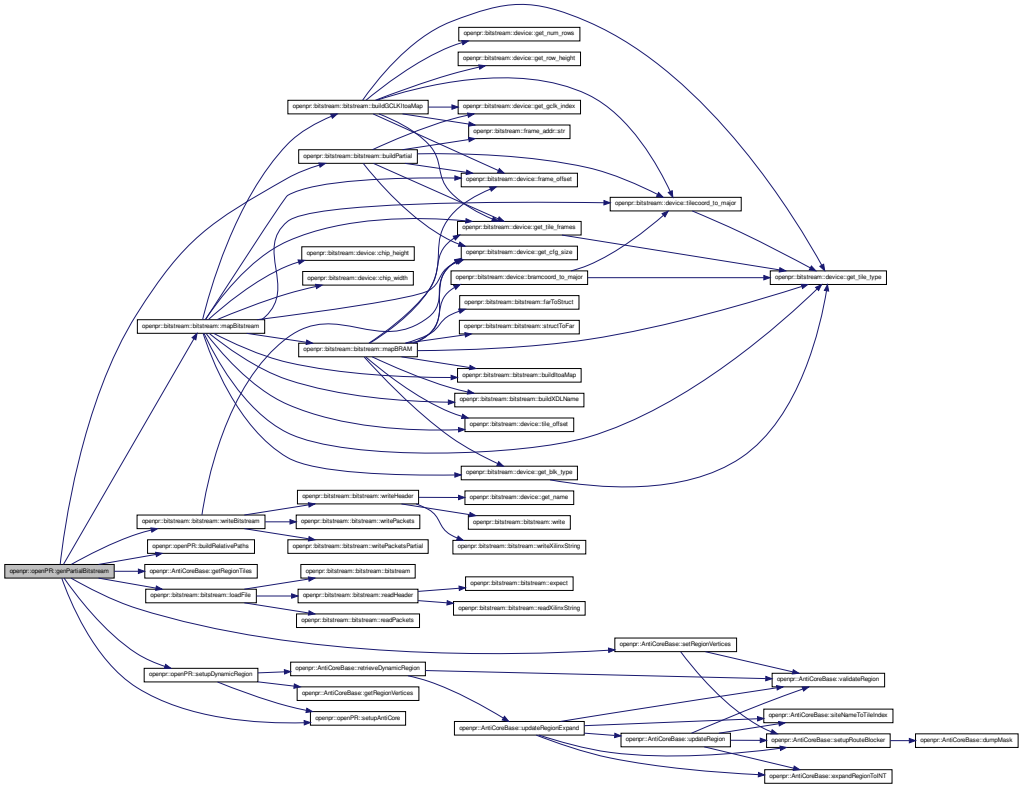
Generate constraints that lock both busmacro nets and blocking nets
Definition at line 340 of file OpenPR.cpp.
Here is the call graph for this function:



8.19.3.4 bool openpr::openPR::genPartialBitstream ( )

Generate a partial bitstream for the defined region from a full bitstream of the partial design.
Definition at line 373 of file OpenPR.cpp.

Here is the call graph for this function:

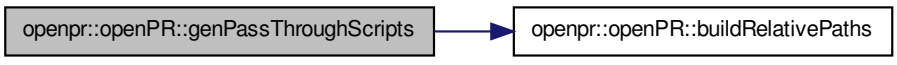


8.19.3.5 bool openpr::openPR::genPassThroughScripts ( )

Generate passthrough scripts automatically.

Definition at line 300 of file OpenPR.cpp.

Here is the call graph for this function:

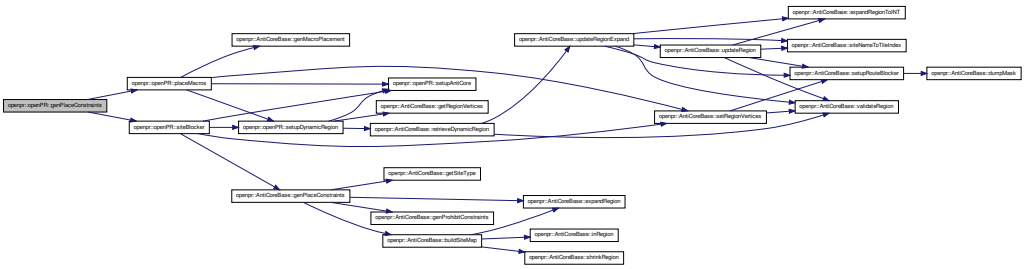


8.19.3.6 bool openpr::openPR::genPlaceConstraints ( )

Generate all placement constraints and link appropriate bus macro files.

Definition at line 109 of file OpenPR.cpp.

Here is the call graph for this function:

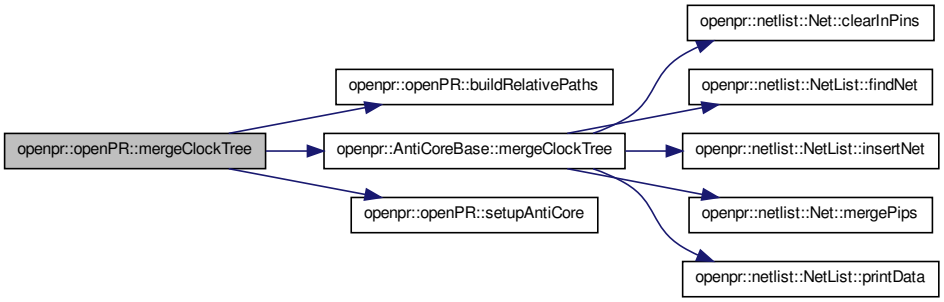


8.19.3.7 bool openpr::openPR::mergeClockTree ( )

Pull clocktree from static design and merge it with partial design.

Definition at line 256 of file OpenPR.cpp.

Here is the call graph for this function:

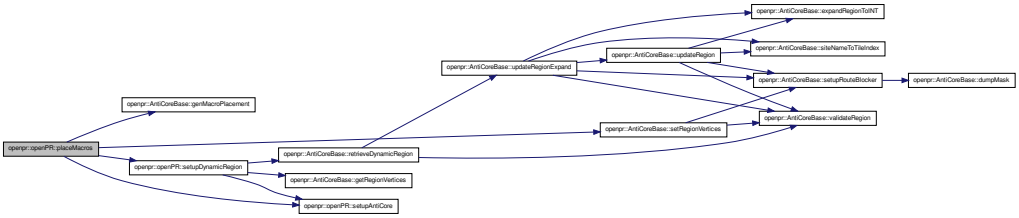


8.19.3.8 bool openpr::openPR::placeMacros ( )

Generate bus macro placement constraints and link the correct bus macro names to the right files.

Definition at line 118 of file OpenPR.cpp.

Here is the call graph for this function:

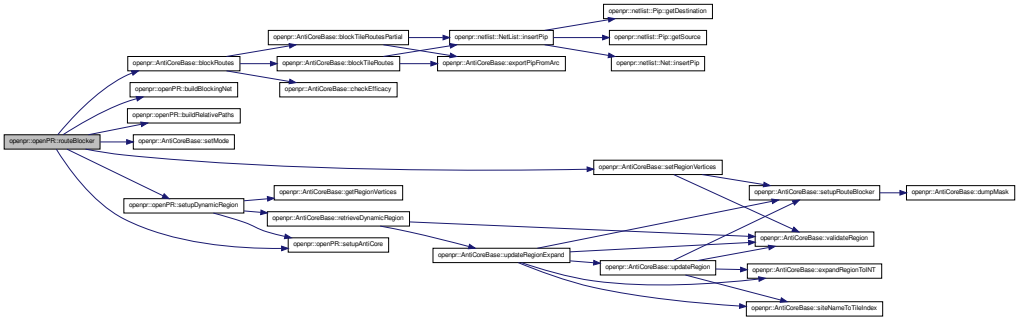


8.19.3.9 bool openpr::openPR::routeBlocker ( )

Generate blocking routes in design.

Definition at line 219 of file OpenPR.cpp.

Here is the call graph for this function:



8.19.3.10 template<class Archive > void openpr::openPR::serialize (Archive & *ar*, const unsigned int *version*) [inline, private]

Constant defining relative path to ucfFile const boost::filesystem::path ucfPath; Use boost.serialize to define an XML archive for the OpenPR class.

Parameters

ar Archive template class.

version Defines which version of the archive this is, currently unused.

Definition at line 96 of file OpenPR.hpp.

8.19.3.11 void openpr::openPR::setupAntiCore ( )

Setup CAntiCore object depending on the device type.

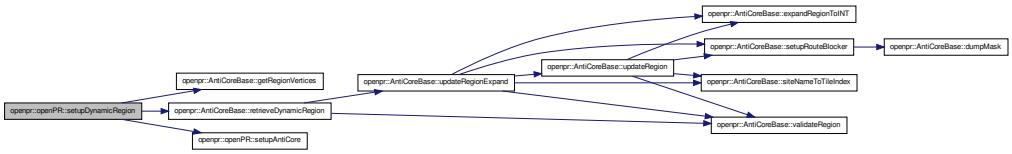
Definition at line 54 of file OpenPR.cpp.

8.19.3.12 void openpr::openPR::setupDynamicRegion ( )

Setup dimensions of dynamic region based on AREA_GROUPs defined in UCF file.

Definition at line 82 of file OpenPR.cpp.

Here is the call graph for this function:

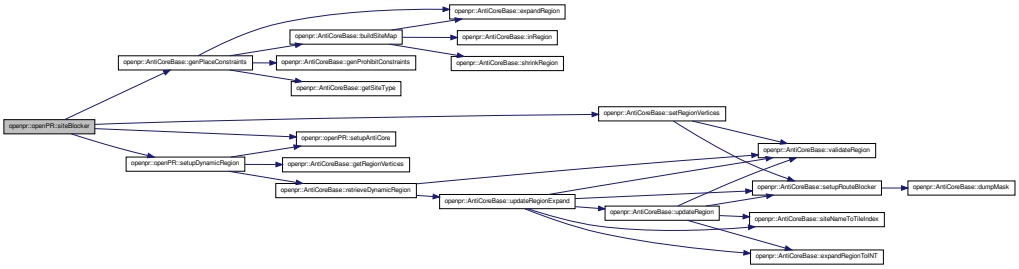


8.19.3.13 bool openpr::openPR::siteBlocker ( )

Generate constraints that block placement within sites.

Definition at line 192 of file OpenPR.cpp.

Here is the call graph for this function:



8.19.4 Friends And Related Function Documentation

8.19.4.1 friend class boost::serialization::access [friend]

Definition at line 34 of file OpenPR.hpp.

8.19.5 Member Data Documentation

8.19.5.1 openpr::AntiCoreBase* openpr::openPR::anticore [private]

Definition at line 61 of file OpenPR.hpp.

8.19.5.2 boost::filesystem::path openpr::openPR::blockedXdlPath [private]

Constant defining the relative path of the routeBlocked xdl file.

Definition at line 67 of file OpenPR.hpp.

8.19.5.3 const boost::filesystem::path openpr::openPR::buildPath [private]

Constant defining relative location of build path

Definition at line 63 of file OpenPR.hpp.

8.19.5.4 vector<string> openpr::openPR::busMacroNames [private]

Definition at line 47 of file OpenPR.hpp.

8.19.5.5 const boost::filesystem::path openpr::openPR::busMacroPath [private]

Constant defining the relative path of the busmacros

Definition at line 83 of file OpenPR.hpp.

8.19.5.6 string openpr::openPR::busMacroPrefix [private]

Definition at line 44 of file OpenPR.hpp.

8.19.5.7 int openpr::openPR::busWidth [private]

Definition at line 51 of file OpenPR.hpp.

8.19.5.8 vector<string> openpr::openPR::clkNetNames [private]

Definition at line 48 of file OpenPR.hpp.

8.19.5.9 torc::architecture::DDB* openpr::openPR::db [private]

Definition at line 60 of file OpenPR.hpp.

8.19.5.10 string openpr::openPR::designName [private]

Definition at line 36 of file OpenPR.hpp.

8.19.5.11 string openpr::openPR::deviceName [private]

Definition at line 43 of file OpenPR.hpp.

8.19.5.12 string openpr::openPR::dynamicAGName [private]

Definition at line 38 of file OpenPR.hpp.

8.19.5.13 boost::filesystem::path openpr::openPR::fullBsPath [private]

Constant defining the relative path of the full bitstream file.

Definition at line 75 of file OpenPR.hpp.

8.19.5.14 boost::filesystem::path openpr::openPR::fullUcfPath [private]

Constant defining the relative path of the UCF file

Definition at line 81 of file OpenPR.hpp.

8.19.5.15 boost::filesystem::path openpr::openPR::fullXdlPath [private]

Constant defining the relative path of the routeBlocked xdl file.

Definition at line 73 of file OpenPR.hpp.

8.19.5.16 bool openpr::openPR::isPartial [private]

Definition at line 50 of file OpenPR.hpp.

8.19.5.17 boost::uint16_t openpr::openPR::l_xMax [private]

Definition at line 59 of file OpenPR.hpp.

8.19.5.18 boost::uint16_t openpr::openPR::l_xMin [private]

Definition at line 58 of file OpenPR.hpp.

8.19.5.19 boost::uint16_t openpr::openPR::l_yMax [private]

Definition at line 57 of file OpenPR.hpp.

8.19.5.20 boost::uint16_t openpr::openPR::l_yMin [private]

Definition at line 56 of file OpenPR.hpp.

8.19.5.21 boost::filesystem::path openpr::openPR::mergedXdlPath [private]

Constant defining the relative path of the routeBlocked xdl file.

Definition at line 69 of file OpenPR.hpp.

8.19.5.22 boost::filesystem::path openpr::openPR::partialBsPath [private]

Constant defining the relative path of the partial bitstream file.

Definition at line 77 of file OpenPR.hpp.

8.19.5.23 string openpr::openPR::partialPath [private]

Definition at line 40 of file OpenPR.hpp.

8.19.5.24 string openpr::openPR::passThroughNet2 [private]

Definition at line 46 of file OpenPR.hpp.

8.19.5.25 string openpr::openPR::passThroughNetName [private]

Definition at line 45 of file OpenPR.hpp.

8.19.5.26 boost::filesystem::path openpr::openPR::pcfPath [private]

Constant defining the relative path of the Physical constraints file

Definition at line 79 of file OpenPR.hpp.

8.19.5.27 boost::filesystem::path openpr::openPR::placedXdlPath [private]

Constant defining the relative path of a placed xdl file.

Definition at line 65 of file OpenPR.hpp.

8.19.5.28 string openpr::openPR::projectPath [private]

Definition at line 37 of file OpenPR.hpp.

8.19.5.29 bool openpr::openPR::regionDefined [private]

Definition at line 49 of file OpenPR.hpp.

8.19.5.30 boost::filesystem::path openpr::openPR::routedXdlPath [private]

Constant defining the relative path of the routeBlocked xdl file.

Definition at line 71 of file OpenPR.hpp.

8.19.5.31 const boost::filesystem::path openpr::openPR::routePTScriptPath [private]

Constant defining the relative path of the route passthrough script

Definition at line 85 of file OpenPR.hpp.

8.19.5.32 string openpr::openPR::staticPath [private]

Definition at line 39 of file OpenPR.hpp.

8.19.5.33 string openpr::openPR::staticPlacedXDLPath [private]

Definition at line 42 of file OpenPR.hpp.

8.19.5.34 string openpr::openPR::ucfPath [private]

Definition at line 41 of file OpenPR.hpp.

8.19.5.35 const boost::filesystem::path openpr::openPR::unroutePTScriptPath [private]

Constant defining the relative path of the unroute passthrough script

Definition at line 87 of file OpenPR.hpp.

8.19.5.36 torc::architecture::xilinx::TileCol openpr::openPR::xMax [private]

Definition at line 55 of file OpenPR.hpp.

8.19.5.37 torc::architecture::xilinx::TileCol openpr::openPR::xMin [private]

Definition at line 54 of file OpenPR.hpp.

8.19.5.38 torc::architecture::xilinx::TileRow openpr::openPR::yMax [private]

Definition at line 53 of file OpenPR.hpp.

8.19.5.39 torc::architecture::xilinx::TileRow openpr::openPR::yMin [private]

Definition at line 52 of file OpenPR.hpp.

The documentation for this class was generated from the following files:

- openpr/anticore/OpenPR.hpp
- openpr/anticore/OpenPR.cpp

8.20 openpr::OpenPRTree Class Reference

`#include <OpenPRTree.hpp>`

Public Member Functions

- OpenPRTree (const char *argv0)

Static Public Member Functions

- static const boost::filesystem::path & relativePath (void)
- static const boost::filesystem::path & workingPath (void)

- static const boost::filesystem::path & executablePath (void)
- static const boost::filesystem::path & edaPath (void)
- static const boost::filesystem::path & databasePath (void)
- static const boost::filesystem::path & logPath (void)

Static Protected Attributes

- static boost::filesystem::path sRelativePath
- static boost::filesystem::path sWorkingPath
- static boost::filesystem::path sExecutablePath
- static boost::filesystem::path sEdaPath
- static boost::filesystem::path sDatabasePath
- static boost::filesystem::path sLogPath

8.20.1 Detailed Description

Definition at line 19 of file OpenPRTree.hpp.

8.20.2 Constructor & Destructor Documentation

8.20.2.1 openpr::OpenPRTree::OpenPRTree (const char * *argv0*)

Definition at line 26 of file OpenPRTree.cpp.

8.20.3 Member Function Documentation

8.20.3.1 static const boost::filesystem::path& openpr::OpenPRTree::databasePath (void) [inline, static]

Definition at line 44 of file OpenPRTree.hpp.

8.20.3.2 static const boost::filesystem::path& openpr::OpenPRTree::edaPath (void) [inline, static]

Definition at line 41 of file OpenPRTree.hpp.

8.20.3.3 static const boost::filesystem::path& openpr::OpenPRTree::executablePath (void) [inline, static]

Definition at line 38 of file OpenPRTree.hpp.

8.20.3.4 static const boost::filesystem::path& openpr::OpenPRTree::logPath (void) [inline, static]

Definition at line 47 of file OpenPRTree.hpp.

8.20.3.5 static const boost::filesystem::path& openpr::OpenPRTree::relativePath (void) [inline, static]

Definition at line 32 of file OpenPRTree.hpp.

8.20.3.6 static const boost::filesystem::path& openpr::OpenPRTree::workingPath (void) [inline, static]

Definition at line 35 of file OpenPRTree.hpp.

8.20.4 Member Data Documentation

8.20.4.1 boost::filesystem::path openpr::OpenPRTree::sDatabasePath [static, protected]

Definition at line 26 of file OpenPRTree.hpp.

8.20.4.2 boost::filesystem::path openpr::OpenPRTree::sEdaPath [static, protected]

Definition at line 25 of file OpenPRTree.hpp.

8.20.4.3 boost::filesystem::path openpr::OpenPRTree::sExecutablePath [static, protected]

Definition at line 24 of file OpenPRTree.hpp.

8.20.4.4 boost::filesystem::path openpr::OpenPRTree::sLogPath [static, protected]

Definition at line 27 of file OpenPRTree.hpp.

8.20.4.5 boost::filesystem::path openpr::OpenPRTree::sRelativePath [static, protected]

Definition at line 22 of file OpenPRTree.hpp.

8.20.4.6 boost::filesystem::path openpr::OpenPRTree::sWorkingPath [static, protected]

Definition at line 23 of file OpenPRTree.hpp.

The documentation for this class was generated from the following files:

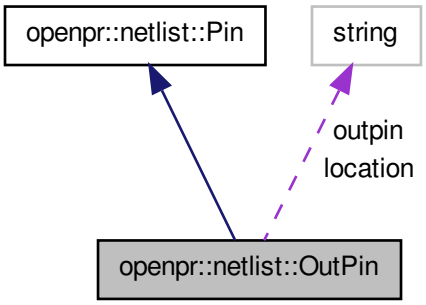
- openpr/anticore/OpenPRTree.hpp
- openpr/anticore/OpenPRTree.cpp

8.21 openpr::netlist::OutPin Class Reference

`#include <OutPin.h>`

Inherits openpr::netlist::Pin.

Collaboration diagram for openpr::netlist::OutPin:



Public Member Functions

- OutPin ()
- OutPin (std::string outpin, std::string location)
- virtual ~OutPin ()
- void printData (std::ofstream *outStream)
- void printData (std::ostream *outStream)
- bool operator!= (Pin &other)
- bool operator!= (Pin *other)
- bool operator== (const Pin &other) const
- bool operator== (const Pin *other) const
- bool operator< (Pin &other)
- bool operator< (Pin *other)
- bool operator> (Pin &other)
- bool operator> (Pin *other)
- Pin & operator= (Pin &other)
- Pin * operator= (Pin *other)
- size_t operator() (const Pin &x) const
- size_t operator() (const Pin *x) const

Private Attributes

- std::string outpin
- std::string location

8.21.1 Detailed Description

Definition at line 23 of file OutPin.h.

8.21.2 Constructor & Destructor Documentation

8.21.2.1 openpr::netlist::OutPin::OutPin ( )

8.21.2.2 openpr::netlist::OutPin::OutPin (std::string *outpin*, std::string *location*)

Definition at line 23 of file OutPin.cpp.

8.21.2.3 openpr::netlist::OutPin::~OutPin ( ) [virtual]

Definition at line 29 of file OutPin.cpp.

8.21.3 Member Function Documentation

8.21.3.1 bool openpr::netlist::OutPin::operator!= (Pin & *other*) [virtual]

Implements openpr::netlist::Pin.

Definition at line 39 of file OutPin.cpp.

8.21.3.2 bool openpr::netlist::OutPin::operator!= (Pin * *other*) [virtual]

Implements openpr::netlist::Pin.

Definition at line 124 of file OutPin.cpp.

8.21.3.3 std::size_t openpr::netlist::OutPin::operator() (const Pin & *x*) const [virtual]

Implements openpr::netlist::Pin.

Definition at line 111 of file OutPin.cpp.

8.21.3.4 std::size_t openpr::netlist::OutPin::operator() (const Pin * *x*) const [virtual]

Implements openpr::netlist::Pin.

Definition at line 199 of file OutPin.cpp.

8.21.3.5 bool openpr::netlist::OutPin::operator< (Pin * *other*) [virtual]

Implements openpr::netlist::Pin.

Definition at line 139 of file OutPin.cpp.

8.21.3.6 bool openpr::netlist::OutPin::operator< (Pin & *other*) [virtual]

Implements openpr::netlist::Pin.

Definition at line 54 of file OutPin.cpp.

8.21.3.7 Pin & openpr::netlist::OutPin::operator= (Pin & *other*) [virtual]

Implements openpr::netlist::Pin.

Definition at line 71 of file OutPin.cpp.

8.21.3.8 Pin * openpr::netlist::OutPin::operator= (Pin * *other*) [virtual]

Implements openpr::netlist::Pin.

Definition at line 156 of file OutPin.cpp.

8.21.3.9 bool openpr::netlist::OutPin::operator== (const Pin * *other*) const [virtual]

Implements openpr::netlist::Pin.

Definition at line 168 of file OutPin.cpp.

8.21.3.10 bool openpr::netlist::OutPin::operator== (const Pin & *other*) const [virtual]

Implements openpr::netlist::Pin.

Definition at line 83 of file OutPin.cpp.

8.21.3.11 bool openpr::netlist::OutPin::operator> (Pin & *other*) [virtual]

Implements openpr::netlist::Pin.

Definition at line 95 of file OutPin.cpp.

8.21.3.12 bool openpr::netlist::OutPin::operator> (Pin * *other*) [virtual]

Implements openpr::netlist::Pin.

Definition at line 183 of file OutPin.cpp.

8.21.3.13 void openpr::netlist::OutPin::printData (std::ofstream * *outStream*) [virtual]

Implements openpr::netlist::Pin.

Definition at line 33 of file OutPin.cpp.

8.21.3.14 void openpr::netlist::OutPin::printData (std::ostream * *outStream*) [virtual]

Implements openpr::netlist::Pin.

Definition at line 36 of file OutPin.cpp.

8.21.4 Member Data Documentation

8.21.4.1 std::string openpr::netlist::OutPin::location [private]

Definition at line 44 of file OutPin.h.

8.21.4.2 std::string openpr::netlist::OutPin::outpin [private]

Definition at line 43 of file OutPin.h.

The documentation for this class was generated from the following files:

- openpr/netlist/OutPin.h
- openpr/netlist/OutPin.cpp

8.22 openpr::netlist::Pin Class Reference

`#include <Pin.h>`

Inherited by openpr::netlist::InPin, openpr::netlist::OutPin, and openpr::netlist::Pip.

Public Member Functions

- Pin ()
- virtual ~Pin ()
- virtual void printData (std::ofstream *outStream)=0
- virtual void printData (std::ostream *outStream)=0
- virtual bool operator!= (Pin &other)=0
- virtual bool operator!= (Pin *other)=0
- virtual bool operator== (const Pin &other) const =0
- virtual bool operator== (const Pin *other) const =0
- virtual bool operator< (Pin &other)=0
- virtual bool operator< (Pin *other)=0
- virtual bool operator> (Pin &other)=0
- virtual bool operator> (Pin *other)=0
- virtual Pin & operator= (Pin &other)=0
- virtual Pin * operator= (Pin *other)=0
- virtual size_t operator() (const Pin &x) const =0
- virtual size_t operator() (const Pin *x) const =0

Friends

- std::size_t hash_value (Pin *p)
- std::size_t hash_value (Pin &p)

8.22.1 Detailed Description

Definition at line 35 of file Pin.h.

8.22.2 Constructor & Destructor Documentation

8.22.2.1 openpr::netlist::Pin::Pin ( )

Definition at line 23 of file Pin.cpp.

8.22.2.2 openpr::netlist::Pin::~Pin ( ) [virtual]

Definition at line 27 of file Pin.cpp.

8.22.3 Member Function Documentation

8.22.3.1 virtual bool openpr::netlist::Pin::operator!= (Pin & *other*) [pure virtual]

Implemented in openpr::netlist::InPin, openpr::netlist::OutPin, and openpr::netlist::Pip.

8.22.3.2 virtual bool openpr::netlist::Pin::operator!= (Pin * *other*) [pure virtual]

Implemented in openpr::netlist::InPin, openpr::netlist::OutPin, and openpr::netlist::Pip.

8.22.3.3 virtual size_t openpr::netlist::Pin::operator() (const Pin & *x*) const [pure virtual]

Implemented in openpr::netlist::InPin, openpr::netlist::OutPin, and openpr::netlist::Pip.

8.22.3.4 virtual size_t openpr::netlist::Pin::operator() (const Pin * *x*) const [pure virtual]

Implemented in openpr::netlist::InPin, openpr::netlist::OutPin, and openpr::netlist::Pip.

8.22.3.5 virtual bool openpr::netlist::Pin::operator< (Pin * *other*) [pure virtual]

Implemented in openpr::netlist::InPin, openpr::netlist::OutPin, and openpr::netlist::Pip.

8.22.3.6 virtual bool openpr::netlist::Pin::operator< (Pin & *other*) [pure virtual]

Implemented in openpr::netlist::InPin, openpr::netlist::OutPin, and openpr::netlist::Pip.

8.22.3.7 virtual Pin& openpr::netlist::Pin::operator= (Pin & *other*) [pure virtual]

Implemented in openpr::netlist::InPin, openpr::netlist::OutPin, and openpr::netlist::Pip.

8.22.3.8 virtual Pin* openpr::netlist::Pin::operator= (Pin * *other*) [pure virtual]

Implemented in openpr::netlist::InPin, openpr::netlist::OutPin, and openpr::netlist::Pip.

8.22.3.9 virtual bool openpr::netlist::Pin::operator== (const Pin * *other*) const [pure virtual]

Implemented in openpr::netlist::InPin, openpr::netlist::OutPin, and openpr::netlist::Pip.

8.22.3.10 virtual bool openpr::netlist::Pin::operator== (const Pin & *other*) const [pure virtual]

Implemented in openpr::netlist::InPin, openpr::netlist::OutPin, and openpr::netlist::Pip.

8.22.3.11 virtual bool openpr::netlist::Pin::operator> (Pin & *other*) [pure virtual]

Implemented in openpr::netlist::InPin, openpr::netlist::OutPin, and openpr::netlist::Pip.

8.22.3.12 virtual bool openpr::netlist::Pin::operator> (Pin * *other*) [pure virtual]

Implemented in openpr::netlist::InPin, openpr::netlist::OutPin, and openpr::netlist::Pip.

8.22.3.13 virtual void openpr::netlist::Pin::printData (std::ofstream * *outStream*) [pure virtual]

Implemented in openpr::netlist::InPin, openpr::netlist::OutPin, and openpr::netlist::Pip.

8.22.3.14 virtual void openpr::netlist::Pin::printData (std::ostream * *outStream*) [pure virtual]

Implemented in openpr::netlist::InPin, openpr::netlist::OutPin, and openpr::netlist::Pip.

8.22.4 Friends And Related Function Documentation

8.22.4.1 std::size_t hash_value (Pin * *p*) [friend]

Definition at line 34 of file Pin.cpp.

8.22.4.2 std::size_t hash_value (Pin & *p*) [friend]

Definition at line 30 of file Pin.cpp.

The documentation for this class was generated from the following files:

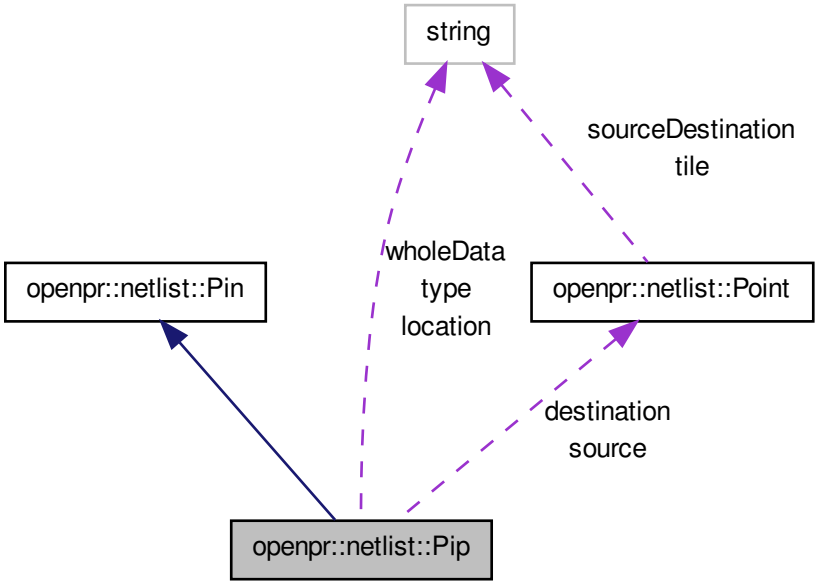
- openpr/netlist/Pin.h
- openpr/netlist/Pin.cpp

8.23 openpr::netlist::Pip Class Reference

`#include <Pip.h>`

Inherits openpr::netlist::Pin.

Collaboration diagram for openpr::netlist::Pip:



Public Member Functions

- Pip ()
- Pip (std::string tok, torc::architecture::DDB *mdb)
- Pip (std::string type, int x, int y, std::string source, std::string destination, torc::architecture::DDB *mdb)
- Pip (std::string location, std::string source, std::string destination, torc::architecture::DDB *mdb)
- virtual ~Pip ()
- void printData (std::ofstream *outStream)
- void printData (std::ostream *outStream)
- bool operator!= (Pin &other)
- bool operator!= (Pin *other)
- bool operator== (const Pin &other) const
- bool operator== (const Pin *other) const
- bool operator< (Pin &other)
- bool operator< (Pin *other)
- bool operator> (Pin &other)
- bool operator> (Pin *other)
- Pin & operator= (Pin &other)
- Pin * operator= (Pin *other)
- size_t operator() (const Pin &x) const
- size_t operator() (const Pin *x) const
- size_t operator() (const Pip &x) const

- size_t operator() (const Pip *x) const
- Point * getSource () const
- Point * getDestination () const
- std::string getTileStr ()
- std::string getSourceStr ()
- std::string getSinkStr ()

Private Member Functions

- void parseLocation (std::string location)
- void generateFullStream ()
- std::string generateLocation () const

Private Attributes

- std::string wholeData
- std::string location
- std::string type
- Point * source
- Point * destination
- int xLoc
- int yLoc
- torc::architecture::DDB * mDB

8.23.1 Detailed Description

Definition at line 23 of file Pip.h.

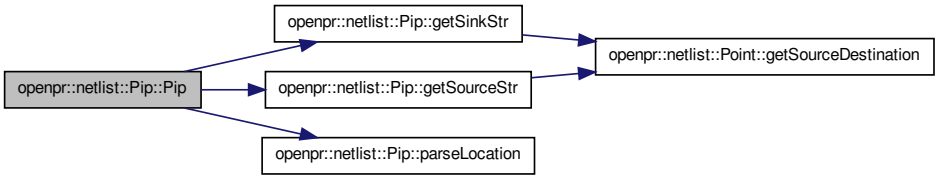
8.23.2 Constructor & Destructor Documentation

8.23.2.1 openpr::netlist::Pip::Pip ( )

8.23.2.2 openpr::netlist::Pip::Pip (std::string *tok*, torc::architecture::DDB * *mdb*)

Definition at line 26 of file Pip.cpp.

Here is the call graph for this function:



8.23.2.3 openpr::netlist::Pip::Pip (std::string *type*, int *x*, int *y*, std::string *source*, std::string *destination*, torc::architecture::DDB * *mDB*)

This constructor takes in a paramaterized list of inputs to construct at Pip

Parameters

type This should be CLBLM, INT ...

x This is the X tile location

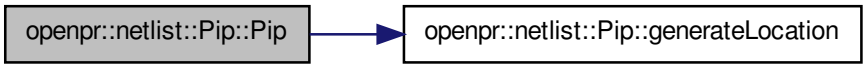
y This is the Y tile location

source This is the source of pip

destination This is the destination(sink) of the pip

Definition at line 62 of file Pip.cpp.

Here is the call graph for this function:



8.23.2.4 openpr::netlist::Pip::Pip (std::string *location*, std::string *source*, std::string *destination*, torc::architecture::DDB * *mDB*)

This consturctor merges the two above constructors

Parameters

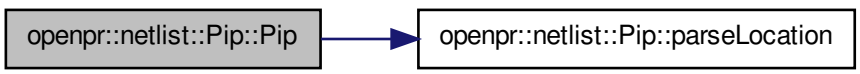
location this should be INT_X27Y70

source this is the source of the pip

destination this is the destination(sink) of the pip

Definition at line 78 of file Pip.cpp.

Here is the call graph for this function:



8.23.2.5 openpr::netlist::Pip::~Pip ( ) [virtual]

Definition at line 102 of file Pip.cpp.

8.23.3 Member Function Documentation

8.23.3.1 void openpr::netlist::Pip::generateFullStream ( ) [private]

8.23.3.2 std::string openpr::netlist::Pip::generateLocation ( ) const [private]

Definition at line 409 of file Pip.cpp.

8.23.3.3 Point * openpr::netlist::Pip::getDestination ( ) const

Definition at line 418 of file Pip.cpp.

8.23.3.4 std::string openpr::netlist::Pip::getSinkStr ( )

Definition at line 430 of file Pip.cpp.

Here is the call graph for this function:

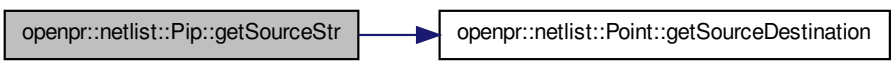
8.23.3.5 Point * openpr::netlist::Pip::getSource ( ) const

Definition at line 421 of file Pip.cpp.

8.23.3.6 std::string openpr::netlist::Pip::getSourceStr ( )

Definition at line 427 of file Pip.cpp.

Here is the call graph for this function:



8.23.3.7 std::string openpr::netlist::Pip::getTileStr ( )

Definition at line 424 of file Pip.cpp.

8.23.3.8 bool openpr::netlist::Pip::operator!= (Pin & *other*) [virtual]

Implements openpr::netlist::Pin.

Definition at line 124 of file Pip.cpp.

8.23.3.9 bool openpr::netlist::Pip::operator!= (Pin * *other*) [virtual]

Implements openpr::netlist::Pin.

Definition at line 237 of file Pip.cpp.

8.23.3.10 std::size_t openpr::netlist::Pip::operator() (const Pip * *x*) const

Definition at line 400 of file Pip.cpp.

8.23.3.11 std::size_t openpr::netlist::Pip::operator() (const Pip & *x*) const

Definition at line 390 of file Pip.cpp.

8.23.3.12 std::size_t openpr::netlist::Pip::operator() (const Pin & *x*) const [virtual]

Implements openpr::netlist::Pin.

Definition at line 357 of file Pip.cpp.

8.23.3.13 std::size_t openpr::netlist::Pip::operator() (const Pin * *x*) const [virtual]

Implements openpr::netlist::Pin.

Definition at line 373 of file Pip.cpp.

8.23.3.14 bool openpr::netlist::Pip::operator< (Pin * *other*) [virtual]

Implements openpr::netlist::Pin.

Definition at line 277 of file Pip.cpp.

8.23.3.15 bool openpr::netlist::Pip::operator< (Pin & *other*) [virtual]

Implements openpr::netlist::Pin.

Definition at line 160 of file Pip.cpp.

8.23.3.16 Pin & openpr::netlist::Pip::operator= (Pin & *other*) [virtual]

Implements openpr::netlist::Pin.

Definition at line 220 of file Pip.cpp.

8.23.3.17 Pin * openpr::netlist::Pip::operator= (Pin * *other*) [virtual]

Implements openpr::netlist::Pin.

Definition at line 339 of file Pip.cpp.

8.23.3.18 bool openpr::netlist::Pip::operator== (const Pin & *other*) const [virtual]

Implements openpr::netlist::Pin.

Definition at line 142 of file Pip.cpp.

8.23.3.19 bool openpr::netlist::Pip::operator== (const Pin * *other*) const [virtual]

Implements openpr::netlist::Pin.

Definition at line 255 of file Pip.cpp.

8.23.3.20 bool openpr::netlist::Pip::operator> (Pin & *other*) [virtual]

Implements openpr::netlist::Pin.

Definition at line 190 of file Pip.cpp.

8.23.3.21 bool openpr::netlist::Pip::operator> (Pin * *other*) [virtual]

Implements openpr::netlist::Pin.

Definition at line 307 of file Pip.cpp.

8.23.3.22 void openpr::netlist::Pip::parseLocation (std::string *location*) [private]

This parses the location into individual parts(Type, x, and y)

Parameters

location something like INT_X27Y70

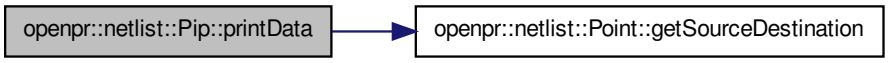
Definition at line 90 of file Pip.cpp.

8.23.3.23 void openpr::netlist::Pip::printData (std::ostream * *outStream*) [virtual]

Implements openpr::netlist::Pin.

Definition at line 115 of file Pip.cpp.

Here is the call graph for this function:



8.23.3.24 void openpr::netlist::Pip::printData (std::ofstream * *outStream*) [virtual]

Implements openpr::netlist::Pin.

Definition at line 106 of file Pip.cpp.

Here is the call graph for this function:

8.23.4 Member Data Documentation

8.23.4.1 Point* openpr::netlist::Pip::destination [private]

Definition at line 59 of file Pip.h.

8.23.4.2 std::string openpr::netlist::Pip::location [private]

Definition at line 56 of file Pip.h.

8.23.4.3 torc::architecture::DDB* openpr::netlist::Pip::mDB [private]

Definition at line 65 of file Pip.h.

8.23.4.4 Point* openpr::netlist::Pip::source [private]

Definition at line 58 of file Pip.h.

8.23.4.5 std::string openpr::netlist::Pip::type [private]

Definition at line 57 of file Pip.h.

8.23.4.6 std::string openpr::netlist::Pip::wholeData [private]

Definition at line 55 of file Pip.h.

8.23.4.7 int openpr::netlist::Pip::xLoc [private]

Definition at line 60 of file Pip.h.

8.23.4.8 int openpr::netlist::Pip::yLoc [private]

Definition at line 61 of file Pip.h.

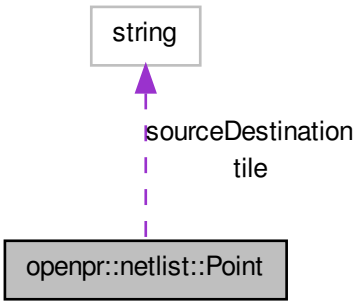
The documentation for this class was generated from the following files:

- openpr/netlist/Pip.h
- openpr/netlist/Pip.cpp

8.24 openpr::netlist::Point Class Reference

`#include <Point.h>`

Collaboration diagram for openpr::netlist::Point:



Public Member Functions

- Point ()
- Point (std::string tile, std::string sourceDestination, bool source, torc::architecture::DDB *mDB)
- bool operator> (const Point &other) const
- bool operator> (const Point *other) const
- bool operator< (const Point &other) const
- bool operator< (const Point *other) const
- bool operator!= (const Point &other) const

- bool operator!= (const Point *other) const
- bool operator== (const Point &other) const
- bool operator== (const Point *other) const
- size_t operator() (const Point &x) const
- size_t operator() (const Point *x) const
- bool getSource () const
- std::string getSourceDestination () const
- virtual ~Point ()
- torc::architecture::xilinx::CompactSegmentIndex getSegmentIndex () const

Private Member Functions

- void setIndices (torc::architecture::xilinx::TileIndex tileIndex, torc::architecture::xilinx::CompactSegmentIndex segmentIndex)

Private Attributes

- bool source
- std::string tile
- std::string sourceDestination
- torc::architecture::xilinx::CompactSegmentIndex segmentIndex

8.24.1 Detailed Description

Definition at line 23 of file Point.h.

8.24.2 Constructor & Destructor Documentation

8.24.2.1 openpr::netlist::Point::Point ( )

8.24.2.2 openpr::netlist::Point::Point (std::string *tile*, std::string *sourceDestination*, bool *source*, torc::architecture::DDB * *mDB*)

This is the normal constructor

Parameters

tile This is the tile name for a source destination pair.

sourceDestination This is either the source or destination location for a point

source if it is a source it is true if it is a destination it is false

Definition at line 32 of file Point.cpp.

8.24.2.3 openpr::netlist::Point::~Point ( ) [virtual]

Definition at line 23 of file Point.cpp.

8.24.3 Member Function Documentation

8.24.3.1 torc::architecture::xilinx::CompactSegmentIndex openpr::netlist::Point::getSegmentIndex ( ) const

Definition at line 210 of file Point.cpp.

8.24.3.2 bool openpr::netlist::Point::getSource ( ) const

Returns

returns a const of the bool source true=source false=destination

Definition at line 197 of file Point.cpp.

8.24.3.3 std::string openpr::netlist::Point::getSourceDestination ( ) const

Returns

returns a const of the source destination field. This is the point within the tile

Definition at line 203 of file Point.cpp.

8.24.3.4 bool openpr::netlist::Point::operator!= (const Point & *other*) const

Parameters

other this is the other point to be compared against this Boolean operator overload Only compares tile and the sourceDestination. (bool)source is not evaluated

Definition at line 171 of file Point.cpp.

8.24.3.5 bool openpr::netlist::Point::operator!= (const Point * *other*) const

Parameters

other this is the other point to be compared against this Boolean operator overload Only compares tile and the sourceDestination. (bool)source is not evaluated

Definition at line 185 of file Point.cpp.

8.24.3.6 size_t openpr::netlist::Point::operator() (const Point & *x*) const

Parameters

x point to be investigated This function evaluates the hash of a point. If is effectively a static function

Definition at line 75 of file Point.cpp.

8.24.3.7 size_t openpr::netlist::Point::operator() (const Point * *x*) const

Parameters

x point to be investigated This function evaluates the hash of a point. If is effectively a static function

Definition at line 87 of file Point.cpp.

8.24.3.8 bool openpr::netlist::Point::operator< (const Point & *other*) const

Parameters

other this is the other point to be compared against this Boolean operator overload Only compares tile and the sourceDestination. (bool)source is not evaluated

Definition at line 135 of file Point.cpp.

8.24.3.9 bool openpr::netlist::Point::operator< (const Point * *other*) const

Parameters

other this is the other point to be compared against this Boolean operator overload Only compares tile and the sourceDestination. (bool)source is not evaluated

Definition at line 153 of file Point.cpp.

8.24.3.10 bool openpr::netlist::Point::operator== (const Point * *other*) const

Parameters

other other point to be compared to this This is the equality operator it compares all three paramaters of tile, sourcedestination and (bool)source

Definition at line 62 of file Point.cpp.

8.24.3.11 bool openpr::netlist::Point::operator== (const Point & *other*) const

Parameters

other other point to be compared to this This is the equality operator it compares all three of tile, sourcedestination and (bool)source

Definition at line 49 of file Point.cpp.

8.24.3.12 bool openpr::netlist::Point::operator> (const Point & *other*) const

Parameters

other this is the other point to be compared against this Boolean operator overload Only compares tile and the sourceDestination. (bool)source is not evaluated

Definition at line 100 of file Point.cpp.

8.24.3.13 bool openpr::netlist::Point::operator> (const Point * *other*) const

Parameters

other this is the other point to be compared against this Boolean operator overload Only compares tile and the sourceDestination. (bool)source is not evaluated

Definition at line 118 of file Point.cpp.

8.24.3.14 void openpr::netlist::Point::setIndices (torc::architecture::xilinx::TileIndex *tileIndex*, torc::architecture::xilinx::CompactSegmentIndex *segmentIndex*) [private]

Definition at line 206 of file Point.cpp.

8.24.4 Member Data Documentation

8.24.4.1 torc::architecture::xilinx::CompactSegmentIndex openpr::netlist::Point::segmentIndex [private]

Definition at line 48 of file Point.h.

8.24.4.2 bool openpr::netlist::Point::source [private]

Definition at line 45 of file Point.h.

8.24.4.3 std::string openpr::netlist::Point::sourceDestination [private]

Definition at line 47 of file Point.h.

8.24.4.4 std::string openpr::netlist::Point::tile [private]

Definition at line 46 of file Point.h.

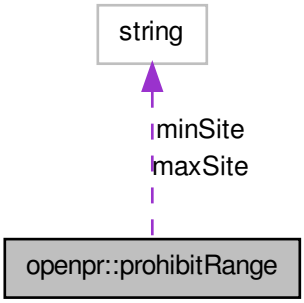
The documentation for this class was generated from the following files:

- openpr/netlist/Point.h
- openpr/netlist/Point.cpp

8.25 openpr::prohibitRange Struct Reference

`#include <ProhibitRange.hpp>`

Collaboration diagram for openpr::prohibitRange:



Public Member Functions

- prohibitRange ()
- prohibitRange (string minSite, string maxSite)
- prohibitRange (const prohibitRange &rhs)
- bool operator< (const prohibitRange &rhs)
- bool operator> (const prohibitRange &rhs)

Public Attributes

- string minSite
- string maxSite

8.25.1 Detailed Description

The prohibitRange struct represents a range of Sites that can be added to a PROHIBIT constraint by the tools.

Definition at line 23 of file ProhibitRange.hpp.

8.25.2 Constructor & Destructor Documentation

8.25.2.1 openpr::prohibitRange::prohibitRange ( ) [inline]

Definition at line 28 of file ProhibitRange.hpp.

8.25.2.2 openpr::prohibitRange::prohibitRange (string *minSite*, string *maxSite*) [inline]

Definition at line 31 of file ProhibitRange.hpp.

8.25.2.3 openpr::prohibitRange::prohibitRange (const prohibitRange & *rhs*) [inline]

Copy constructor.

Parameters

rhs object to copy from.

Definition at line 38 of file ProhibitRange.hpp.

8.25.3 Member Function Documentation

8.25.3.1 bool openpr::prohibitRange::operator< (const prohibitRange & *rhs*) [inline]

Compare two prohibitRanges and check whether the RHS or LHS value should represent the bottom corner of the range.

Parameters

rhs Right hand side value to be compared

Definition at line 47 of file ProhibitRange.hpp.

8.25.3.2 bool openpr::prohibitRange::operator> (const prohibitRange & *rhs*) [inline]

Compare two prohibitRanges and check whether the RHS or LHS value should represent the top corner of the range.

Parameters

rhs prohibitRange object to compare too

Definition at line 83 of file ProhibitRange.hpp.

8.25.4 Member Data Documentation

8.25.4.1 string openpr::prohibitRange::maxSite

Last site in range for this SITE type

Definition at line 27 of file ProhibitRange.hpp.

8.25.4.2 string openpr::prohibitRange::minSite

First site in range for this SITE type

Definition at line 25 of file ProhibitRange.hpp.

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

- openpr/anticore/ProhibitRange.hpp

8.26 openpr::bitstream::tile_coord Struct Reference

`#include <tile.h>`

Public Member Functions

- tile_coord ()
- tile_coord (int x, int y)
- void set (int _x, int _y)
- bool operator== (tile_coord const &other) const

Public Attributes

- int x
- int y

Friends

- std::size_t hash_value (tile_coord const &to_hash)

8.26.1 Detailed Description

Definition at line 16 of file tile.h.

8.26.2 Constructor & Destructor Documentation

8.26.2.1 openpr::bitstream::tile_coord::tile_coord ( ) [inline]

Definition at line 20 of file tile.h.

8.26.2.2 openpr::bitstream::tile_coord::tile_coord (int *x*, int *y*) [inline]

Definition at line 25 of file tile.h.

8.26.3 Member Function Documentation

8.26.3.1 bool openpr::bitstream::tile_coord::operator== (tile_coord const & *other*) const [inline]

Definition at line 31 of file tile.h.

8.26.3.2 void openpr::bitstream::tile_coord::set (int *_x*, int *_y*) [inline]

Definition at line 26 of file tile.h.

8.26.4 Friends And Related Function Documentation

8.26.4.1 std::size_t hash_value (tile_coord const & *to_hash*) [friend]

Definition at line 36 of file tile.h.

8.26.5 Member Data Documentation

8.26.5.1 int openpr::bitstream::tile_coord::x

Definition at line 18 of file tile.h.

8.26.5.2 int openpr::bitstream::tile_coord::y

Definition at line 19 of file tile.h.

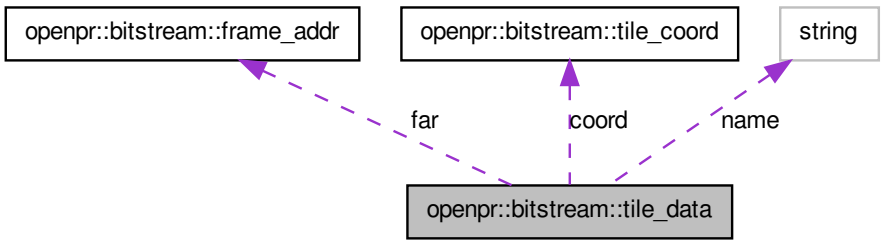
The documentation for this struct was generated from the following file:

- openpr/bitstream/tile.h

8.27 openpr::bitstream::tile_data Struct Reference

`#include <tile.h>`

Collaboration diagram for openpr::bitstream::tile_data:



Public Member Functions

- tile_data (const string _name, const int x, const int y, const frame_addr _far, const int _num_frames, const int _frame_num, const int _byte_off, char *const _first_frame)
- void print ()

Public Attributes

- string name

- tile_coord coord
- frame_addr far
- int frame_num
- int byte_off
- int num_frames
- char * first_frame

8.27.1 Detailed Description

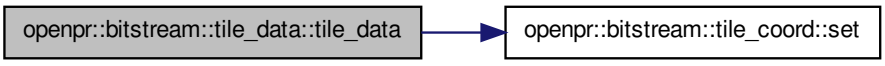
Definition at line 45 of file tile.h.

8.27.2 Constructor & Destructor Documentation

8.27.2.1 openpr::bitstream::tile_data::tile_data (const string *_name*, const int *x*, const int *y*, const frame_addr *_far*, const int *_num_frames*, const int *_frame_num*, const int *_byte_off*, char *const *_first_frame*) [inline]

Definition at line 54 of file tile.h.

Here is the call graph for this function:



8.27.3 Member Function Documentation

8.27.3.1 void openpr::bitstream::tile_data::print ( ) [inline]

Definition at line 66 of file tile.h.

Here is the call graph for this function:

8.27.4 Member Data Documentation

8.27.4.1 int openpr::bitstream::tile_data::byte_off

Definition at line 51 of file tile.h.

8.27.4.2 tile_coord openpr::bitstream::tile_data::coord

Definition at line 48 of file tile.h.

8.27.4.3 frame_addr openpr::bitstream::tile_data::far

Definition at line 49 of file tile.h.

8.27.4.4 char* openpr::bitstream::tile_data::first_frame

Definition at line 53 of file tile.h.

8.27.4.5 int openpr::bitstream::tile_data::frame_num

Definition at line 50 of file tile.h.

8.27.4.6 string openpr::bitstream::tile_data::name

Definition at line 47 of file tile.h.

8.27.4.7 int openpr::bitstream::tile_data::num_frames

Definition at line 52 of file tile.h.

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

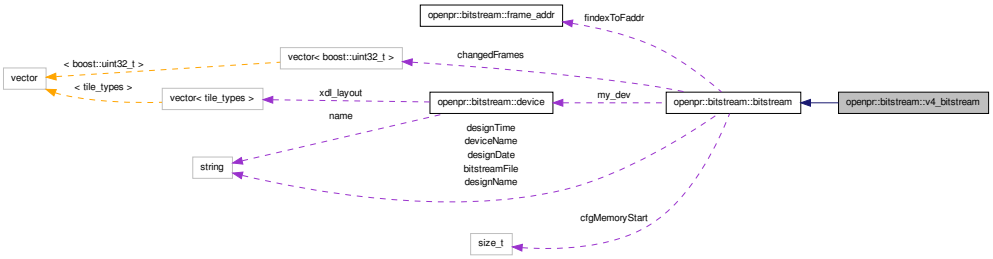
- openpr/bitstream/tile.h

8.28 openpr::bitstream::v4_bitstream Class Reference

`#include <v4_bitstream.h>`

Inherits openpr::bitstream::bitstream.

Collaboration diagram for openpr::bitstream::v4_bitstream:



Public Member Functions

- v4_bitstream (std::string device_name, bool frame_ecc=false)
- v4_bitstream (void)
- virtual bool readPackets (std::fstream &inStream)
- virtual bool writePacketHeader (std::fstream &outStream, boost::uint32_t packetType, boost::uint32_t opcode, boost::uint32_t address, boost::uint32_t reserved, boost::uint32_t count)
- virtual bool writePacketsPartial (std::fstream &outStream)
- virtual bool writePackets (std::fstream &outStream)
- virtual bool writePartialFrames (std::fstream &outStream)

Protected Types

- enum EPacketType { eType1 = 1, eType2, eTypeCount = 8 }
- enum EOpcode {
  eOpNOP = 0, eOpRead, eOpWrite, eOpReserved,
  eOpcodeCount }
- enum ERegister {
  eRegCRC = 0, eRegFAR, eRegFDRI, eRegFDRO,
  eRegCMD, eRegCTL, eRegMASK, eRegSTAT,
  eRegLOUT, eRegCOR, eRegMFWR, eRegCBC,
  eRegIDCODE, eRegAXSS, eRegCount }
- enum ECommand {
  eCmdNULL = 0, eCmdWCFG, eCmdMFWR, eCmdLFRM,
  eCmdRCFG, eCmdSTART, eCmdRCAP, eCmdRCRC,
  eCmdAGHIGH, eCmdSWITCH, eCmdGRESTORE, eCmdSHUTDOWN,
  eCmdGCAPTURE, eCmdDESYNC, eCmdCount }
- enum EShifts {
  eShiftPacketType = 29, eShiftPacketOpcode = 27, eShiftType1Address = 13, eShiftType1Reserved = 11,
  eShiftType1Count = 0, eShiftType2Count = 0 }

- enum EMasks {
  eMaskPacketType = 0x00000007, eMaskPacketOpcode = 0x00000003, eMaskType1Address = 0x00003fff, eMaskType1Reserved = 0x00000003,
  eMaskType1Count = 0x000007ff, eMaskType2Count = 0x07ffffff }
- enum EWords { eDummyWord = 0xFFFFFFFF, eSyncWord = 0xAA995566 }
- enum EShiftFAR {
  eShiftBlockType = 19, eShiftTB = 22, eShiftRow = 14, eShiftMajor = 6,
  eShiftMNA = 0 }

Protected Member Functions

- virtual bool writeFrameData (std::fstream &inStream, int inCount)
- void unmangleTilePair (boost::uint16_t *ptr)
- void reverseFrameBits (boost::uint8_t *ptr)
- openpr::bitstream::frame_addr farToStruct (boost::uint32_t far)
- boost::uint32_t structToFar (openpr::bitstream::frame_addr far)

Protected Attributes

- boost::uint32_t mRegister [eRegCount]

Static Protected Attributes

- static const int top = 0
- static const char * sTypeName [eTypeCount]
- static const char * sOpcodeName [eOpcodeCount]
- static const char * sRegisterName [eRegCount]
- static const char * sCommandName [eCmdCount]

8.28.1 Detailed Description

Definition at line 21 of file v4_bitstream.h.

8.28.2 Member Enumeration Documentation

8.28.2.1 enum openpr::bitstream::v4_bitstream::ECommand [protected]

See also

CMD register commands: UG071, v1.10, April 8, 2008, Table 7-6

Enumerator:

eCmdNULL

eCmdWCFG

eCmdMFWR

eCmdLFRM

eCmdRCFG

eCmdSTART

eCmdRCAP

eCmdRCRC

eCmdAGHIGH

eCmdSWITCH

eCmdGRESTORE

eCmdSHUTDOWN

eCmdGCAPTURE

eCmdDESYNC

eCmdCount

Definition at line 36 of file v4_bitstream.h.

8.28.2.2 enum openpr::bitstream::v4_bitstream::EMasks [protected]

See also

type 1 packet format: UG071, v1.10, April 8, 2008, Table 7-2
type 2 packet format: UG071, v1.10, April 8, 2008, Table 7-4

Enumerator:

eMaskPacketType

eMaskPacketOpcode

eMaskType1Address

eMaskType1Reserved

eMaskType1Count

eMaskType2Count

Definition at line 55 of file v4_bitstream.h.

8.28.2.3 enum openpr::bitstream::v4_bitstream::EOpcode [protected]

See also

opcode format: UG071, v1.10, April 8, 2008, Table 7-3

Enumerator:

eOpNOP

eOpRead

eOpWrite

eOpReserved

eOpcodeCount

Definition at line 29 of file v4_bitstream.h.

8.28.2.4 enum openpr::bitstream::v4_bitstream::EPacketType [protected]

See also

packet type: UG071, v1.10, April 8, 2008, Tables 7-2 and 7-4

Enumerator:

eType1
eType2
eTypeCount

Definition at line 26 of file v4_bitstream.h.

8.28.2.5 enum openpr::bitstream::v4_bitstream::ERegister [protected]

See also

configuration registers: UG071, v1.10, April 8, 2008, Table 7-5

Enumerator:

eRegCRC
eRegFAR
eRegFDRI
eRegFDRO
eRegCMD
eRegCTL
eRegMASK
eRegSTAT
eRegLOUT
eRegCOR
eRegMFWR
eRegCBC
eRegIDCODE
eRegAXSS
eRegCount

Definition at line 32 of file v4_bitstream.h.

8.28.2.6 enum openpr::bitstream::v4_bitstream::EShiftFAR [protected]

See also

Frame Address Register Description: UG071, v1.10, April 8, 2008, Table 7-8

Enumerator:

eShiftBlockType
eShiftTB

eShiftRow

eShiftMajor

eShiftMNA

Definition at line 73 of file v4_bitstream.h.

8.28.2.7 enum openpr::bitstream::v4_bitstream::EShifts [protected]

See also

type 1 packet format: UG071, v1.10, April 8, 2008, Table 7-2
type 2 packet format: UG071, v1.10, April 8, 2008, Table 7-4

Enumerator:

eShiftPacketType

eShiftPacketOpcode

eShiftType1Address

eShiftType1Reserved

eShiftType1Count

eShiftType2Count

Definition at line 41 of file v4_bitstream.h.

8.28.2.8 enum openpr::bitstream::v4_bitstream::EWords [protected]

Enumerator:

eDummyWord

eSyncWord

Definition at line 67 of file v4_bitstream.h.

8.28.3 Constructor & Destructor Documentation

8.28.3.1 openpr::bitstream::v4_bitstream::v4_bitstream (std::string *device_name,* bool *frame_ecc* = `false`)

8.28.3.2 openpr::bitstream::v4_bitstream::v4_bitstream (void)

Definition at line 37 of file v4_bitstream.cpp.

8.28.4 Member Function Documentation

8.28.4.1 frame_addr openpr::bitstream::v4_bitstream::farToStruct (boost::uint32_t *far*) [protected, virtual]

Prepare frame for writeback.

Parameters

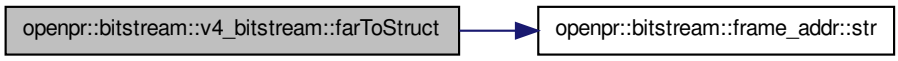
fIndex index of frame to prepare Convert the hex Frame Address Register to a frame_addr struct.

far Frame Address Register value to be converted.

Implements openpr::bitstream::bitstream.

Definition at line 290 of file v4_bitstream.cpp.

Here is the call graph for this function:



8.28.4.2 virtual bool openpr::bitstream::v4_bitstream::readPackets (std::fstream & *inStream*) [virtual]

8.28.4.3 void openpr::bitstream::v4_bitstream::reverseFrameBits (boost::uint8_t * *ptr*) [protected]

remangle the bytes for a tile pair

Parameters

ptr A pointer to the frame reverse the order of the bits in a frame

ptr A pointer to the frame

Definition at line 386 of file v4_bitstream.cpp.

8.28.4.4 boost::uint32_t openpr::bitstream::v4_bitstream::structToFar (openpr::bitstream::frame_addr *far*) [protected, virtual]

Convert the frame_addr struct to the 32bit hex frame address register format.

Parameters

far frame_addr struct to be converted.

Implements openpr::bitstream::bitstream.

Definition at line 304 of file v4_bitstream.cpp.

8.28.4.5 void openpr::bitstream::v4_bitstream::unmangleTilePair (boost::uint16_t * *ptr*) [protected]

unmangle the bytes for a tile pair

Parameters

ptr A pointer to the frame

Definition at line 367 of file v4_bitstream.cpp.

8.28.4.6 virtual bool openpr::bitstream::v4_bitstream::writeFrameData (std::fstream & *inStream*, int *inCount*) [protected, virtual]

8.28.4.7 virtual bool openpr::bitstream::v4_bitstream::writePacketHeader (std::fstream & *outStream*, boost::uint32_t *packetType*, boost::uint32_t *opcode*, boost::uint32_t *address*, boost::uint32_t *reserved*, boost::uint32_t *count*) [virtual]

Write a packet header to the bitstream.

Parameters

outStream Bitstream to be written.

packetType uint indicating type 1 or type 2 packet.

opcode Operation to be performed on register.

address Register address to be written.

reserved Param for reserved opcodes.

count Number of words to be written in packet.

8.28.4.8 virtual bool openpr::bitstream::v4_bitstream::writePackets (std::fstream & *outStream*) [virtual]

Write packets in proper sequence for a full bitstream.

Parameters

outStream Bitstream file to be written

Todo

test whether this actually works

8.28.4.9 virtual bool openpr::bitstream::v4_bitstream::writePacketsPartial (std::fstream & *outStream*) [virtual]

Write packets in proper sequence for a partial bitstream.

Parameters

outStream Bitstream file to be written

Todo

get actual partial bitstream sequence and write this function

8.28.4.10 virtual bool openpr::bitstream::v4_bitstream::writePartialFrames (std::fstream & *outStream*) [virtual]

Write out partial bitstream.

Parameters

outStream bitstream file to be written

8.28.5 Member Data Documentation

8.28.5.1 boost::uint32_t openpr::bitstream::v4_bitstream::mRegister[eRegCount] [protected]

Definition at line 81 of file v4_bitstream.h.

8.28.5.2 const char * openpr::bitstream::v4_bitstream::sCommandName [static, protected]

Initial value:

```
{
        "NULL", "WCFG", "MFWR", "LFRM", "RCFG", "START", "RCAP", "RCRC", "AGHIGH"
      , "SWITCH", "GRESTORE", "SHUTDOWN",
        "GCAPTURE", "DESYNC"
    }
```

Definition at line 85 of file v4_bitstream.h.

8.28.5.3 const char * openpr::bitstream::v4_bitstream::sOpcodeName [static, protected]

Initial value:

```
{
        "NOP", "READ", "WRITE", "RESERVED"
    }
```

Definition at line 83 of file v4_bitstream.h.

8.28.5.4 const char * openpr::bitstream::v4_bitstream::sRegisterName [static, protected]

Initial value:

```
{
        "CRC", "FAR", "FDRI", "FDRO", "CMD", "CTL", "MASK", "STAT", "LOUT", "COR"
      , "MFWR", "CBC", "IDCODE", "AXSS"
    }
```

Definition at line 84 of file v4_bitstream.h.

8.28.5.5 const char * openpr::bitstream::v4_bitstream::sTypeName [static, protected]

Initial value:

```
{
        "[UNKNOWN TYPE 0]", "TYPE1", "TYPE2", "[UNKNOWN TYPE 3]", "[UNKNOWN TYPE
      4]", "[UNKNOWN TYPE 5]",
        "[UNKNOWN TYPE 6]", "[UNKNOWN TYPE 7]"
    }
```

Definition at line 82 of file v4_bitstream.h.

8.28.5.6 const int openpr::bitstream::v4_bitstream::top = 0 [static, protected]

Definition at line 80 of file v4_bitstream.h.

The documentation for this class was generated from the following files:

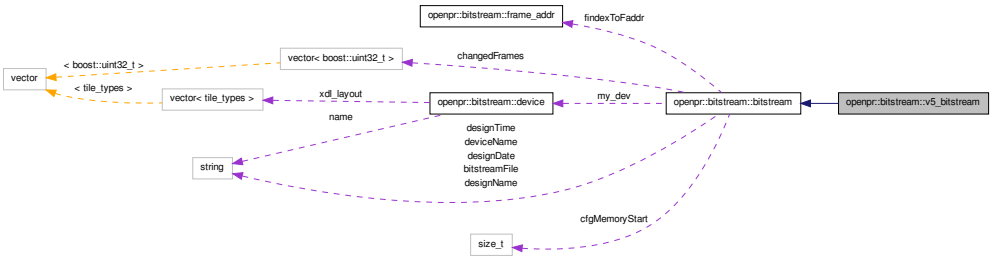
- openpr/bitstream/v4_bitstream.h
- openpr/bitstream/v4_bitstream.cpp

8.29 openpr::bitstream::v5_bitstream Class Reference

`#include <v5_bitstream.h>`

Inherits openpr::bitstream::bitstream.

Collaboration diagram for openpr::bitstream::v5_bitstream:



Public Member Functions

- v5_bitstream (string device_name)
- v5_bitstream (void)
- virtual bool readPackets (fstream &inStream)
- virtual bool writePacketHeader (fstream &outStream, boost::uint32_t packetType, boost::uint32_t opcode, boost::uint32_t address, boost::uint32_t reserved, boost::uint32_t count)
- virtual bool writePackets (fstream &outStream)
- virtual bool writePacketsPartial (fstream &outStream)
- virtual bool writePartialFrames (fstream &outStream)

Protected Types

- enum EPacketType { eType1 = 1, eType2, eTypeCount = 8 }
- enum EOpcode {
  eOpNOP = 0, eOpRead, eOpWrite, eOpReserved,
  eOpcodeCount }
- enum ERegister {
  eRegCRC = 0, eRegFAR, eRegFDRI, eRegFDRO,
  eRegCMD, eRegCTL0, eRegMASK, eRegSTAT,
  eRegLOUT, eRegCOR0, eRegMFWR, eRegCBC,
  eRegIDCODE, eRegAXSS, eRegCOR1, eRegCSOB,
  eRegWBSTAR, eRegTIMER, eRegBOOTSTS = 22, eRegCTL1 = 24,
  eRegCount }
- enum ECommand {
  eCmdNULL = 0, eCmdWCFG, eCmdMFW, eCmdDGHIGH,
  eCmdLFRM = eCmdDGHIGH, eCmdRCFG, eCmdSTART, eCmdRCAP,
  eCmdRCRC, eCmdAGHIGH, eCmdSWITCH, eCmdGRESTORE,
  eCmdSHUTDOWN, eCmdGCAPTURE, eCmdDESYNCH, eCmdIPROG = 15,
  eCmdLTIMER = 17, eCmdCount }
- enum EShifts {
  eShiftPacketType = 29, eShiftPacketOpcode = 27, eShiftType1Address = 13, eShiftType1Reserved = 11,
  eShiftType1Count = 0, eShiftType2Count = 0 }
- enum EMasks {
  eMaskPacketType = 0x00000007, eMaskPacketOpcode = 0x00000003, eMaskType1Address = 0x00003fff, eMaskType1Reserved = 0x00000003,
  eMaskType1Count = 0x000007ff, eMaskType2Count = 0x07ffffff }
- enum EWords { eDummyWord = 0xFFFFFFFF, eBusWidthWord = 0x000000BB, eBusWidth = 0x11220044, eSyncWord = 0xAA995566 }
- enum EShiftFAR {
  eShiftBlockType = 21, eShiftTB = 20, eShiftRow = 15, eShiftMajor = 7,
  eShiftMNA = 0 }

Protected Member Functions

- virtual bool writeFrameData (fstream &inStream, int inCount)
- openpr::bitstream::frame_addr farToStruct (boost::uint32_t far)
- boost::uint32_t structToFar (openpr::bitstream::frame_addr far)

Protected Attributes

- boost::uint32_t mRegister [eRegCount]

Static Protected Attributes

- static const char * sTypeName [eTypeCount]
- static const char * sOpcodeName [eOpcodeCount]
- static const char * sRegisterName [eRegCount]
- static const char * sCommandName [eCmdCount]

8.29.1 Detailed Description

Definition at line 21 of file v5_bitstream.h.

8.29.2 Member Enumeration Documentation

8.29.2.1 enum openpr::bitstream::v5_bitstream::ECommand [protected]

Enumerator:

eCmdNULL
eCmdWCFG
eCmdMFW
eCmdDGHIGH
eCmdLFRM
eCmdRCFG
eCmdSTART
eCmdRCAP
eCmdRCRC
eCmdAGHIGH
eCmdSWITCH
eCmdGRESTORE
eCmdSHUTDOWN
eCmdGCAPTURE
eCmdDESYNCH
eCmdIPROG
eCmdLTIMER
eCmdCount

Definition at line 37 of file v5_bitstream.h.

8.29.2.2 enum openpr::bitstream::v5_bitstream::EMasks [protected]

Enumerator:

eMaskPacketType
eMaskPacketOpcode
eMaskType1Address
eMaskType1Reserved

eMaskType1Count
eMaskType2Count

Definition at line 55 of file v5_bitstream.h.

8.29.2.3 enum openpr::bitstream::v5_bitstream::EOpcode [protected]

Enumerator:

eOpNOP
eOpRead
eOpWrite
eOpReserved
eOpcodeCount

Definition at line 29 of file v5_bitstream.h.

8.29.2.4 enum openpr::bitstream::v5_bitstream::EPacketType [protected]

Enumerator:

eType1
eType2
eTypeCount

Definition at line 26 of file v5_bitstream.h.

8.29.2.5 enum openpr::bitstream::v5_bitstream::ERegister [protected]

Enumerator:

eRegCRC
eRegFAR
eRegFDRI
eRegFDRO
eRegCMD
eRegCTL0
eRegMASK
eRegSTAT
eRegLOUT
eRegCOR0
eRegMFWR
eRegCBC
eRegIDCODE
eRegAXSS
eRegCOR1

eRegCSOB

eRegWBSTAR

eRegTIMER

eRegBOOTSTS

eRegCTL1

eRegCount

Definition at line 32 of file v5_bitstream.h.

8.29.2.6 enum openpr::bitstream::v5_bitstream::EShiftFAR [protected]

Enumerator: **See also**

eShiftBlockType Frame Address Register bitfields obtained from UG191 v3.6 Figure 6-10.

eShiftTB

eShiftRow

eShiftMajor

eShiftMNA

Definition at line 76 of file v5_bitstream.h.

8.29.2.7 enum openpr::bitstream::v5_bitstream::EShifts [protected]

Enumerator:

eShiftPacketType

eShiftPacketOpcode

eShiftType1Address

eShiftType1Reserved

eShiftType1Count

eShiftType2Count

Definition at line 41 of file v5_bitstream.h.

8.29.2.8 enum openpr::bitstream::v5_bitstream::EWords [protected]

Enumerator:

eDummyWord

eBusWidthWord

eBusWidth

eSyncWord

Definition at line 69 of file v5_bitstream.h.

8.29.3 Constructor & Destructor Documentation

8.29.3.1 openpr::bitstream::v5_bitstream::v5_bitstream (string *device_name*)

Definition at line 44 of file v5_bitstream.cpp.

8.29.3.2 openpr::bitstream::v5_bitstream::v5_bitstream (void)

Definition at line 39 of file v5_bitstream.cpp.

8.29.4 Member Function Documentation

8.29.4.1 frame_addr openpr::bitstream::v5_bitstream::farToStruct (boost::uint32_t *far*) [protected, virtual]

Convert the hex Frame Address Register to a frame_addr struct.

Parameters

far Frame Address Register value to be converted.

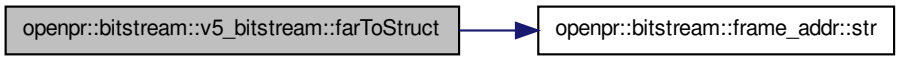
See also

Frame Address Register bitfields obtained from UG191 v3.6 Figure 6-10.

Implements openpr::bitstream::bitstream.

Definition at line 486 of file v5_bitstream.cpp.

Here is the call graph for this function:

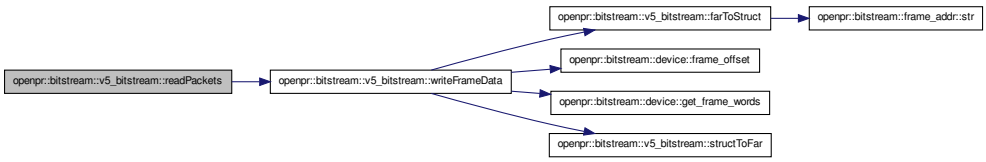


8.29.4.2 bool openpr::bitstream::v5_bitstream::readPackets (fstream & *inStream*) [virtual]

Implements openpr::bitstream::bitstream.

Definition at line 49 of file v5_bitstream.cpp.

Here is the call graph for this function:



8.29.4.3 boost::uint32_t openpr::bitstream::v5_bitstream::structToFar (openpr::bitstream::frame_addr *far*) [protected, virtual]

Convert the frame_addr struct to the 32bit hex frame address register format.

Parameters

far frame_addr struct to be converted.

See also

Frame Address Register bitfields obtained from UG191 v3.6 Figure 6-10.

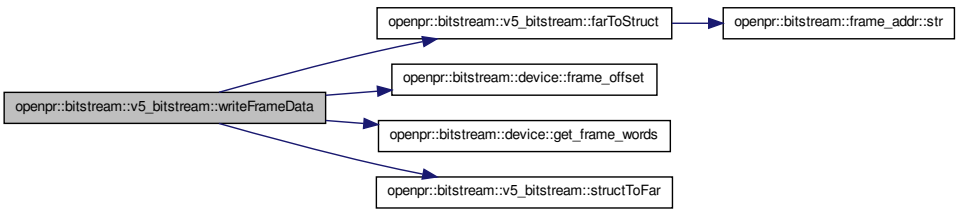
Implements openpr::bitstream::bitstream.

Definition at line 501 of file v5_bitstream.cpp.

8.29.4.4 bool openpr::bitstream::v5_bitstream::writeFrameData (fstream & *inStream*, int *inCount*) [protected, virtual]

Definition at line 515 of file v5_bitstream.cpp.

Here is the call graph for this function:



8.29.4.5 bool openpr::bitstream::v5_bitstream::writePacketHeader (fstream & *outStream*, boost::uint32_t *packetType*, boost::uint32_t *opcode*, boost::uint32_t *address*, boost::uint32_t *reserved*, boost::uint32_t *count*) [virtual]

Write a packet header to the bitstream.

Parameters

outStream Bitstream to be written.

packetType uint indicating type 1 or type 2 packet.

opcode Operation to be performed on register.

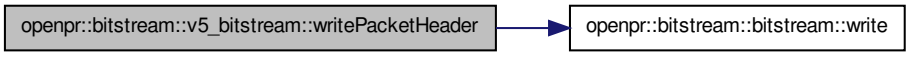
address Register address to be written.

reserved Param for reserved opcodes.

count Number of words to be written in packet.

Definition at line 188 of file v5_bitstream.cpp.

Here is the call graph for this function:



8.29.4.6 bool openpr::bitstream::v5_bitstream::writePackets (fstream & *outStream*) [virtual]

Write packets in proper sequence for a full bitstream.

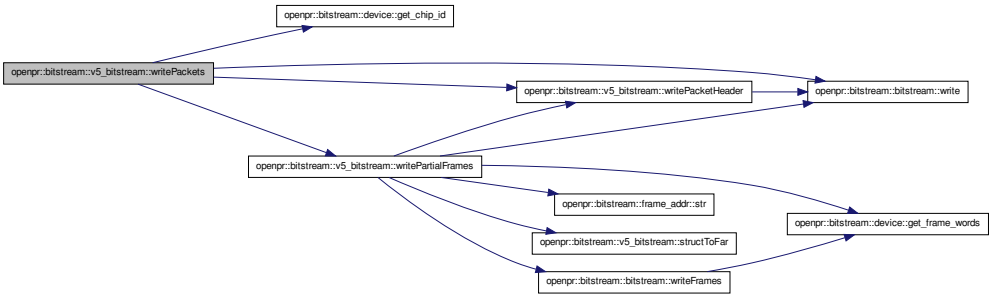
Parameters

outStream Bitstream file to be written

Implements openpr::bitstream::bitstream.

Definition at line 216 of file v5_bitstream.cpp.

Here is the call graph for this function:



8.29.4.7 bool openpr::bitstream::v5_bitstream::writePacketsPartial (fstream & *outStream*) [virtual]

Write packets in proper sequence for a partial bitstream.

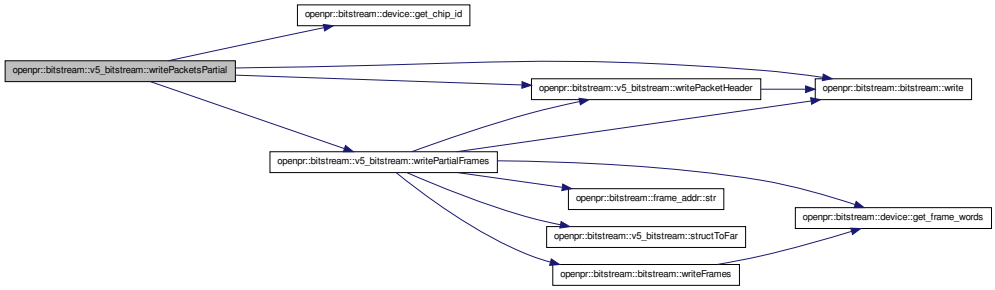
Parameters

outStream Bitstream file to be written

Implements openpr::bitstream::bitstream.

Definition at line 334 of file v5_bitstream.cpp.

Here is the call graph for this function:



8.29.4.8 bool openpr::bitstream::v5_bitstream::writePartialFrames (fstream & *outStream*) [virtual]

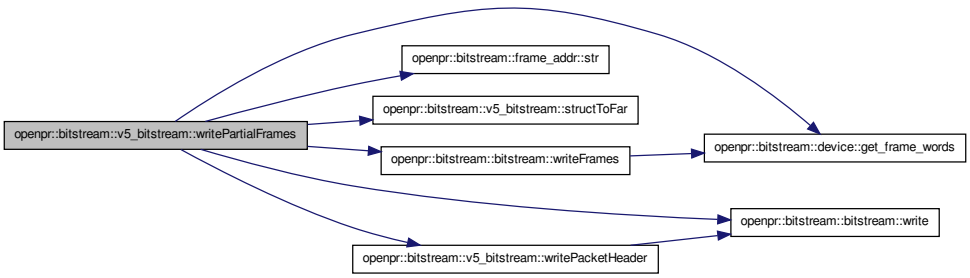
Write out partial bitstream.

Parameters

outStream bitstream file to be written

Definition at line 435 of file v5_bitstream.cpp.

Here is the call graph for this function:



8.29.5 Member Data Documentation

8.29.5.1 boost::uint32_t openpr::bitstream::v5_bitstream::mRegister[eRegCount] [protected]

Definition at line 85 of file v5_bitstream.h.

8.29.5.2 const char * openpr::bitstream::v5_bitstream::sCommandName [static, protected]

Initial value:

```
{
       "NULL", "WCFG", "MFW", "DGHIGH/LFRM", "RCFG", "START", "RCAP", "RCRC", "A
     GHIGH", "SWITCH", "GRESTORE", "SHUTDOWN",
       "GCAPTURE", "DESYNCH", "[UNKNOWN CMD 14]", "IPROG", "[UNKNOWN CMD 16]", "
     LTIMER"
   }
```

Definition at line 89 of file v5_bitstream.h.

8.29.5.3 const char * openpr::bitstream::v5_bitstream::sOpcodeName [static, protected]

Initial value:

```
{
       "NOP", "READ", "WRITE", "RESERVED"
   }
```

Definition at line 87 of file v5_bitstream.h.

8.29.5.4 const char * openpr::bitstream::v5_bitstream::sRegisterName [static, protected]

Initial value:

```
{
       "CRC", "FAR", "FDRI", "FDRO", "CMD", "CTL0", "MASK", "STAT", "LOUT", "COR
     0", "MFWR", "CBC", "IDCODE", "AXSS",
       "COR1", "CSOB", "WBSTAR", "TIMER", "[UNKNOWN REG 18]", "[UNKNOWN REG 19]"
     , "[UNKNOWN REG 20]", "[UNKNOWN REG 21]",
       "BOOTSTS", "[UNKNOWN REG 23]", "CTL1"
   }
```

Definition at line 88 of file v5_bitstream.h.

8.29.5.5 const char * openpr::bitstream::v5_bitstream::sTypeName [static, protected]

Initial value:

```
{
       "[UNKNOWN TYPE 0]", "TYPE1", "TYPE2", "[UNKNOWN TYPE 3]", "[UNKNOWN TYPE
     4]", "[UNKNOWN TYPE 5]",
       "[UNKNOWN TYPE 6]", "[UNKNOWN TYPE 7]"
   }
```

Definition at line 86 of file v5_bitstream.h.

The documentation for this class was generated from the following files:

- openpr/bitstream/v5_bitstream.h
- openpr/bitstream/v5_bitstream.cpp

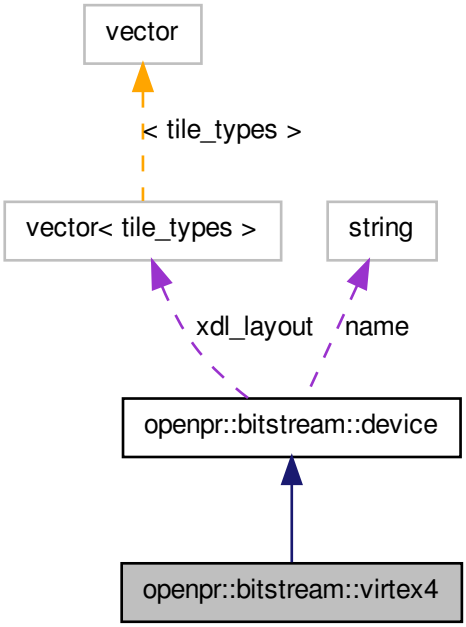
8.30 openpr::bitstream::virtex4 Class Reference

`#include <virtex4.h>`

Inherits openpr::bitstream::device.

Inherited by openpr::bitstream::xc4vfx60, openpr::bitstream::xc4vlx15, and openpr::bitstream::xc4vlx60.

Collaboration diagram for openpr::bitstream::virtex4:



Protected Types

- enum { virtex4_frame_words = 41, virtex4_frame_height, virtex4_clb_slices = 4, num_blk_types = 3 }

Protected Member Functions

- virtex4 (const int num_rows, const int num_cols, const tile_types row_layout[ ], const string name, const int id)
- int get_addressable_blk_types ()
- int tile_offset (int x, int y)
- ~virtex4 ()

Static Protected Attributes

- static const int virtex4_tile_frames [ ]
- static const int virtex4_block_type [ ]
- static const char * virtex4_routing_table = "Virtex4Bits"
- static const char * virtex4_logic_table = "Virtex4LogicBits"

8.30.1 Detailed Description

Definition at line 20 of file virtex4.h.

8.30.2 Member Enumeration Documentation

8.30.2.1 anonymous enum [protected]

Enumerator:

virtex4_frame_words

virtex4_frame_height

virtex4_clb_slices

num_blk_types

Definition at line 23 of file virtex4.h.

8.30.3 Constructor & Destructor Documentation

8.30.3.1 openpr::bitstream::virtex4::virtex4 (const int *num_rows*, const int *num_cols*, const tile_types *row_layout[ ]*, const string *name*, const int *id*) [inline, protected]

Virtex4 Class Constructor. Send V4 specific parameters to device class to be initialized

Definition at line 38 of file virtex4.h.

8.30.3.2 openpr::bitstream::virtex4::~virtex4 ( ) [protected]

Return tile number within column when given byte offset.

Parameters

byte_offset The byte offset within the frame.

Returns

Tile index within column (-1 if in ECC word). Return the type of interconnect tile. Virtex4 Class Destructor. Does nothing so far

Todo

Remove if not used

Definition at line 54 of file virtex4.cpp.

8.30.4 Member Function Documentation

8.30.4.1 int openpr::bitstream::virtex4::get_addressable_blk_types ( ) [inline, protected, virtual]

Return number of addressable block types for Virtex5.

Reimplemented from openpr::bitstream::device.

Definition at line 53 of file virtex4.h.

8.30.4.2 int openpr::bitstream::virtex4::tile_offset (int *x*, int *y*) [protected, virtual]

Return tile_offset within a frame (in bytes).

Implements openpr::bitstream::device.

Definition at line 46 of file virtex4.cpp.

8.30.5 Member Data Documentation

8.30.5.1 const int openpr::bitstream::virtex4::virtex4_block_type [static, protected]

Initial value:

```
{
    0,
    0,
    0,
    0,
    2,
    1,
    0,
    0
}
```

Definition at line 29 of file virtex4.h.

8.30.5.2 const char * openpr::bitstream::virtex4::virtex4_logic_table = "Virtex4LogicBits" [static, protected]

Definition at line 33 of file virtex4.h.

8.30.5.3 const char * openpr::bitstream::virtex4::virtex4_routing_table = "Virtex4Bits" [static, protected]

Definition at line 31 of file virtex4.h.

8.30.5.4 const int openpr::bitstream::virtex4::virtex4_tile_frames [static, protected]

Initial value:

```
{
    30,
    3,
    22,
    21,
    64,
    20,
    20,
    2
}
```

Definition at line 27 of file virtex4.h.

The documentation for this class was generated from the following files:

- openpr/bitstream/virtex4.h
- openpr/bitstream/virtex4.cpp

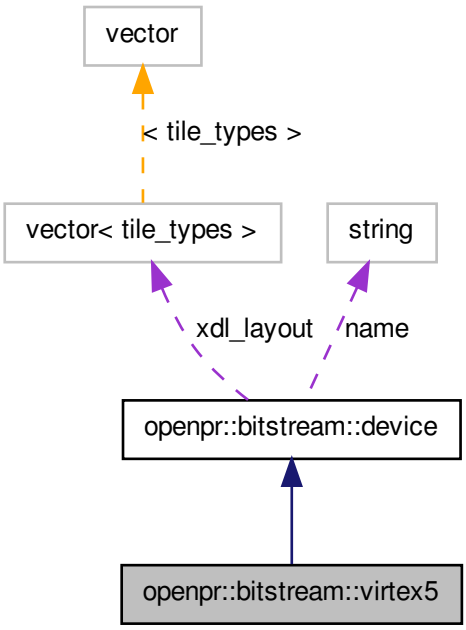
8.31 openpr::bitstream::virtex5 Class Reference

`#include <virtex5.h>`

Inherits openpr::bitstream::device.

Inherited by openpr::bitstream::xc5vlx110t, openpr::bitstream::xc5vlx50, openpr::bitstream::xc5vlx50t, and openpr::bitstream::xc5vsx95t.

Collaboration diagram for openpr::bitstream::virtex5:



Protected Types

- enum { virtex5_frame_words = 41, virtex5_frame_height, virtex5_clb_slices = 2, virtex5_num_blk_types = 2 }

Protected Member Functions

- virtex5 (const int num_rows, const int num_cols, const tile_types row_layout[ ], const string name, const int id)
- int get_addressable_blk_types ()
- virtual int tile_offset (int x, int y)
- ~virtex5 ()

Static Protected Attributes

- static const int virtex5_tile_frames [ ]
- static const int virtex5_block_type [ ]
- static const char * virtex5_routing_table = "Virtex5Bits"
- static const char * virtex5_logic_table = "Virtex5LogicBits"

8.31.1 Detailed Description

Definition at line 21 of file virtex5.h.

8.31.2 Member Enumeration Documentation

8.31.2.1 anonymous enum [protected]

Enumerator:

virtex5_frame_words
virtex5_frame_height
virtex5_clb_slices
virtex5_num_blk_types

Definition at line 24 of file virtex5.h.

8.31.3 Constructor & Destructor Documentation

8.31.3.1 openpr::bitstream::virtex5::virtex5 (const int *num_rows*, const int *num_cols*, const tile_types *row_layout[ ]*, const string *name*, const int *id*) [inline, protected]

Virtex4 Class Constructor. Send V4 specific parameters to device class to be initialized

Definition at line 39 of file virtex5.h.

8.31.3.2 openpr::bitstream::virtex5::~virtex5 ( ) [protected]

Return tile number within column when given byte offset.

Parameters

byte_offset The byte offset within the frame.

Returns

Tile index within column (-1 if in ECC word). Return the type of interconnect tile. Virtex4 Class Destructor. Does nothing so far

Todo

Remove if not used

Definition at line 55 of file virtex5.cpp.

8.31.4 Member Function Documentation

8.31.4.1 int openpr::bitstream::virtex5::get_addressable_blk_types ( ) [inline, protected, virtual]

Return number of addressable block types for Virtex5.

Reimplemented from openpr::bitstream::device.

Definition at line 53 of file virtex5.h.

8.31.4.2 int openpr::bitstream::virtex5::tile_offset (int *x*, int *y*) [protected, virtual]

Return byte offset of tile within frames. Only works for CLB Block Types

Parameters

x X coordinate of tile

y Y coordinate of tile

Returns

byte offset of tile within a frame

Implements openpr::bitstream::device.

Definition at line 46 of file virtex5.cpp.

8.31.5 Member Data Documentation

8.31.5.1 const int openpr::bitstream::virtex5::virtex5_block_type [static, protected]

Initial value:

```
{
    0,
    0,
    0,
    0,
    1,
    0,
    0,
    0
}
```

Definition at line 30 of file virtex5.h.

8.31.5.2 const char * openpr::bitstream::virtex5::virtex5_logic_table = "Virtex5LogicBits" [static, protected]

Definition at line 34 of file virtex5.h.

8.31.5.3 const char * openpr::bitstream::virtex5::virtex5_routing_table = "Virtex5Bits" [static, protected]

Definition at line 32 of file virtex5.h.

8.31.5.4 const int openpr::bitstream::virtex5::virtex5_tile_frames [static, protected]

Initial value:

```
{
    54,
    4,
    36,
    28,
```

```
    128,
    30,
    32,
    2
}
```

Definition at line 28 of file virtex5.h.

The documentation for this class was generated from the following files:

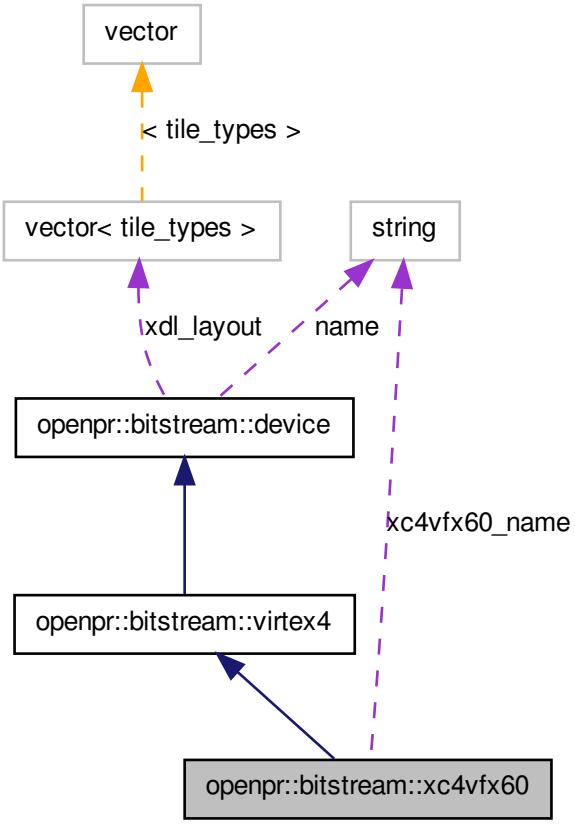
- openpr/bitstream/virtex5.h
- openpr/bitstream/virtex5.cpp

8.32 openpr::bitstream::xc4vfx60 Class Reference

`#include <v4_devices.h>`

Inherits openpr::bitstream::virtex4.

Collaboration diagram for openpr::bitstream::xc4vfx60:



Public Member Functions

- xc4vfx60 ()

Protected Types

- enum { xc4vfx60_num_rows = 8, xc4vfx60_num_cols = 76 }

Static Protected Attributes

- static const tile_types xc4vfx60_row_layout [ ]
- static const string xc4vfx60_name = "XC4VFX60"
- static const int xc4vfx60_id = 0x01EB4093U

8.32.1 Detailed Description

Definition at line 46 of file v4_devices.h.

8.32.2 Member Enumeration Documentation

8.32.2.1 anonymous enum [protected]

Enumerator:

xc4vfx60_num_rows

xc4vfx60_num_cols

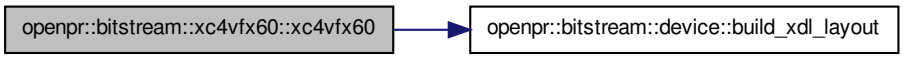
Definition at line 48 of file v4_devices.h.

8.32.3 Constructor & Destructor Documentation

8.32.3.1 openpr::bitstream::xc4vfx60::xc4vfx60 ( ) [inline]

Definition at line 53 of file v4_devices.h.

Here is the call graph for this function:



8.32.4 Member Data Documentation

8.32.4.1 const int openpr::bitstream::xc4vfx60::xc4vfx60_id = 0x01EB4093U [static, protected]

Definition at line 51 of file v4_devices.h.

8.32.4.2 const string openpr::bitstream::xc4vfx60::xc4vfx60_name = "XC4VFX60" [static, protected]

XC4VLX60 Part

Definition at line 50 of file v4_devices.h.

8.32.4.3 const tile_types openpr::bitstream::xc4vfx60::xc4vfx60_row_layout [static, protected]

Definition at line 49 of file v4_devices.h.

The documentation for this class was generated from the following files:

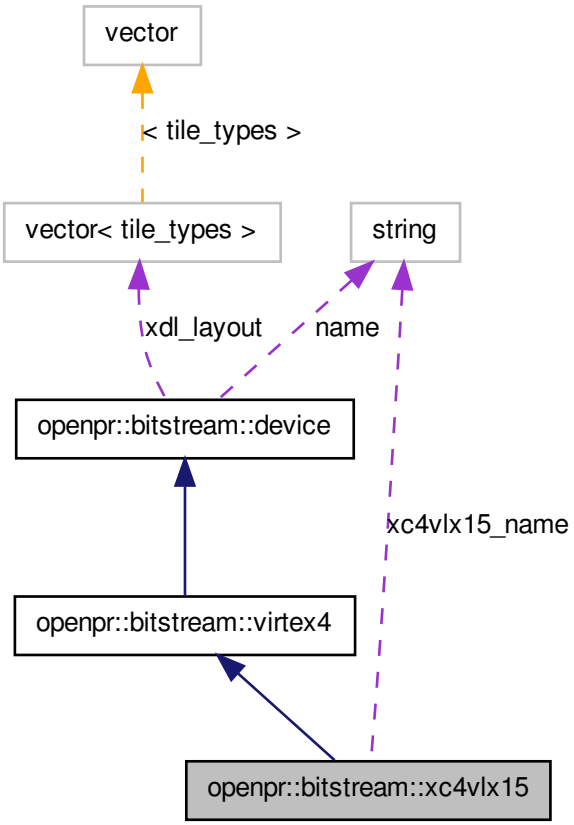
- openpr/bitstream/v4_devices.h
- openpr/bitstream/v4_devices.cpp

8.33 openpr::bitstream::xc4vlx15 Class Reference

`#include <v4_devices.h>`

Inherits openpr::bitstream::virtex4.

Collaboration diagram for openpr::bitstream::xc4vlx15:



Public Member Functions

- xc4vlx15 ()

Protected Types

- enum { xc4vlx15_num_rows = 4, xc4vlx15_num_cols = 35 }

Static Protected Attributes

- static const tile_types xc4vlx15_row_layout [ ]
- static const string xc4vlx15_name = "XC4VLX15"
- static const int xc4vlx15_id = 0x01658093U

8.33.1 Detailed Description

Definition at line 20 of file v4_devices.h.

8.33.2 Member Enumeration Documentation

8.33.2.1 anonymous enum [protected]

Enumerator:

xc4vlx15_num_rows

xc4vlx15_num_cols

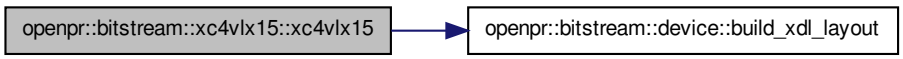
Definition at line 22 of file v4_devices.h.

8.33.3 Constructor & Destructor Documentation

8.33.3.1 openpr::bitstream::xc4vlx15::xc4vlx15 ( ) [inline]

Definition at line 27 of file v4_devices.h.

Here is the call graph for this function:



8.33.4 Member Data Documentation

8.33.4.1 const int openpr::bitstream::xc4vlx15::xc4vlx15_id = 0x01658093U [static, protected]

Definition at line 25 of file v4_devices.h.

8.33.4.2 const string openpr::bitstream::xc4vlx15::xc4vlx15_name = "XC4VLX15" [static, protected]

Definition at line 24 of file v4_devices.h.

8.33.4.3 const tile_types openpr::bitstream::xc4vlx15::xc4vlx15_row_layout [static, protected]

Definition at line 23 of file v4_devices.h.

The documentation for this class was generated from the following files:

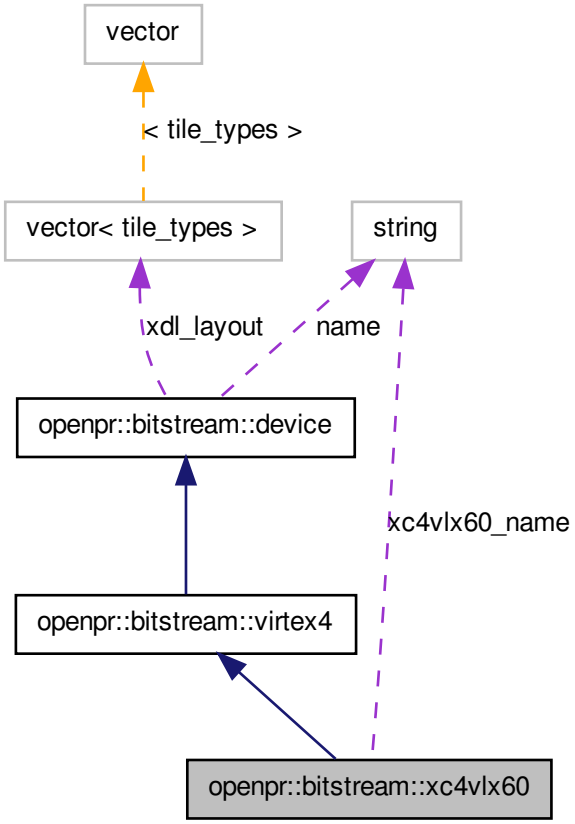
- openpr/bitstream/v4_devices.h
- openpr/bitstream/v4_devices.cpp

8.34 openpr::bitstream::xc4vlx60 Class Reference

`#include <v4_devices.h>`

Inherits openpr::bitstream::virtex4.

Collaboration diagram for openpr::bitstream::xc4vlx60:



Public Member Functions

- xc4vlx60 ()

Protected Types

- enum { xc4vlx60_num_rows = 8, xc4vlx60_num_cols = 67 }

Static Protected Attributes

- static const tile_types xc4vlx60_row_layout [ ]
- static const string xc4vlx60_name = "XC4VLX60"
- static const int xc4vlx60_id = 0x016B4093U

8.34.1 Detailed Description

Definition at line 33 of file v4_devices.h.

8.34.2 Member Enumeration Documentation

8.34.2.1 anonymous enum [protected]

Enumerator:

xc4vlx60_num_rows

xc4vlx60_num_cols

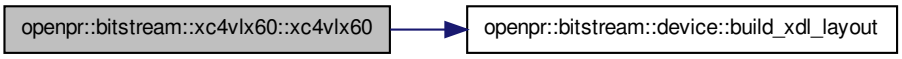
Definition at line 35 of file v4_devices.h.

8.34.3 Constructor & Destructor Documentation

8.34.3.1 openpr::bitstream::xc4vlx60::xc4vlx60 ( ) [inline]

Definition at line 40 of file v4_devices.h.

Here is the call graph for this function:



8.34.4 Member Data Documentation

8.34.4.1 const int openpr::bitstream::xc4vlx60::xc4vlx60_id = 0x016B4093U [static, protected]

Definition at line 38 of file v4_devices.h.

8.34.4.2 const string openpr::bitstream::xc4vlx60::xc4vlx60_name = "XC4VLX60" [static, protected]

XC4VLX60 Part

Definition at line 37 of file v4_devices.h.

8.34.4.3 const tile_types openpr::bitstream::xc4vlx60::xc4vlx60_row_layout [static, protected]

Definition at line 36 of file v4_devices.h.

The documentation for this class was generated from the following files:

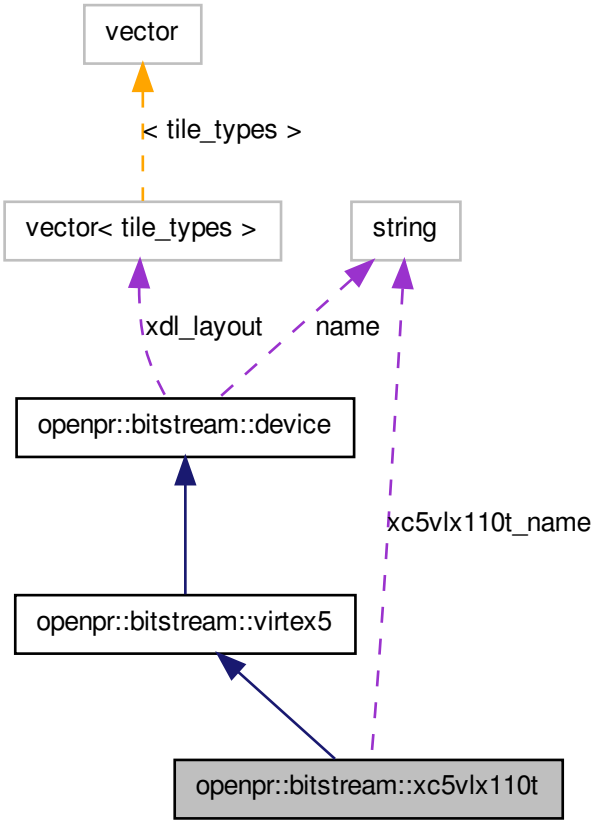
- openpr/bitstream/v4_devices.h
- openpr/bitstream/v4_devices.cpp

8.35 openpr::bitstream::xc5vlx110t Class Reference

`#include <v5_devices.h>`

Inherits openpr::bitstream::virtex5.

Collaboration diagram for openpr::bitstream::xc5vlx110t:



Public Member Functions

- xc5vlx110t ()

Protected Types

- enum { xc5vlx110t_num_rows = 8, xc5vlx110t_num_cols = 70 }

Static Protected Attributes

- static const tile_types xc5vlx110t_row_layout [ ]
- static const string xc5vlx110t_name = "XC5VLX110T"
- static const int xc5vlx110t_id = 0x2AD6093

8.35.1 Detailed Description

Definition at line 61 of file v5_devices.h.

8.35.2 Member Enumeration Documentation

8.35.2.1 anonymous enum [protected]

Enumerator:

xc5vlx110t_num_rows

xc5vlx110t_num_cols

Definition at line 63 of file v5_devices.h.

8.35.3 Constructor & Destructor Documentation

8.35.3.1 openpr::bitstream::xc5vlx110t::xc5vlx110t ( ) [inline]

Definition at line 68 of file v5_devices.h.

Here is the call graph for this function:

8.35.4 Member Data Documentation

8.35.4.1 const int openpr::bitstream::xc5vlx110t::xc5vlx110t_id = 0x2AD6093 [static, protected]

Definition at line 66 of file v5_devices.h.

8.35.4.2 const string openpr::bitstream::xc5vlx110t::xc5vlx110t_name = "XC5VLX110T" [static, protected]

Definition at line 65 of file v5_devices.h.

8.35.4.3 const tile_types openpr::bitstream::xc5vlx110t::xc5vlx110t_row_layout [static, protected]

Definition at line 64 of file v5_devices.h.

The documentation for this class was generated from the following files:

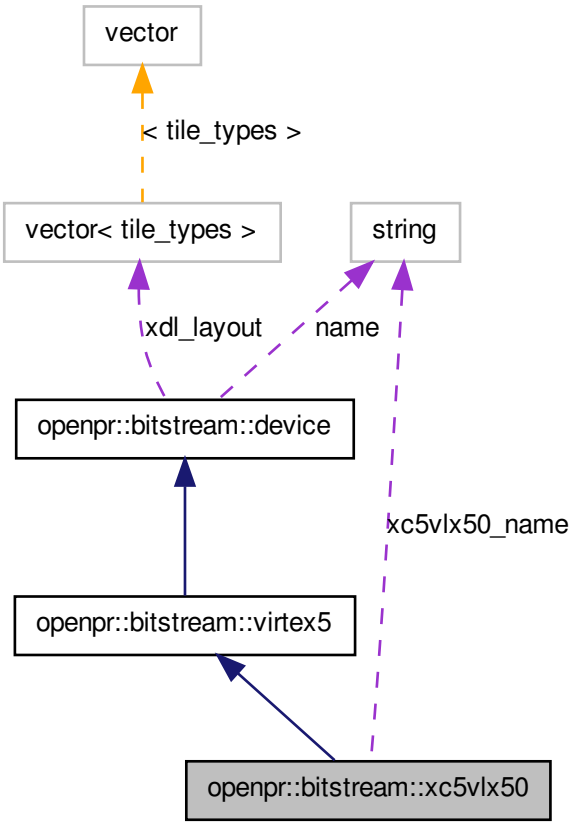
- openpr/bitstream/v5_devices.h
- openpr/bitstream/v5_devices.cpp

8.36 openpr::bitstream::xc5vlx50 Class Reference

`#include <v5_devices.h>`

Inherits openpr::bitstream::virtex5.

Collaboration diagram for openpr::bitstream::xc5vlx50:



Public Member Functions

- xc5vlx50 ()

Protected Types

- enum { xc5vlx50_num_rows = 6, xc5vlx50_num_cols = 39 }

Static Protected Attributes

- static const tile_types xc5vlx50_row_layout [ ]
- static const string xc5vlx50_name = "XC5VLX50"
- static const int xc5vlx50_id = 0x2896093

8.36.1 Detailed Description

Definition at line 22 of file v5_devices.h.

8.36.2 Member Enumeration Documentation

8.36.2.1 anonymous enum [protected]

Enumerator:

xc5vlx50_num_rows

xc5vlx50_num_cols

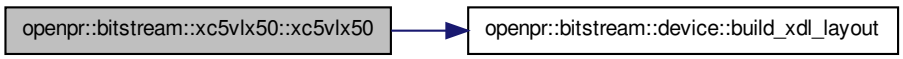
Definition at line 24 of file v5_devices.h.

8.36.3 Constructor & Destructor Documentation

8.36.3.1 openpr::bitstream::xc5vlx50::xc5vlx50 ( ) [inline]

Definition at line 29 of file v5_devices.h.

Here is the call graph for this function:



8.36.4 Member Data Documentation

8.36.4.1 const int openpr::bitstream::xc5vlx50::xc5vlx50_id = 0x2896093 [static, protected]

Definition at line 27 of file v5_devices.h.

8.36.4.2 const string openpr::bitstream::xc5vlx50::xc5vlx50_name = "XC5VLX50" [static, protected]

Definition at line 26 of file v5_devices.h.

8.36.4.3 const tile_types openpr::bitstream::xc5vlx50::xc5vlx50_row_layout [static, protected]

Definition at line 25 of file v5_devices.h.

The documentation for this class was generated from the following files:

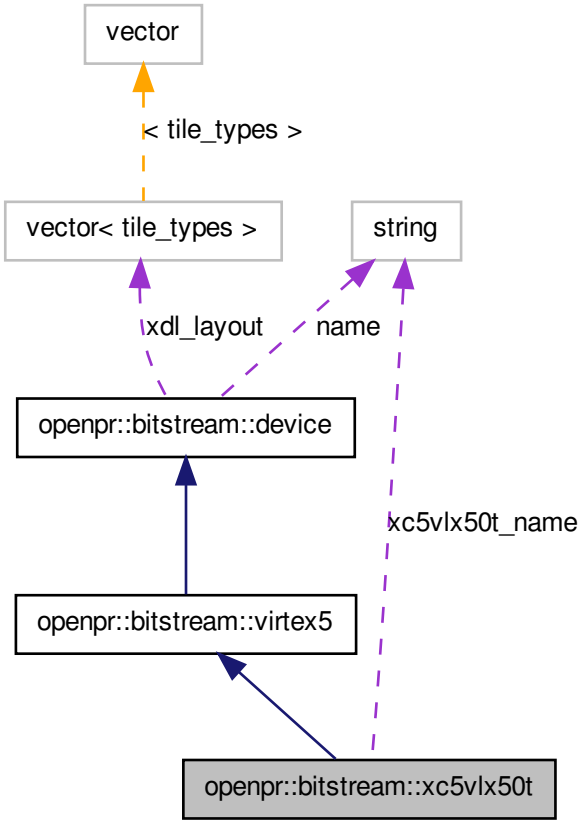
- openpr/bitstream/v5_devices.h
- openpr/bitstream/v5_devices.cpp

8.37 openpr::bitstream::xc5vlx50t Class Reference

`#include <v5_devices.h>`

Inherits openpr::bitstream::virtex5.

Collaboration diagram for openpr::bitstream::xc5vlx50t:



Public Member Functions

- xc5vlx50t ()

Protected Types

- enum { xc5vlx50t_num_rows = 6, xc5vlx50t_num_cols = 42 }

Static Protected Attributes

- static const tile_types xc5vlx50t_row_layout [ ]
- static const string xc5vlx50t_name = "XC5VLX50T"
- static const int xc5vlx50t_id = 0x02A96093

8.37.1 Detailed Description

Definition at line 35 of file v5_devices.h.

8.37.2 Member Enumeration Documentation

8.37.2.1 anonymous enum [protected]

Enumerator:

xc5vlx50t_num_rows

xc5vlx50t_num_cols

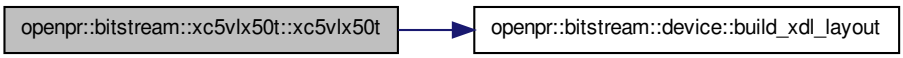
Definition at line 37 of file v5_devices.h.

8.37.3 Constructor & Destructor Documentation

8.37.3.1 openpr::bitstream::xc5vlx50t::xc5vlx50t ( ) [inline]

Definition at line 42 of file v5_devices.h.

Here is the call graph for this function:



8.37.4 Member Data Documentation

8.37.4.1 const int openpr::bitstream::xc5vlx50t::xc5vlx50t_id = 0x02A96093 [static, protected]

Definition at line 40 of file v5_devices.h.

8.37.4.2 const string openpr::bitstream::xc5vlx50t::xc5vlx50t_name = "XC5VLX50T" [static, protected]

Definition at line 39 of file v5_devices.h.

8.37.4.3 const tile_types openpr::bitstream::xc5vlx50t::xc5vlx50t_row_layout [static, protected]

Definition at line 38 of file v5_devices.h.

The documentation for this class was generated from the following files:

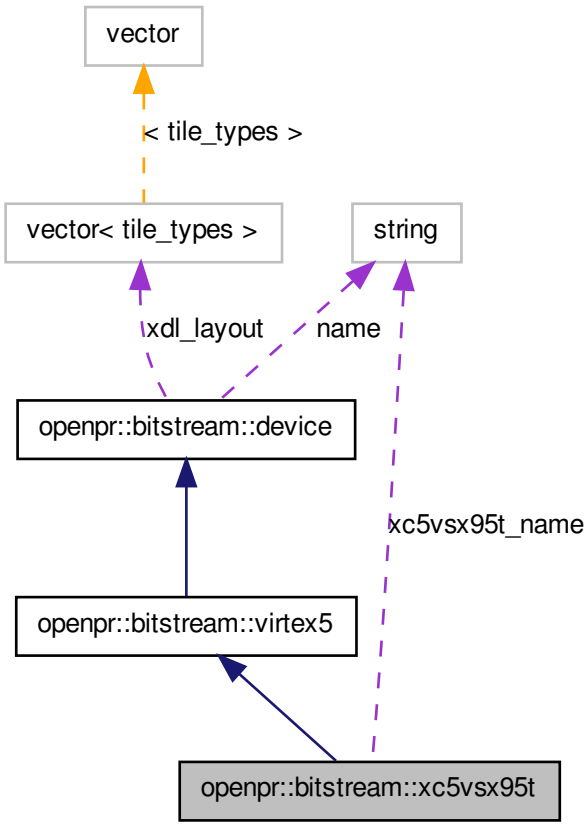
- openpr/bitstream/v5_devices.h
- openpr/bitstream/v5_devices.cpp

8.38 openpr::bitstream::xc5vsx95t Class Reference

`#include <v5_devices.h>`

Inherits openpr::bitstream::virtex5.

Collaboration diagram for openpr::bitstream::xc5vsx95t:



Public Member Functions

- xc5vsx95t ()

Protected Types

- enum { xc5vsx95t_num_rows = 8, xc5vsx95t_num_cols = 77 }

Static Protected Attributes

- static const tile_types xc5vsx95t_row_layout [ ]
- static const string xc5vsx95t_name = "xc5vsx95t"
- static const int xc5vsx95t_id = 0x02ece093

8.38.1 Detailed Description

Definition at line 48 of file v5_devices.h.

8.38.2 Member Enumeration Documentation

8.38.2.1 anonymous enum [protected]

Enumerator:

xc5vsx95t_num_rows

xc5vsx95t_num_cols

Definition at line 50 of file v5_devices.h.

8.38.3 Constructor & Destructor Documentation

8.38.3.1 openpr::bitstream::xc5vsx95t::xc5vsx95t ( ) [inline]

Definition at line 55 of file v5_devices.h.

Here is the call graph for this function:

8.38.4 Member Data Documentation

8.38.4.1 const int openpr::bitstream::xc5vsx95t::xc5vsx95t_id = 0x02ece093 [static, protected]

Definition at line 53 of file v5_devices.h.

8.38.4.2 const string openpr::bitstream::xc5vsx95t::xc5vsx95t_name = "xc5vsx95t" [static, protected]

Definition at line 52 of file v5_devices.h.

8.38.4.3 const tile_types openpr::bitstream::xc5vsx95t::xc5vsx95t_row_layout [static, protected]

Definition at line 51 of file v5_devices.h.

The documentation for this class was generated from the following files:

- openpr/bitstream/v5_devices.h
- openpr/bitstream/v5_devices.cpp

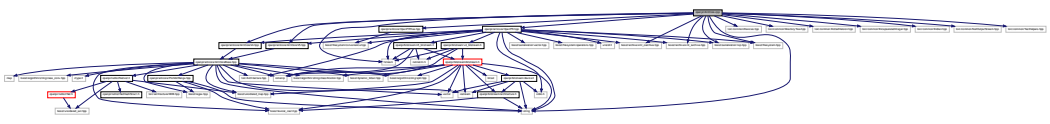
Chapter 9

File Documentation

9.1 openpr/AntiCore.cpp File Reference

```
#include "openpr/anticore/AntiCoreV5.hpp"
#include "openpr/anticore/AntiCoreV4.hpp"
#include "openpr/anticore/OpenPRTree.hpp"
#include "openpr/anticore/OpenPR.hpp"
#include "torc/common/Devices.hpp"
#include "torc/common/DirectoryTree.hpp"
#include "torc/common/DottedVersion.hpp"
#include "torc/common/EncapsulatedInteger.hpp"
#include "torc/common/Endian.hpp"
#include "torc/common/NullOutputStream.hpp"
#include "torc/common/TestHelpers.hpp"
#include <string>
#include <fstream>
#include <boost/archive/xml_oarchive.hpp>
#include <boost/archive/xml_iarchive.hpp>
#include <boost/serialization/nvp.hpp>
#include <boost/filesystem.hpp>
```

Include dependency graph for AntiCore.cpp:



Functions

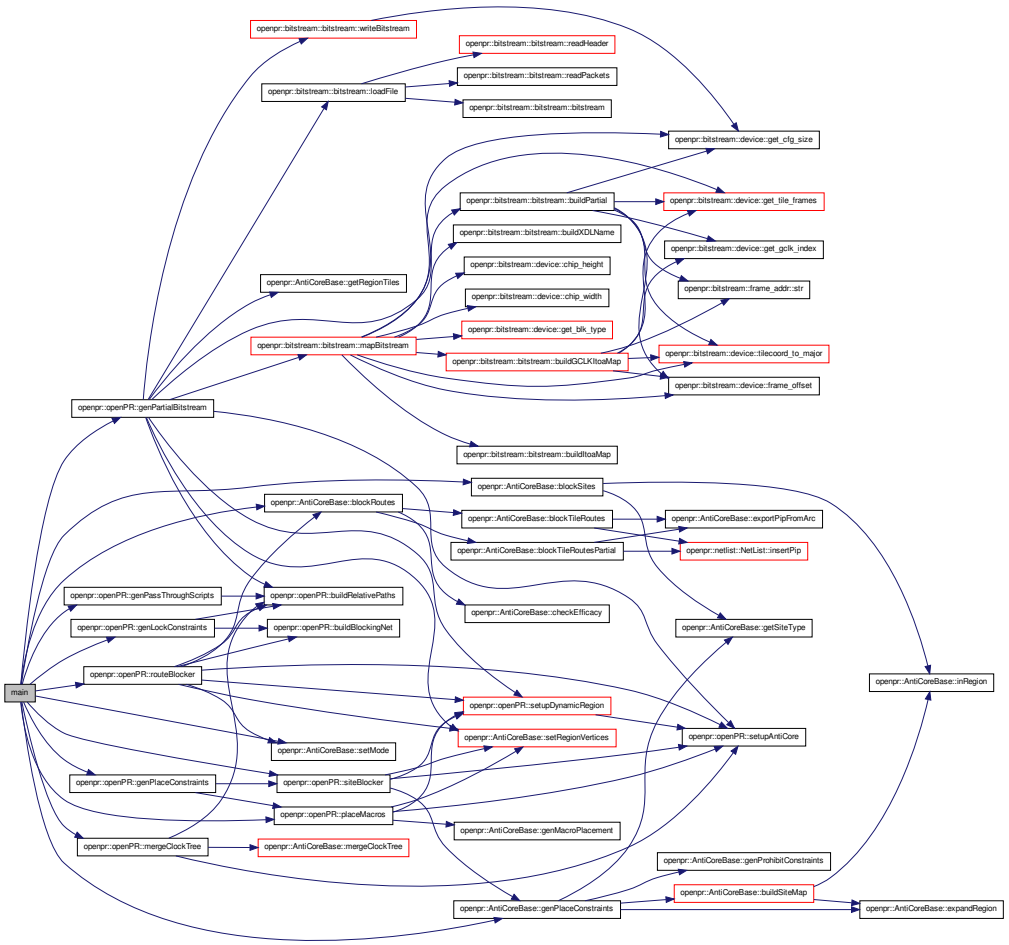
- int main (int argc, char ∗argv[ ])

9.1.1 Function Documentation

9.1.1.1 int main (int *argc*, char ∗ *argv[ ]*)

Definition at line 32 of file AntiCore.cpp.

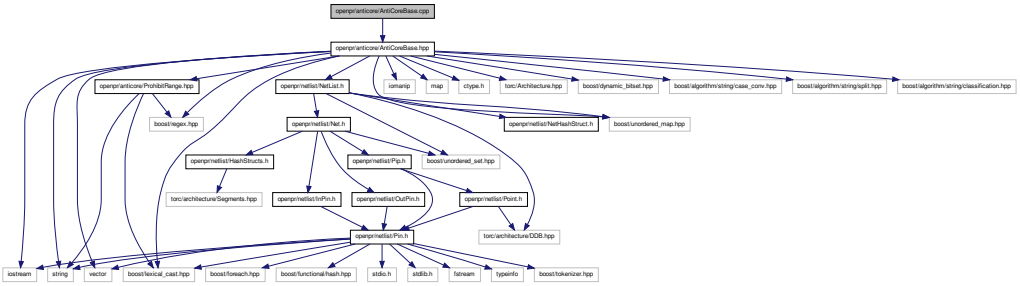
Here is the call graph for this function:



9.2 openpr/anticore/AntiCoreBase.cpp File Reference

```
#include "openpr/anticore/AntiCoreBase.hpp"
```

Include dependency graph for AntiCoreBase.cpp:



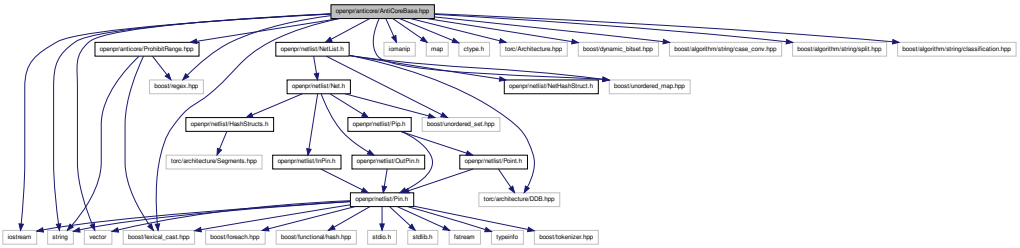
Namespaces

- namespace openpr

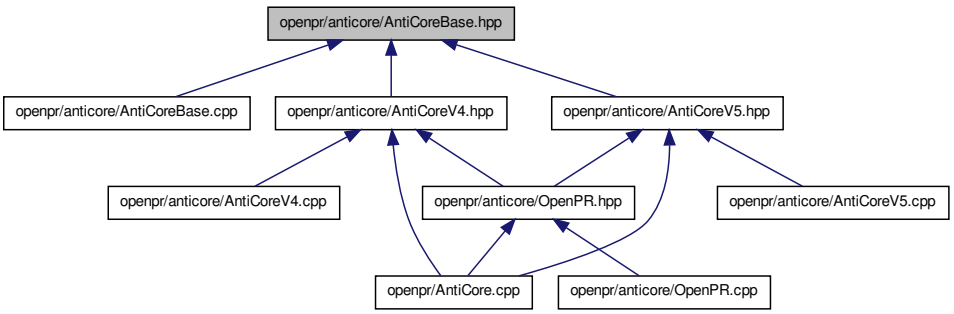
9.3 openpr/anticore/AntiCoreBase.hpp File Reference

```
#include <iostream>
#include <iomanip>
#include <vector>
#include <map>
#include <string>
#include <ctype.h>
#include "torc/Architecture.hpp"
#include "openpr/anticore/ProhibitRange.hpp"
#include "openpr/netlist/NetList.h"
#include <boost/dynamic_bitset.hpp>
#include <boost/unordered_map.hpp>
#include <boost/regex.hpp>
#include <boost/lexical_cast.hpp>
#include <boost/algorithm/string/case_conv.hpp>
#include <boost/algorithm/string/split.hpp>
#include <boost/algorithm/string/classification.hpp>
```

Include dependency graph for AntiCoreBase.hpp:



This graph shows which files directly or indirectly include this file:



Classes

- class openpr::AntiCoreBase

Namespaces

- namespace openpr

Typedefs

- typedef std::string openpr::string
- typedef boost::unordered_map< string, string > openpr::bmNameToTypeMap

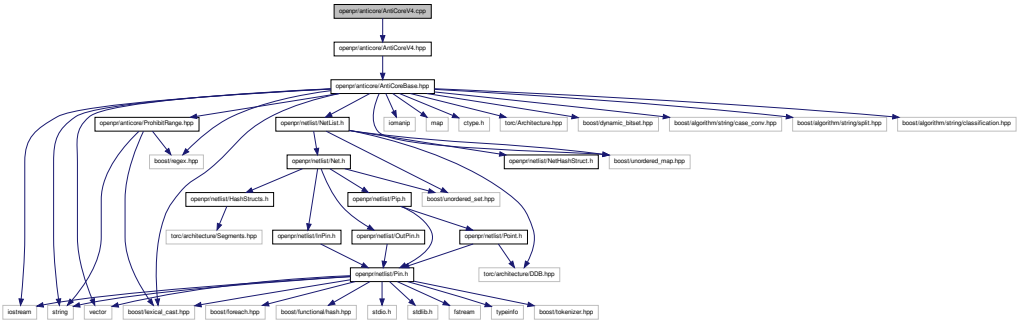
Enumerations

- enum openpr::eMode { openpr::eStatic, openpr::ePartial }

9.4 openpr/anticore/AntiCoreV4.cpp File Reference

```
#include "openpr/anticore/AntiCoreV4.hpp"
```

Include dependency graph for AntiCoreV4.cpp:



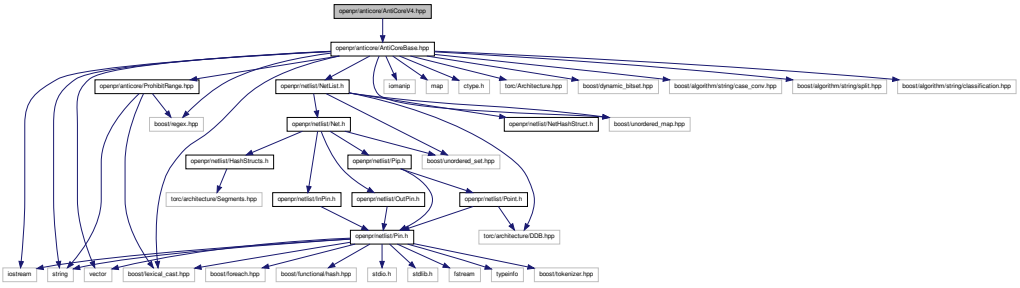
Namespaces

- namespace openpr

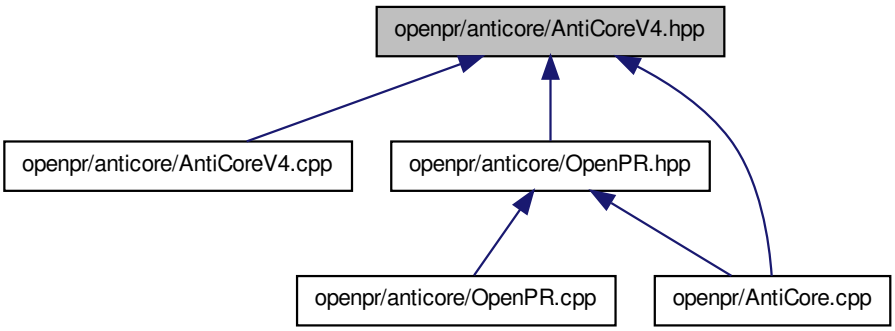
9.5 openpr/anticore/AntiCoreV4.hpp File Reference

```
#include "openpr/anticore/AntiCoreBase.hpp"
```

Include dependency graph for AntiCoreV4.hpp:



This graph shows which files directly or indirectly include this file:



Classes

- class openpr::AntiCoreV4

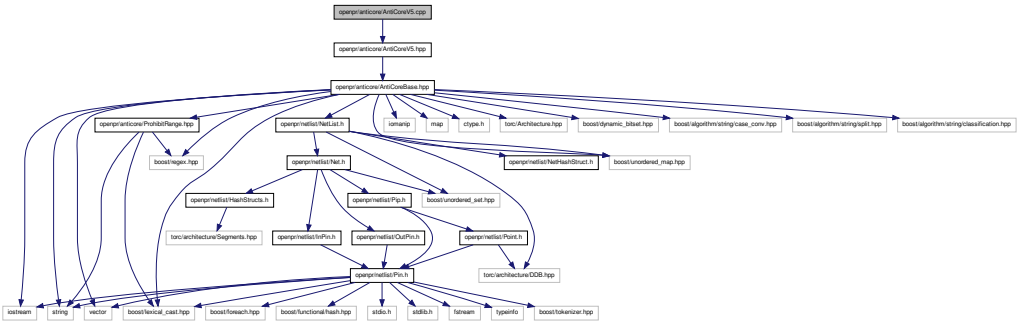
Namespaces

- namespace openpr

9.6 openpr/anticore/AntiCoreV5.cpp File Reference

```
#include "openpr/anticore/AntiCoreV5.hpp"
```

Include dependency graph for AntiCoreV5.cpp:



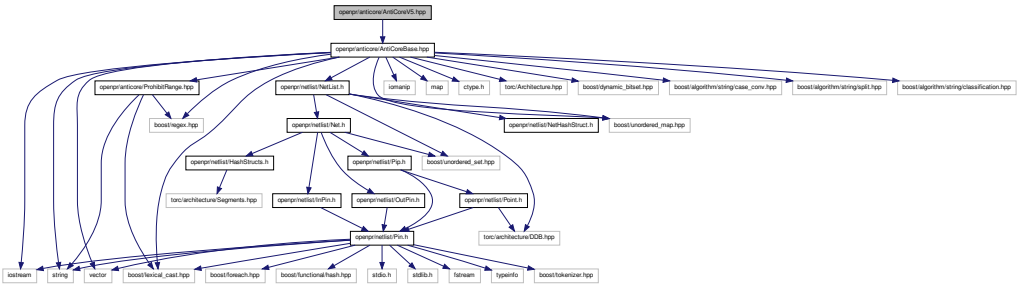
Namespaces

- namespace openpr

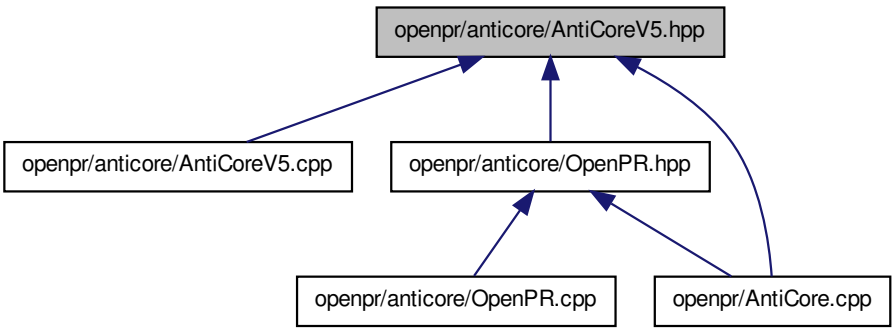
9.7 openpr/anticore/AntiCoreV5.hpp File Reference

```
#include "openpr/anticore/AntiCoreBase.hpp"
```

Include dependency graph for AntiCoreV5.hpp:



This graph shows which files directly or indirectly include this file:



Classes

- class openpr::AntiCoreV5

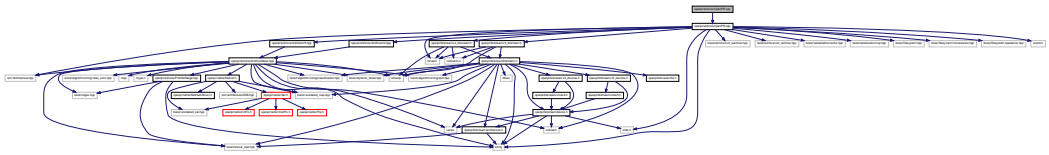
Namespaces

- namespace openpr

9.8 openpr/anticore/OpenPR.cpp File Reference

```
#include "openpr/anticore/OpenPR.hpp"
```

Include dependency graph for OpenPR.cpp:



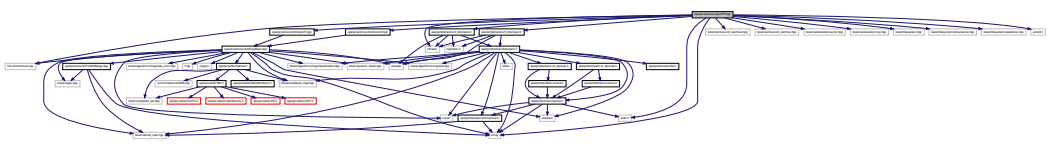
Namespaces

- namespace openpr

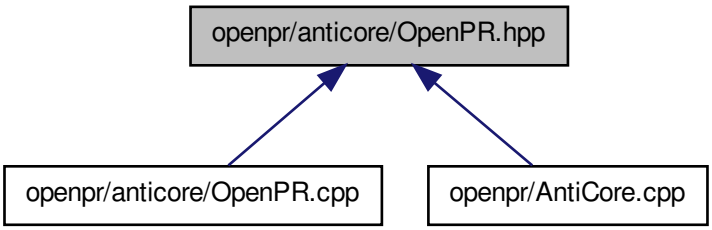
9.9 openpr/anticore/OpenPR.hpp File Reference

```
#include "openpr/anticore/AntiCoreV4.hpp"
#include "openpr/anticore/AntiCoreV5.hpp"
#include "torc/Architecture.hpp"
#include "openpr/bitstream/v5_bitstream.h"
#include "openpr/bitstream/v4_bitstream.h"
#include <fstream>
#include <string>
#include <boost/archive/xml_oarchive.hpp>
#include <boost/archive/xml_iarchive.hpp>
#include <boost/serialization/vector.hpp>
#include <boost/serialization/nvp.hpp>
#include <boost/filesystem.hpp>
#include <boost/filesystem/convenience.hpp>
#include <boost/filesystem/operations.hpp>
#include <stdio.h>
#include <unistd.h>
```

Include dependency graph for OpenPR.hpp:



This graph shows which files directly or indirectly include this file:



Classes

- class openpr::openPR

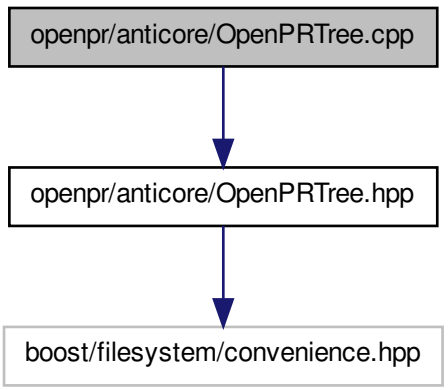
Namespaces

- namespace openpr

9.10 openpr/anticore/OpenPRTree.cpp File Reference

```
#include "openpr/anticore/OpenPRTree.hpp"
```

Include dependency graph for OpenPRTree.cpp:



Namespaces

- namespace openpr

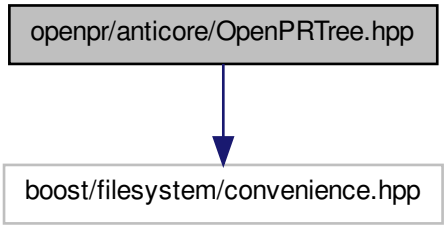
Functions

- const std::string openpr::cEdaNameConst ("eda")
- const std::string openpr::cArchitectureNameConst ("architecture")
- const std::string openpr::cXilinxNameConst ("xilinx")

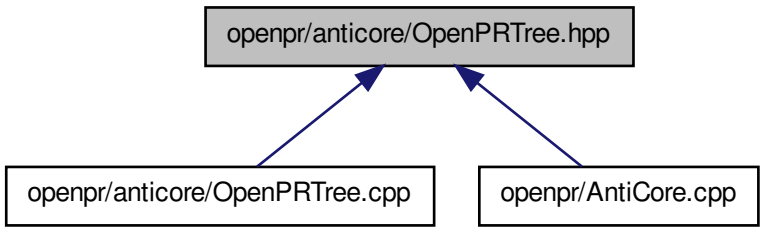
9.11 openpr/anticore/OpenPRTree.hpp File Reference

```
#include <boost/filesystem/convenience.hpp>
```

Include dependency graph for OpenPRTree.hpp:



This graph shows which files directly or indirectly include this file:



Classes

- class openpr::OpenPRTree

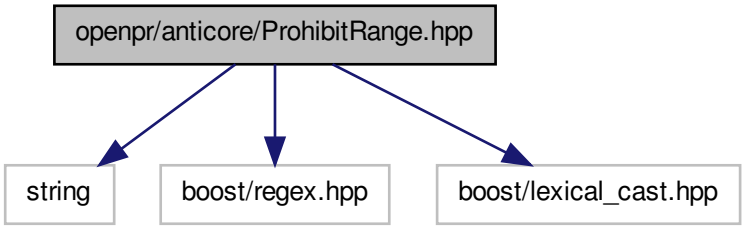
Namespaces

- namespace openpr

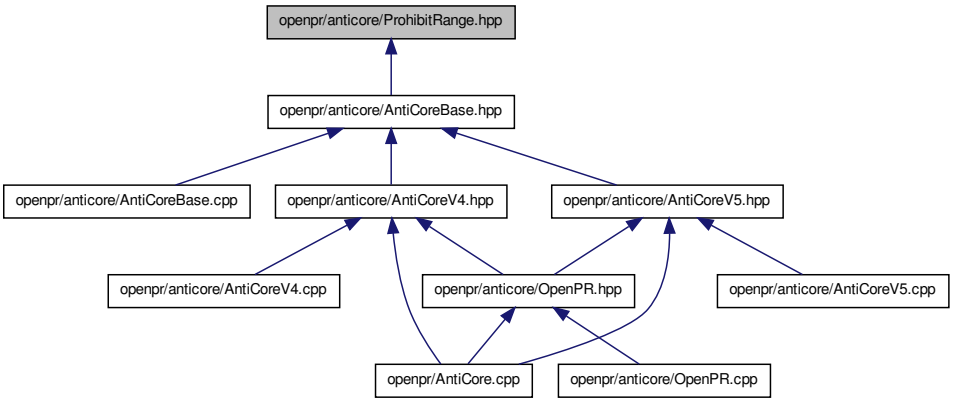
9.12 openpr/anticore/ProhibitRange.hpp File Reference

```
#include <string>
#include <boost/regex.hpp>
#include <boost/lexical_cast.hpp>
```

Include dependency graph for ProhibitRange.hpp:



This graph shows which files directly or indirectly include this file:



Classes

- struct openpr::prohibitRange

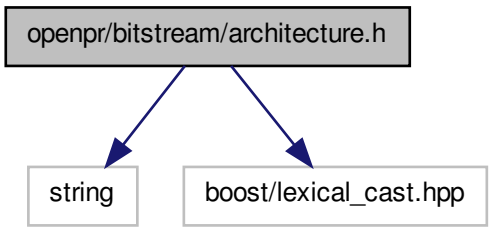
Namespaces

- namespace openpr

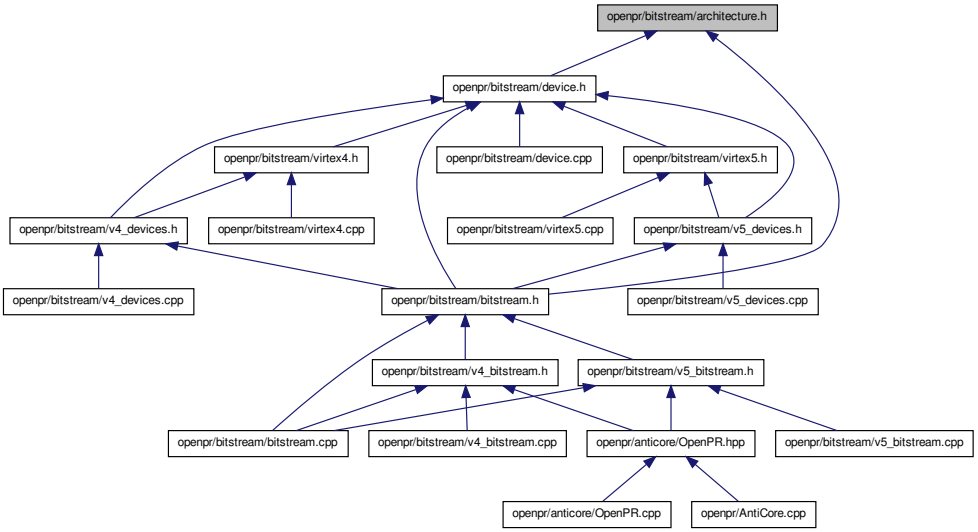
9.13 openpr/bitstream/architecture.h File Reference

```
#include <string>
#include <boost/lexical_cast.hpp>
```

Include dependency graph for architecture.h:



This graph shows which files directly or indirectly include this file:



Classes

- struct openpr::bitstream::frame_addr
- class openpr::bitstream::architecture

Namespaces

- namespace openpr
- namespace openpr::bitstream

Enumerations

- enum openpr::bitstream::tile_types {

  openpr::bitstream::IOB, openpr::bitstream::GCLK, openpr::bitstream::CLB, openpr::bitstream::DSP48,

  openpr::bitstream::BRAM, openpr::bitstream::BRAM_INT, openpr::bitstream::TRANSCV, openpr::bitstream::PAD,

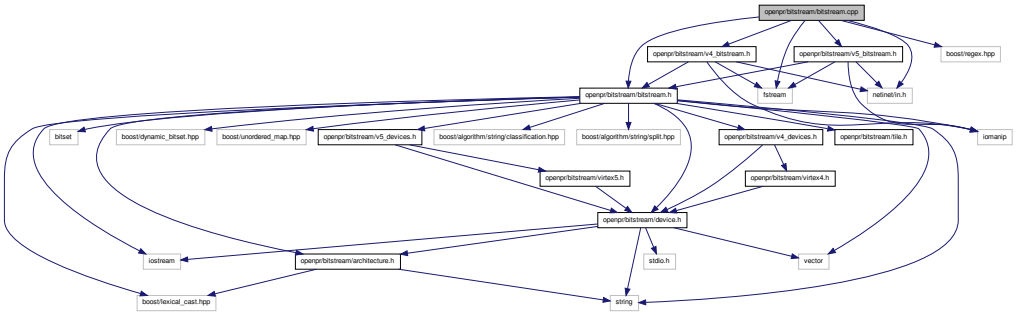
  openpr::bitstream::NUM_TILE_TYPES, openpr::bitstream::MULTIPLE, openpr::bitstream::INVALID }

9.14 openpr/bitstream/bitstream.cpp File Reference

```
#include "openpr/bitstream/bitstream.h"
#include "openpr/bitstream/v4_bitstream.h"
```

```
#include "openpr/bitstream/v5_bitstream.h"
#include <fstream>
#include <netinet/in.h>
#include <boost/regex.hpp>
```

Include dependency graph for bitstream.cpp:



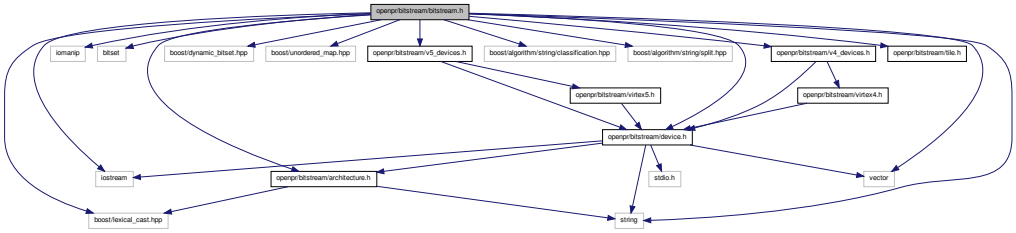
Namespaces

- namespace openpr
- namespace openpr::bitstream

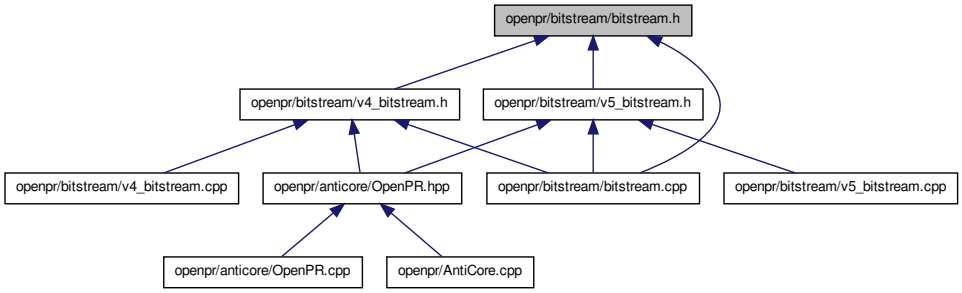
9.15 openpr/bitstream/bitstream.h File Reference

```
#include <string>
#include <iostream>
#include <iomanip>
#include <bitset>
#include <vector>
#include <boost/dynamic_bitset.hpp>
#include <boost/unordered_map.hpp>
#include <boost/lexical_cast.hpp>
#include <boost/algorithm/string/classification.hpp>
#include <boost/algorithm/string/split.hpp>
#include "openpr/bitstream/architecture.h"
#include "openpr/bitstream/device.h"
#include "openpr/bitstream/tile.h"
#include "openpr/bitstream/v4_devices.h"
#include "openpr/bitstream/v5_devices.h"
```

Include dependency graph for bitstream.h:



This graph shows which files directly or indirectly include this file:



Classes

- class openpr::bitstream::bitstream

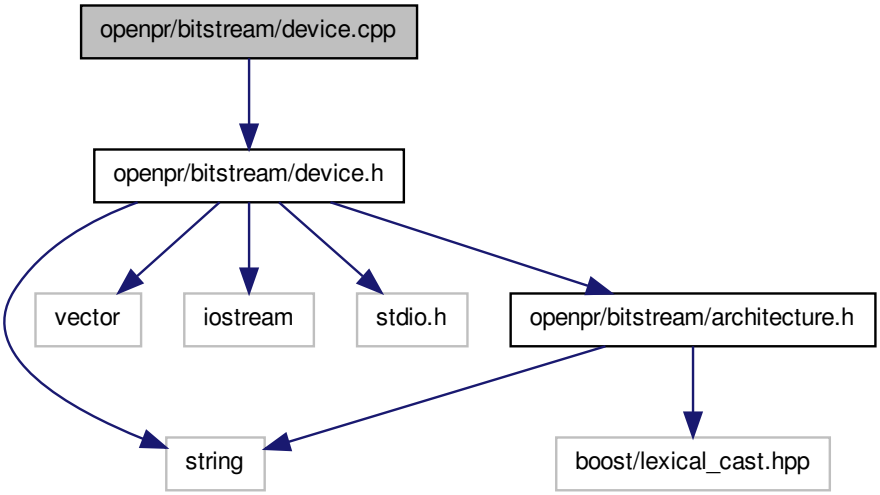
Namespaces

- namespace openpr
- namespace openpr::bitstream

9.16 openpr/bitstream/device.cpp File Reference

```
#include "openpr/bitstream/device.h"
```

Include dependency graph for device.cpp:



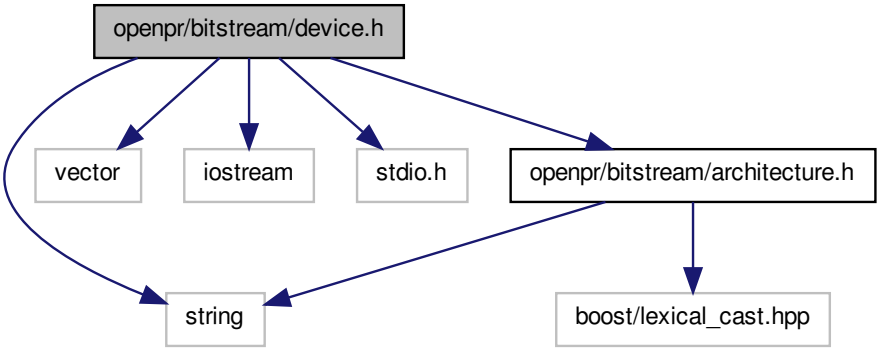
Namespaces

- namespace openpr
- namespace openpr::bitstream

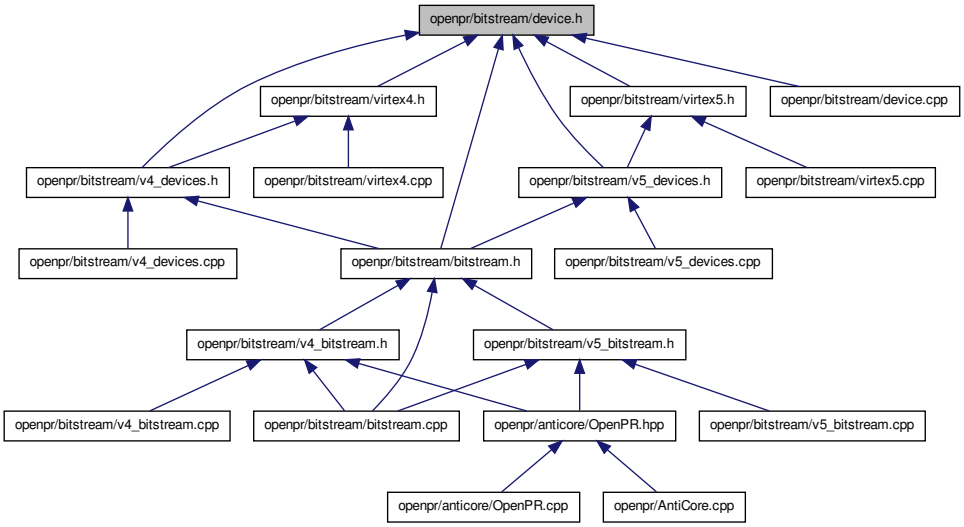
9.17 openpr/bitstream/device.h File Reference

```
#include <string>
#include <vector>
#include <iostream>
#include <stdio.h>
#include "openpr/bitstream/architecture.h"
```

Include dependency graph for device.h:



This graph shows which files directly or indirectly include this file:



Classes

- class openpr::bitstream::device

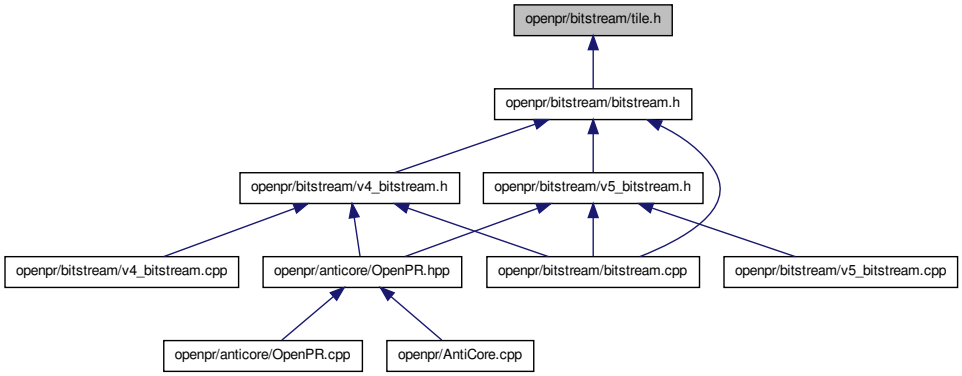
Namespaces

- namespace openpr

- namespace openpr::bitstream

9.18 openpr/bitstream/tile.h File Reference

This graph shows which files directly or indirectly include this file:



Classes

- struct openpr::bitstream::tile_coord
- struct openpr::bitstream::tile_data

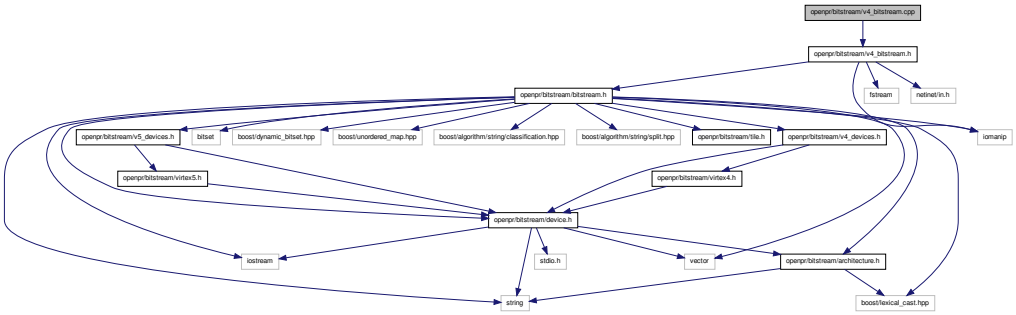
Namespaces

- namespace openpr
- namespace openpr::bitstream

9.19 openpr/bitstream/v4_bitstream.cpp File Reference

```
#include "openpr/bitstream/v4_bitstream.h"
```

Include dependency graph for v4_bitstream.cpp:



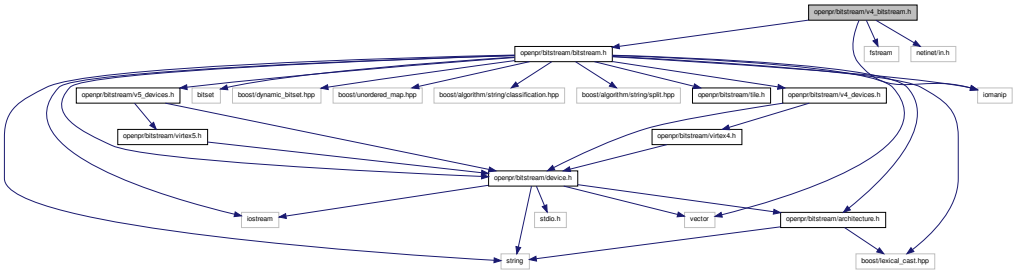
Namespaces

- namespace openpr
- namespace openpr::bitstream

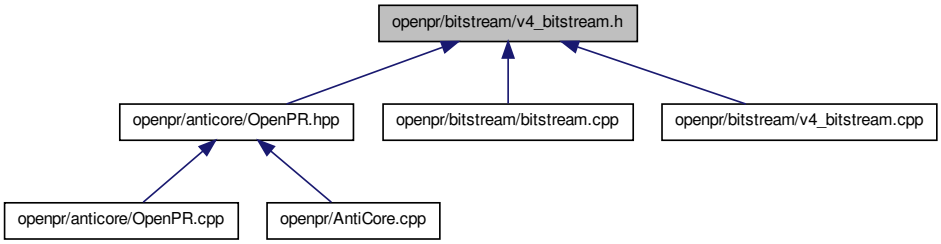
9.20 openpr/bitstream/v4_bitstream.h File Reference

```
#include "openpr/bitstream/bitstream.h"
#include <fstream>
#include <iomanip>
#include <netinet/in.h>
```

Include dependency graph for v4_bitstream.h:



This graph shows which files directly or indirectly include this file:



Classes

- class openpr::bitstream::v4_bitstream

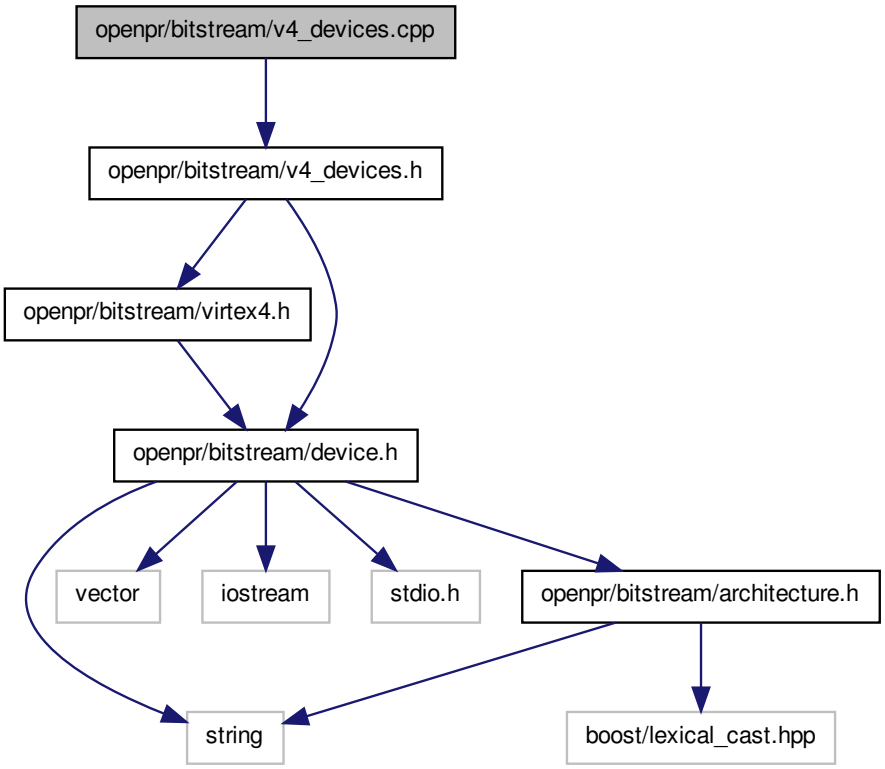
Namespaces

- namespace openpr
- namespace openpr::bitstream

9.21 openpr/bitstream/v4_devices.cpp File Reference

```
#include "openpr/bitstream/v4_devices.h"
```

Include dependency graph for v4_devices.cpp:



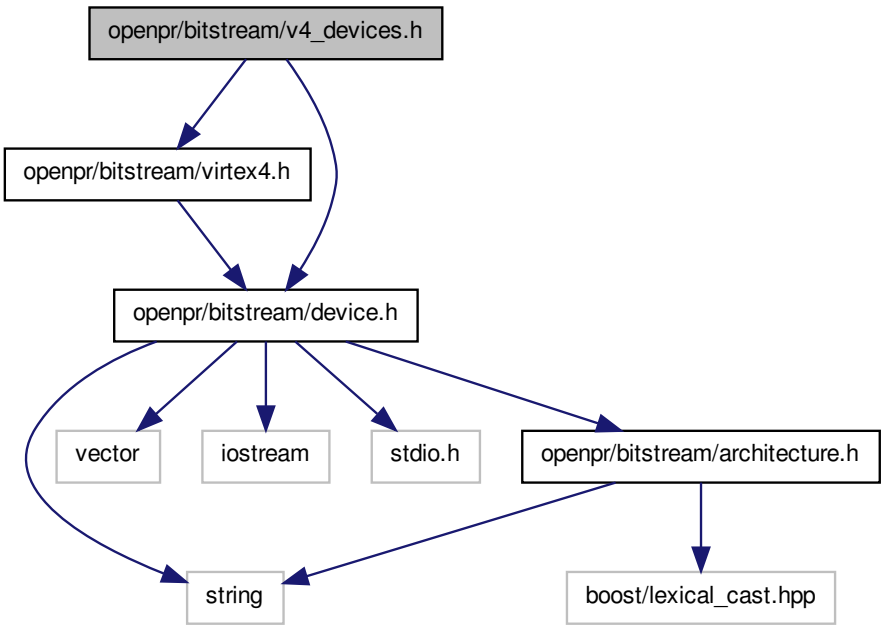
Namespaces

- namespace openpr
- namespace openpr::bitstream

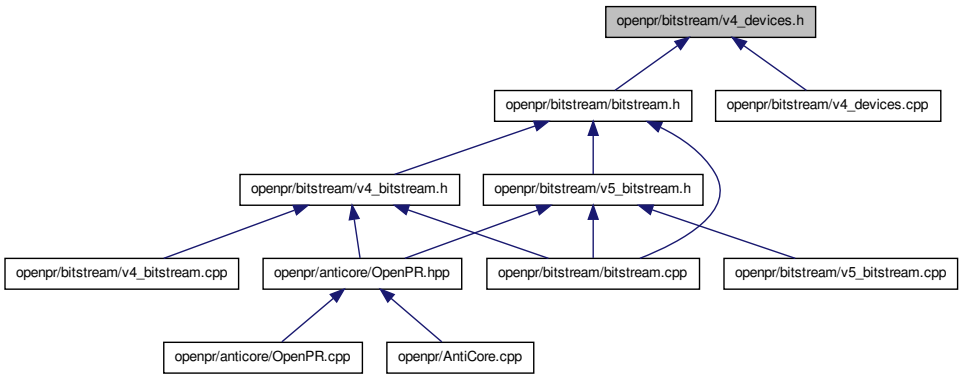
9.22 openpr/bitstream/v4_devices.h File Reference

```
#include "openpr/bitstream/virtex4.h"
#include "openpr/bitstream/device.h"
```

Include dependency graph for v4_devices.h:



This graph shows which files directly or indirectly include this file:



Classes

- class openpr::bitstream::xc4vlx15
- class openpr::bitstream::xc4vlx60

- class openpr::bitstream::xc4vfx60

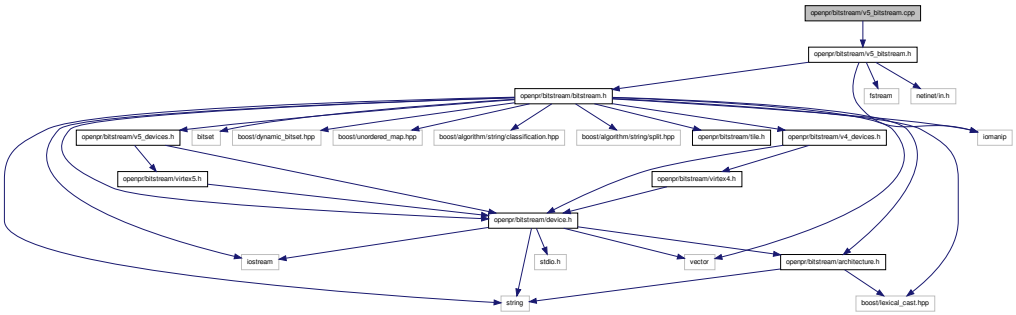
Namespaces

- namespace openpr
- namespace openpr::bitstream

9.23 openpr/bitstream/v5_bitstream.cpp File Reference

```
#include "openpr/bitstream/v5_bitstream.h"
```

Include dependency graph for v5_bitstream.cpp:



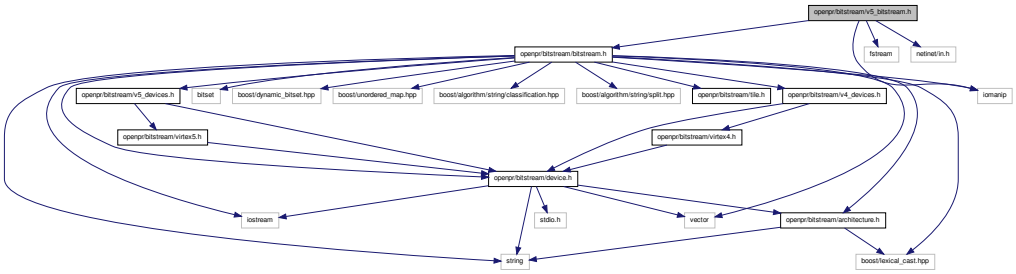
Namespaces

- namespace openpr
- namespace openpr::bitstream

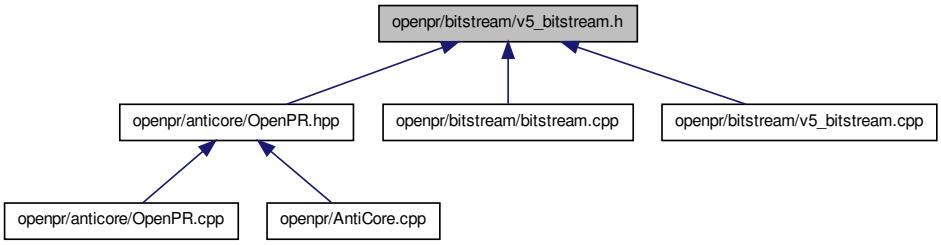
9.24 openpr/bitstream/v5_bitstream.h File Reference

```
#include "openpr/bitstream/bitstream.h"
#include <fstream>
#include <iomanip>
#include <netinet/in.h>
```

Include dependency graph for v5_bitstream.h:



This graph shows which files directly or indirectly include this file:



Classes

- class openpr::bitstream::v5_bitstream

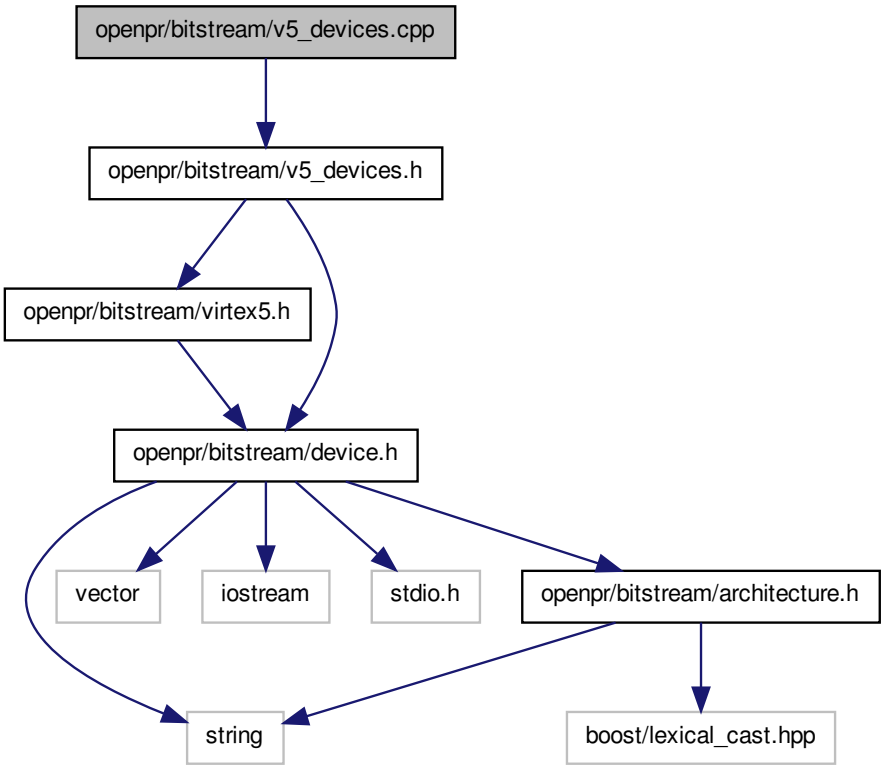
Namespaces

- namespace openpr
- namespace openpr::bitstream

9.25 openpr/bitstream/v5_devices.cpp File Reference

```
#include "openpr/bitstream/v5_devices.h"
```

Include dependency graph for v5_devices.cpp:



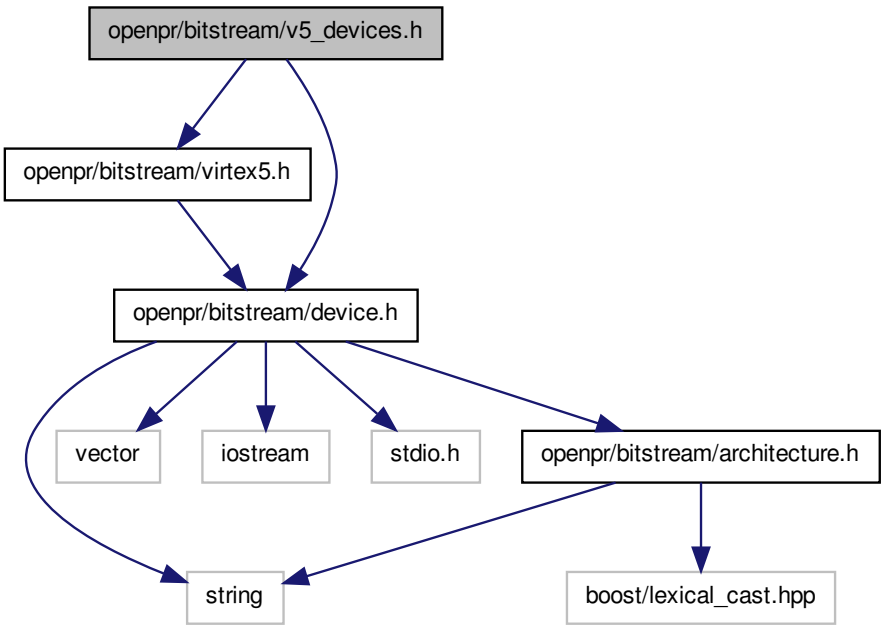
Namespaces

- namespace openpr
- namespace openpr::bitstream

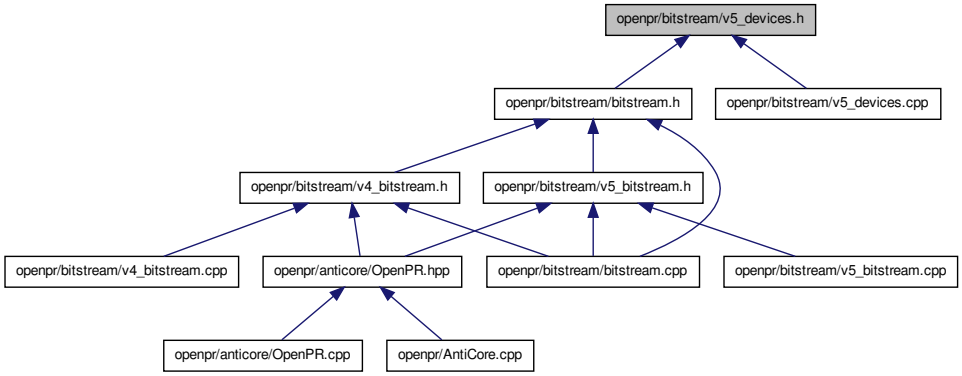
9.26 openpr/bitstream/v5_devices.h File Reference

```
#include "openpr/bitstream/virtex5.h"
#include "openpr/bitstream/device.h"
```

Include dependency graph for v5_devices.h:



This graph shows which files directly or indirectly include this file:



Classes

- class openpr::bitstream::xc5vlx50
- class openpr::bitstream::xc5vlx50t

- class openpr::bitstream::xc5vsx95t
- class openpr::bitstream::xc5vlx110t

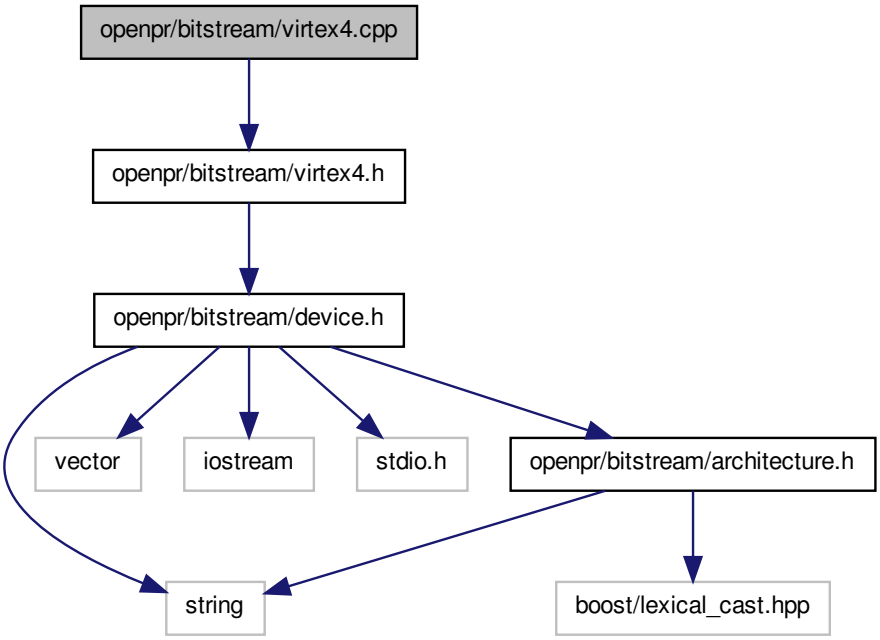
Namespaces

- namespace openpr
- namespace openpr::bitstream

9.27 openpr/bitstream/virtex4.cpp File Reference

```
#include "openpr/bitstream/virtex4.h"
```

Include dependency graph for virtex4.cpp:



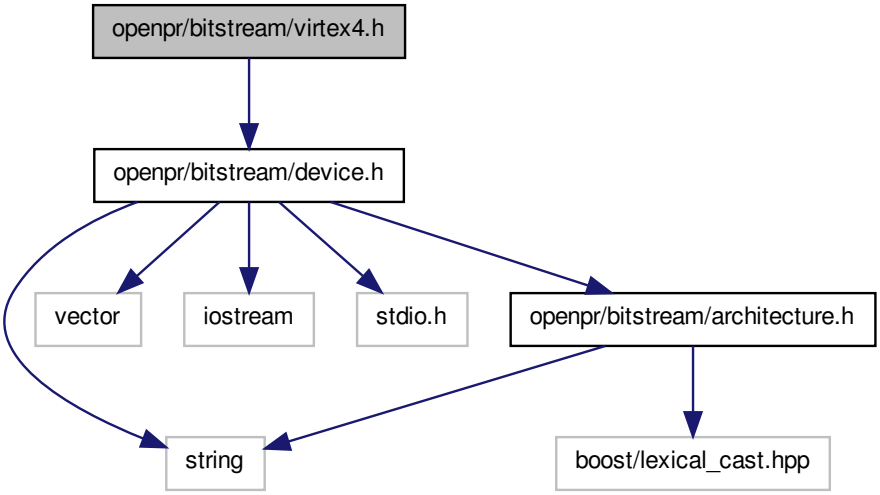
Namespaces

- namespace openpr
- namespace openpr::bitstream

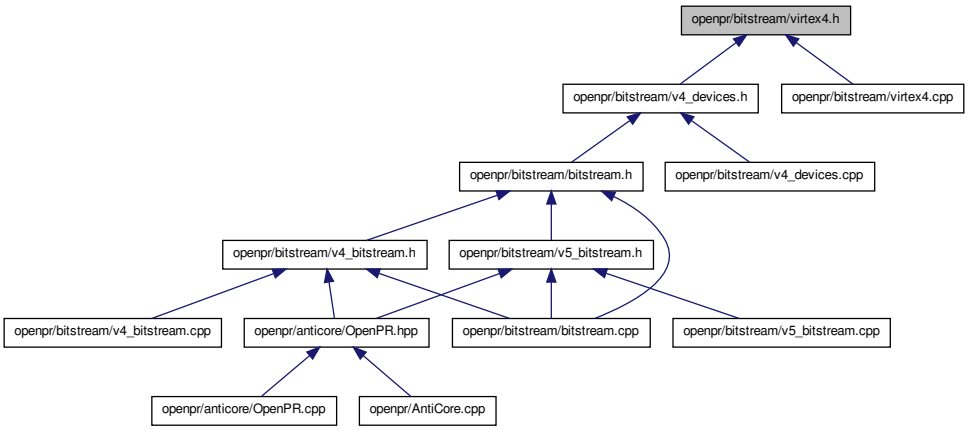
9.28 openpr/bitstream/virtex4.h File Reference

```
#include "openpr/bitstream/device.h"
```

Include dependency graph for virtex4.h:



This graph shows which files directly or indirectly include this file:



Classes

- class openpr::bitstream::virtex4

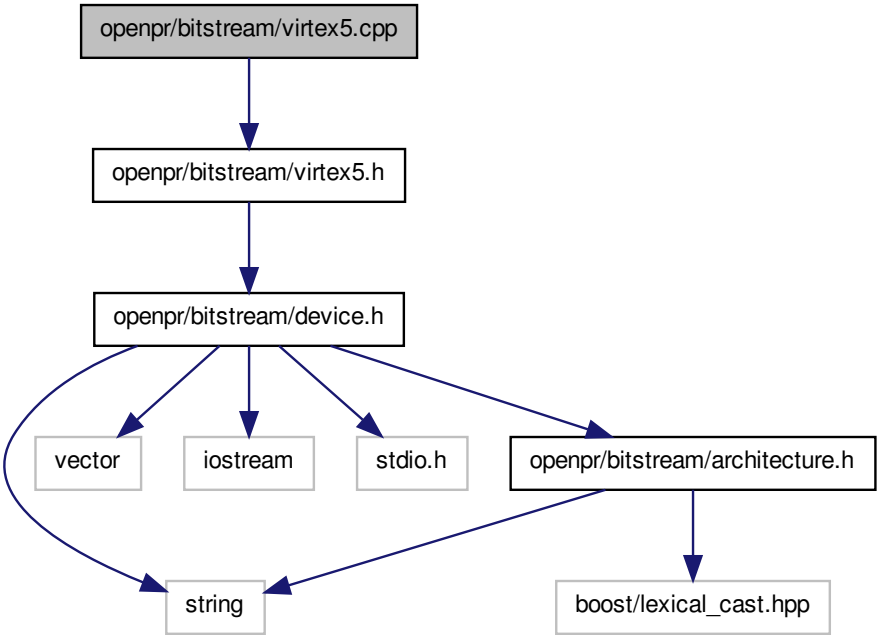
Namespaces

- namespace openpr
- namespace openpr::bitstream

9.29 openpr/bitstream/virtex5.cpp File Reference

```
#include "openpr/bitstream/virtex5.h"
```

Include dependency graph for virtex5.cpp:



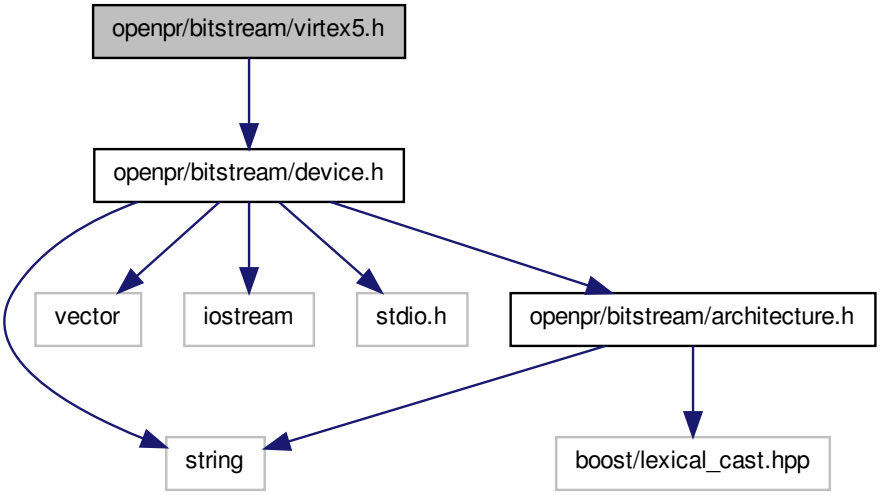
Namespaces

- namespace openpr
- namespace openpr::bitstream

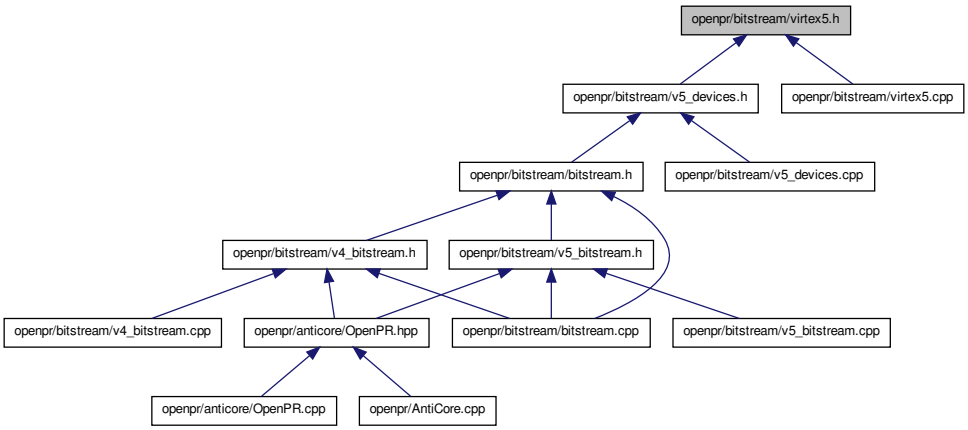
9.30 openpr/bitstream/virtex5.h File Reference

```
#include "openpr/bitstream/device.h"
```

Include dependency graph for virtex5.h:



This graph shows which files directly or indirectly include this file:



Classes

- class openpr::bitstream::virtex5

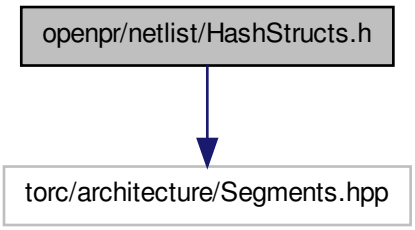
Namespaces

- namespace openpr
- namespace openpr::bitstream

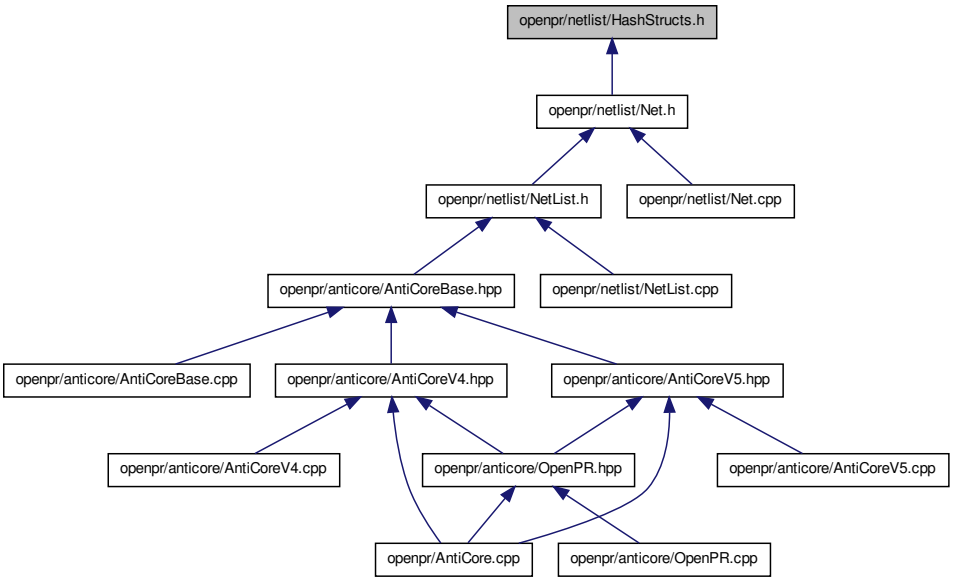
9.31 openpr/netlist/HashStructs.h File Reference

```
#include "torc/architecture/Segments.hpp"
```

Include dependency graph for HashStructs.h:



This graph shows which files directly or indirectly include this file:



Classes

- struct openpr::netlist::hash_pip
- struct openpr::netlist::eq_pip
- struct openpr::netlist::hash_point
- struct openpr::netlist::eq_point
- struct openpr::netlist::hash_segment
- struct openpr::netlist::eq_segment

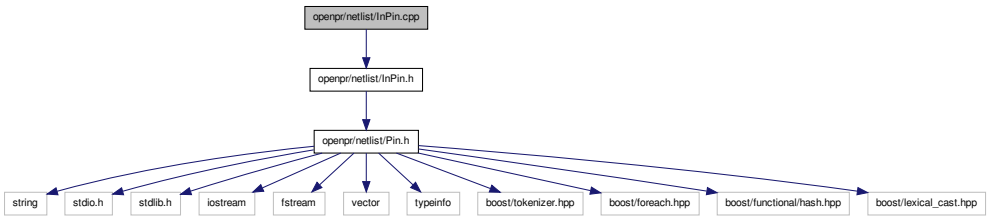
Namespaces

- namespace openpr
- namespace openpr::netlist

9.32 openpr/netlist/InPin.cpp File Reference

```
#include "openpr/netlist/InPin.h"
```

Include dependency graph for InPin.cpp:



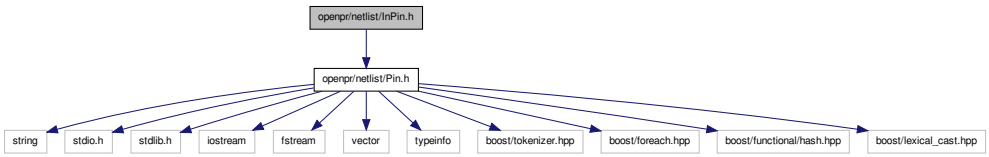
Namespaces

- namespace openpr
- namespace openpr::netlist

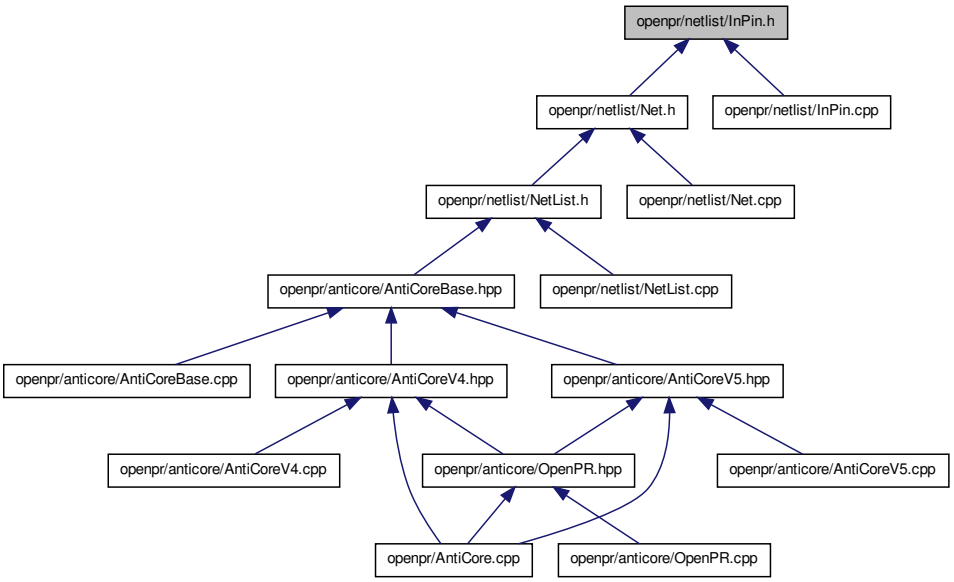
9.33 openpr/netlist/InPin.h File Reference

```
#include "openpr/netlist/Pin.h"
```

Include dependency graph for InPin.h:



This graph shows which files directly or indirectly include this file:



Classes

- class openpr::netlist::InPin

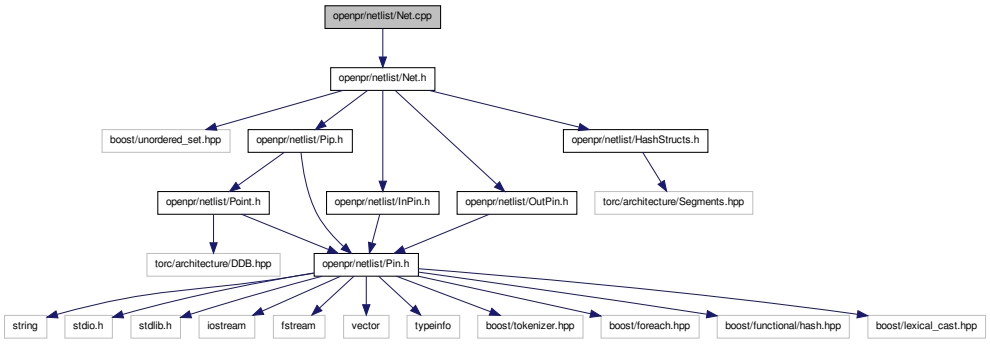
Namespaces

- namespace openpr
- namespace openpr::netlist

9.34 openpr/netlist/Net.cpp File Reference

```
#include "openpr/netlist/Net.h"
```

Include dependency graph for Net.cpp:



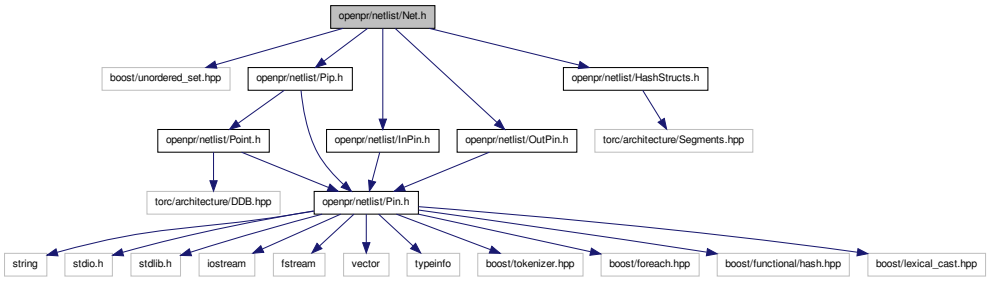
Namespaces

- namespace openpr
- namespace openpr::netlist

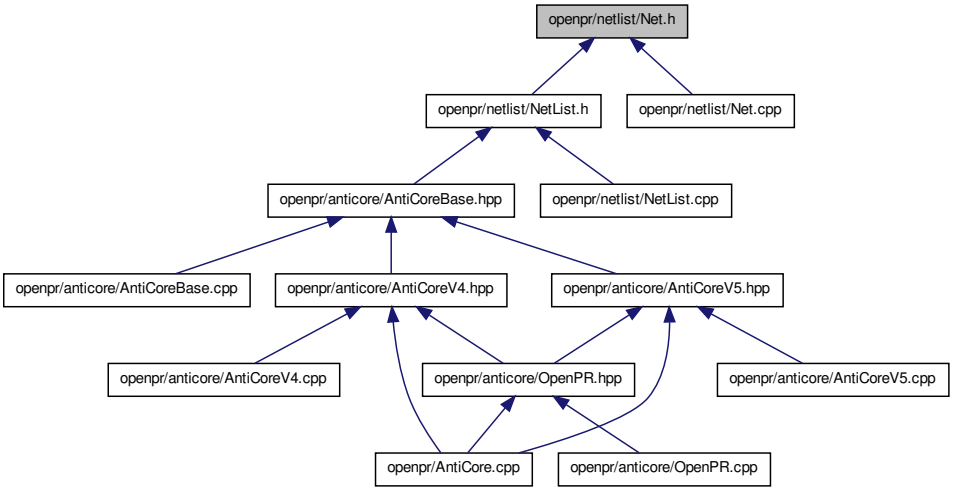
9.35 openpr/netlist/Net.h File Reference

```
#include <boost/unordered_set.hpp>
#include "openpr/netlist/Pip.h"
#include "openpr/netlist/InPin.h"
#include "openpr/netlist/OutPin.h"
#include "openpr/netlist/HashStructs.h"
```

Include dependency graph for Net.h:



This graph shows which files directly or indirectly include this file:



Classes

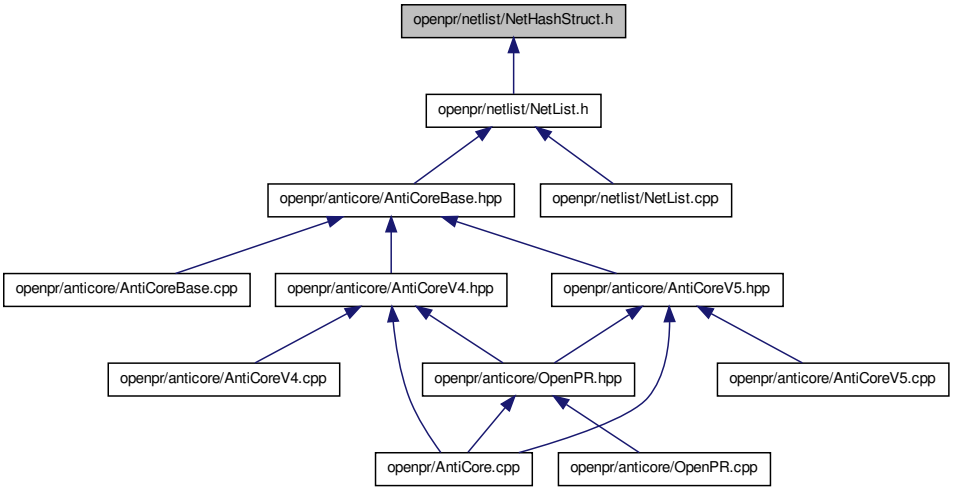
- class openpr::netlist::Net

Namespaces

- namespace openpr
- namespace openpr::netlist

9.36 openpr/netlist/NetHashStruct.h File Reference

This graph shows which files directly or indirectly include this file:



Classes

- struct openpr::netlist::hash_net
- struct openpr::netlist::eq_net

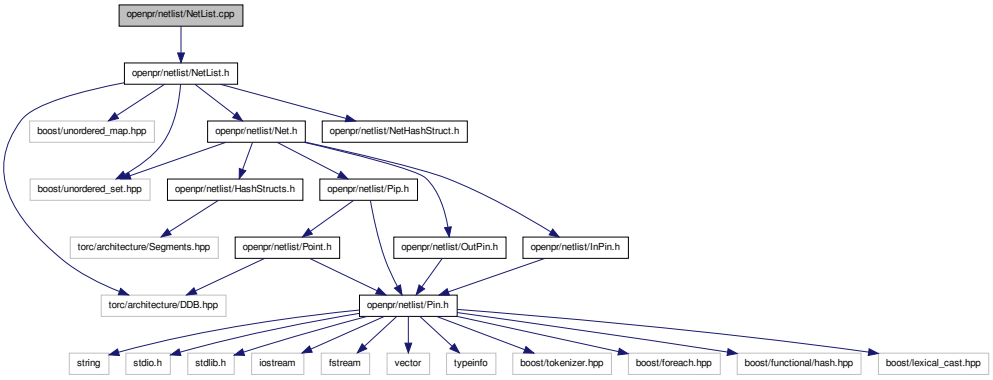
Namespaces

- namespace openpr
- namespace openpr::netlist

9.37 openpr/netlist/NetList.cpp File Reference

```
#include "openpr/netlist/NetList.h"
```

Include dependency graph for NetList.cpp:



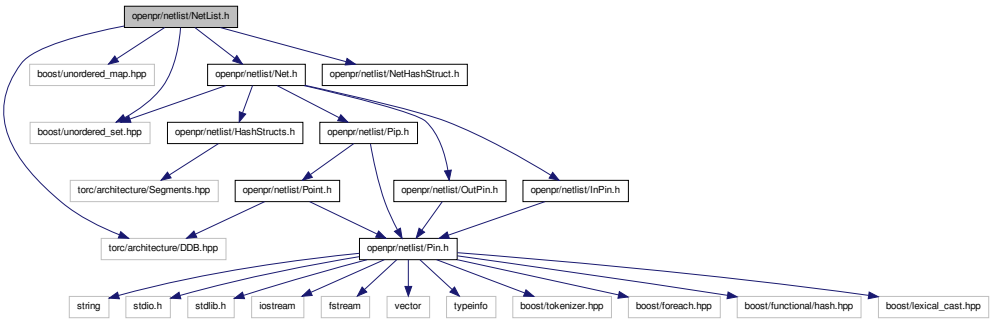
Namespaces

- namespace openpr
- namespace openpr::netlist

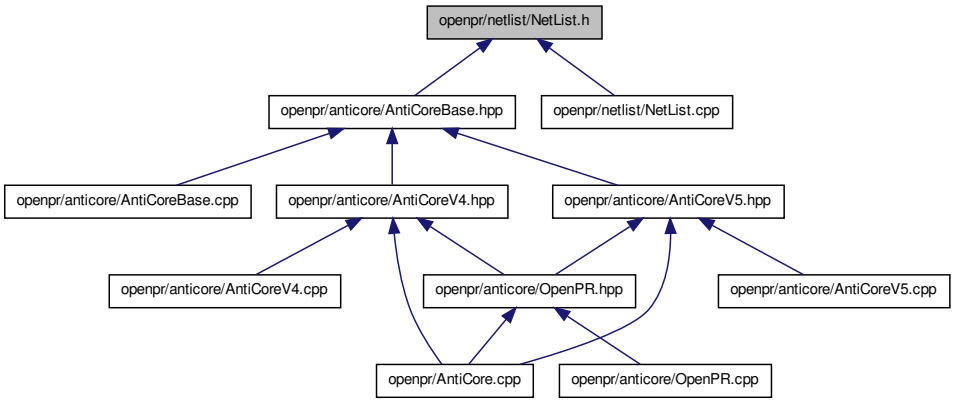
9.38 openpr/netlist/NetList.h File Reference

```
#include <boost/unordered_set.hpp>
#include <boost/unordered_map.hpp>
#include "torc/architecture/DDB.hpp"
#include "openpr/netlist/Net.h"
#include "openpr/netlist/NetHashStruct.h"
```

Include dependency graph for NetList.h:



This graph shows which files directly or indirectly include this file:



Classes

- class openpr::netlist::NetList

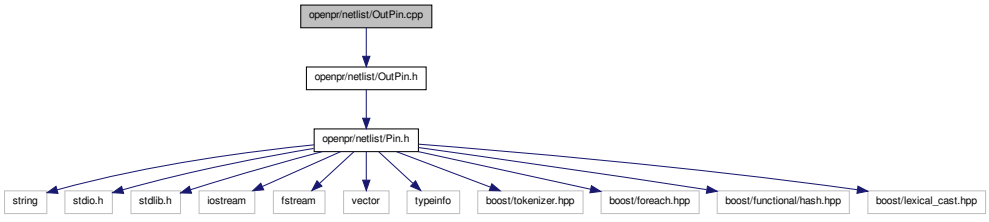
Namespaces

- namespace openpr
- namespace openpr::netlist

9.39 openpr/netlist/OutPin.cpp File Reference

```
#include "openpr/netlist/OutPin.h"
```

Include dependency graph for OutPin.cpp:



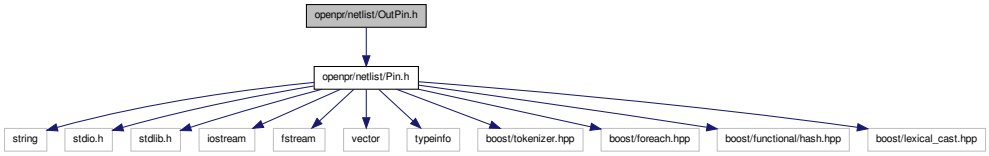
Namespaces

- namespace openpr
- namespace openpr::netlist

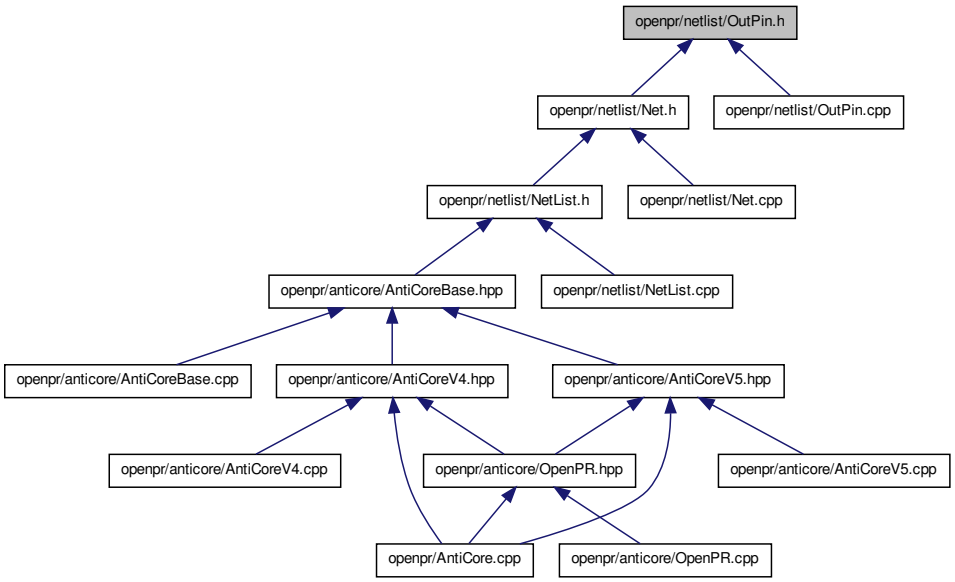
9.40 openpr/netlist/OutPin.h File Reference

```
#include "openpr/netlist/Pin.h"
```

Include dependency graph for OutPin.h:



This graph shows which files directly or indirectly include this file:



Classes

- class openpr::netlist::OutPin

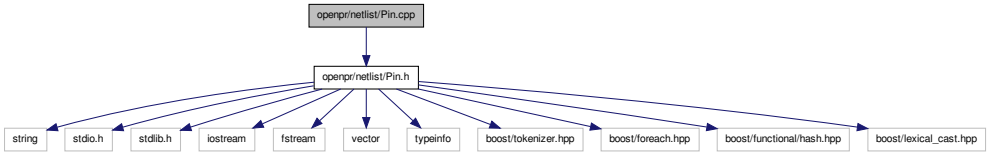
Namespaces

- namespace openpr
- namespace openpr::netlist

9.41 openpr/netlist/Pin.cpp File Reference

```
#include "openpr/netlist/Pin.h"
```

Include dependency graph for Pin.cpp:



Namespaces

- namespace openpr
- namespace openpr::netlist

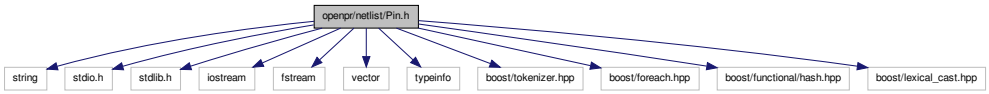
Functions

- std::size_t openpr::netlist::hash_value (Pin &pin)
- std::size_t openpr::netlist::hash_value (Pin *pin)

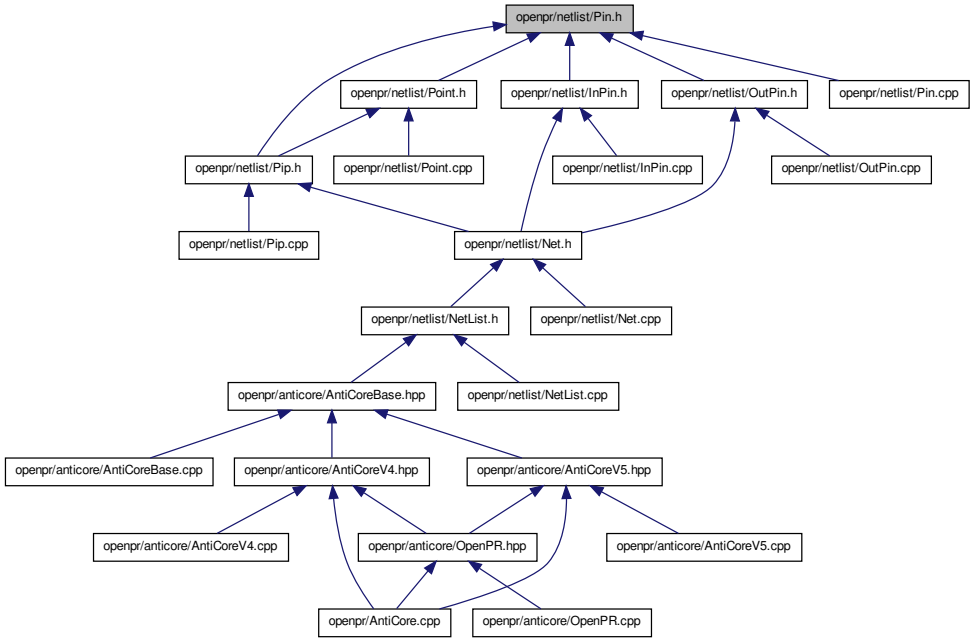
9.42 openpr/netlist/Pin.h File Reference

```
#include <string>
#include <stdio.h>
#include <stdlib.h>
#include <iostream>
#include <fstream>
#include <vector>
#include <typeinfo>
#include <boost/tokenizer.hpp>
#include <boost/foreach.hpp>
#include <boost/functional/hash.hpp>
#include <boost/lexical_cast.hpp>
```

Include dependency graph for Pin.h:



This graph shows which files directly or indirectly include this file:



Classes

- class openpr::netlist::Pin

Namespaces

- namespace openpr
- namespace openpr::netlist

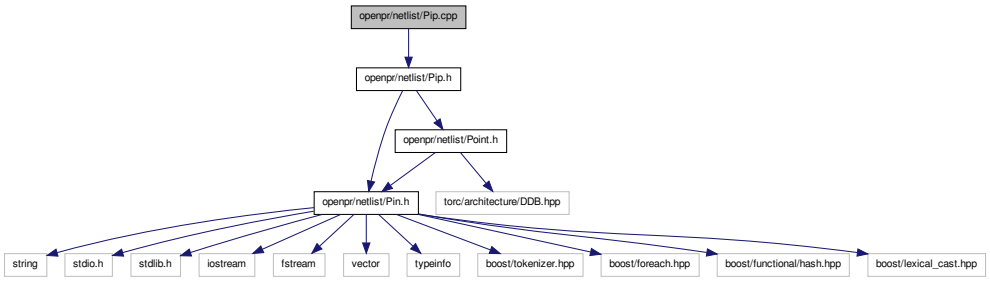
Typedefs

- typedef boost::tokenizer< boost::char_separator< char > > openpr::netlist::tokenizer

9.43 openpr/netlist/Pip.cpp File Reference

```
#include "openpr/netlist/Pip.h"
```

Include dependency graph for Pip.cpp:



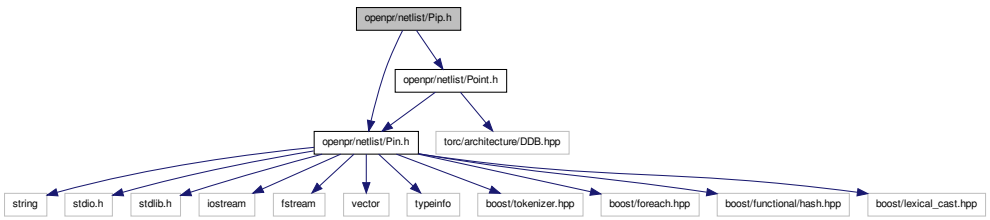
Namespaces

- namespace openpr
- namespace openpr::netlist

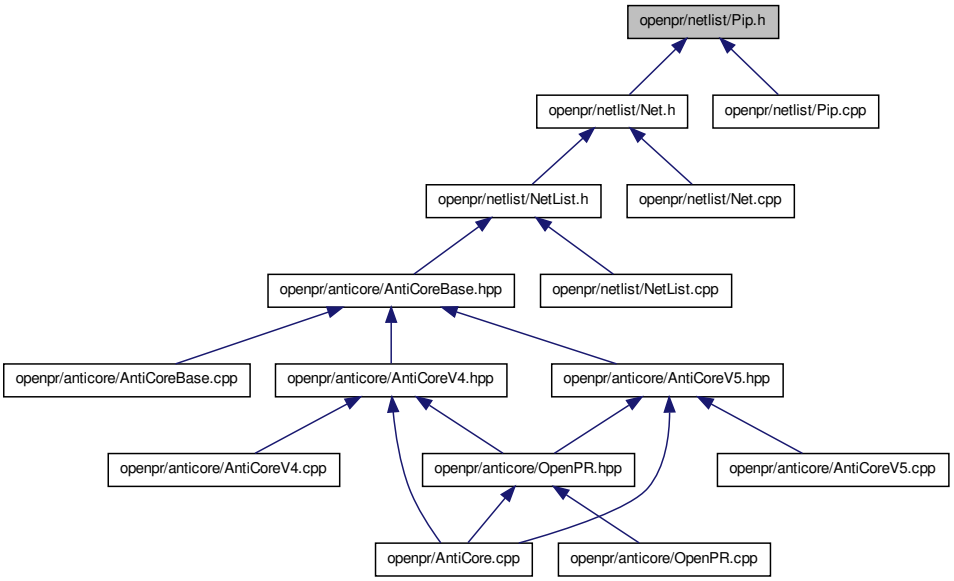
9.44 openpr/netlist/Pip.h File Reference

```
#include "openpr/netlist/Pin.h"
#include "openpr/netlist/Point.h"
```

Include dependency graph for Pip.h:



This graph shows which files directly or indirectly include this file:



Classes

- class openpr::netlist::Pip

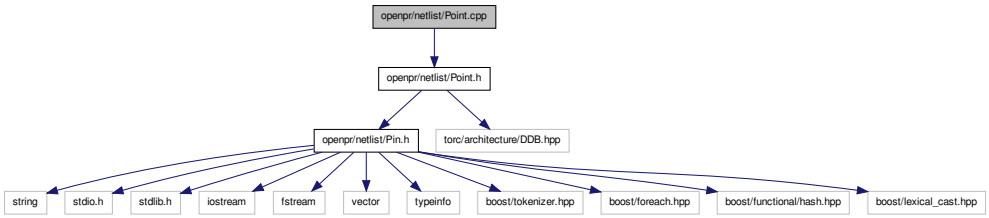
Namespaces

- namespace openpr
- namespace openpr::netlist

9.45 openpr/netlist/Point.cpp File Reference

```
#include "openpr/netlist/Point.h"
```

Include dependency graph for Point.cpp:



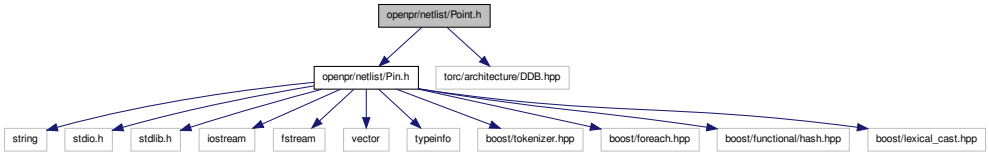
Namespaces

- namespace openpr
- namespace openpr::netlist

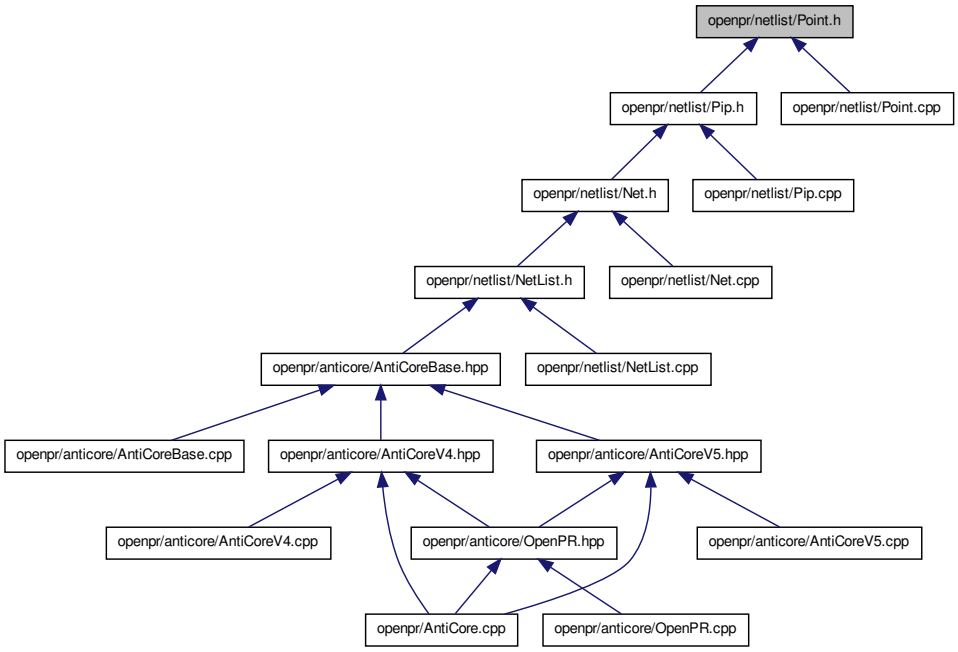
9.46 openpr/netlist/Point.h File Reference

```
#include "openpr/netlist/Pin.h"
#include "torc/architecture/DDB.hpp"
```

Include dependency graph for Point.h:



This graph shows which files directly or indirectly include this file:



Classes

- class openpr::netlist::Point

Namespaces

- namespace openpr
- namespace openpr::netlist

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