

# htd\_te

## API Documentation

August 26, 2014

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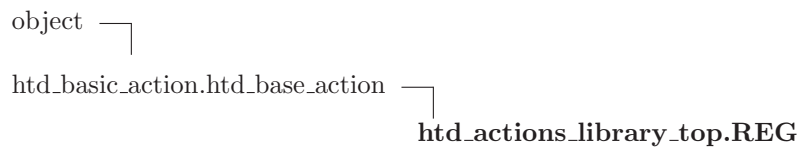
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# 1 Module htd\_actions\_library\_top

## 1.1 Variables

Name	Description
<code>--package--</code>	<b>Value:</b> None
<code>dict_cr_RegFieldsByName</code>	<b>Value:</b> {'ACMODE_SAVE_FSCP_PM_REDIRECTIONS': {'ALL': {'access': '...
<code>dict_cr_RegPropertiesByName</code>	<b>Value:</b> {'ACMODE_SAVE_FSCP_PM_REDIRECTIONS': {'addressOffset': 20...
<code>dict_fuse_RegFieldsByName</code>	<b>Value:</b> {'Iunit/fp_iunit_hpll_freq': {'access': 'not-available', ...
<code>dict_pcu_ConstByName</code>	<b>Value:</b> {'BOOT_FSM_PRE_PCODE_WAKE': {'value': 10}, 'PCODE_INSTR.L...
<code>dict_sig_GetModulePath</code>	<b>Value:</b> {'behavioral.double_sync2': {'path': ['soc.tb.soc.par_dd...
<code>dict_tap_EncodingByName</code>	<b>Value:</b> {'AgingPatternTAPonly_CHAIN': {'ir': 274, 'irRtlPath': No...
<code>dict_tap_FieldsByEncoding</code>	<b>Value:</b> {0: {'DATA': {'access': 'R0', 'bitOffset': 0, 'bitWidth':...
<code>htdPlayer</code>	<b>Value:</b> <htd_player_ui.htd_player_ui object at 0x2aaaaed07950>
<code>mname</code>	<b>Value:</b> 'collateral.dynamic.members'
<code>status</code>	<b>Value:</b> 1

## 1.2 Class REG



### 1.2.1 Methods

**`__init__(self, action_name, source_file, source_lineno, currentFlow)`**

`x.__init__(...)` initializes x; see `help(type(x))` for signature

Overrides: `object.__init__` `exitit`(inherited documentation)

**`verify_arguments(self)`**

Overrides: `htd_basic_action.htd_base_action.verify_arguments`

**`run(self)`**

Overrides: `htd_basic_action.htd_base_action.run`

***Inherited from htd.basic\_action.htd\_base\_action(Section 2.3)***

argument\_exists(), error(), error\_bysrc(), get\_action\_argument(), get\_action\_argument\_last\_entry(),  
 get\_action\_call\_file(), get\_action\_call\_lineno(), get\_action\_name(), get\_action\_type(),  
 get\_all\_arguments(), get\_arguments(), get\_declared\_arguments(), get\_not\_declared\_arguments(),  
 get\_result(), i\_am\_htd\_base\_action\_object(), inform(), inform\_nosrc(), post\_run(),  
 post\_run\_place\_holder(), pre\_run(), pre\_run\_place\_holder(), print\_action\_arguments(),  
 set\_result(), verify\_action\_arguments(), verify\_obligatory\_arguments()

***Inherited from object***

\_\_delattr\_\_(), \_\_format\_\_(), \_\_getattr\_\_(), \_\_hash\_\_(), \_\_new\_\_(), \_\_reduce\_\_(), \_\_reduce\_ex\_\_(),  
 \_\_repr\_\_(), \_\_setattr\_\_(), \_\_sizeof\_\_(), \_\_str\_\_(), \_\_subclasshook\_\_()

**1.2.2 Properties**

Name	Description
<i>Inherited from object</i>	
__class__	

**1.2.3 Class Variables**

Name	Description
<i>Inherited from htd.basic_action.htd_base_action (Section 2.3)</i>	
author, description	

**1.3 Class CACHEPLOAD****1.3.1 Methods**

<b>__init__</b> ( <i>self, action_name, source_file, source_lineno, currentFlow</i> )
x.__init__(...) initializes x; see help(type(x)) for signature
Overrides: object.__init__ extit(inherited documentation)

<b>verify_arguments</b> ( <i>self</i> )
---

Overrides: htd_basic_action.htd_base_action.verify_arguments
--

<b>run</b> ( <i>self</i> )
----------------------------

Overrides: htd_basic_action.htd_base_action.run
---

***Inherited from htd\_basic\_action.htd\_base\_action(Section 2.3)***

argument\_exists(), error(), error\_by\_src(), get\_action\_argument(), get\_action\_argument\_last\_entry(),  
 get\_action\_call\_file(), get\_action\_call\_lineno(), get\_action\_name(), get\_action\_type(),  
 get\_all\_arguments(), get\_arguments(), get\_declared\_arguments(), get\_not\_declared\_arguments(),  
 get\_result(), i\_am\_htd\_base\_action\_object(), inform(), inform\_nosrc(), post\_run(),  
 post\_run\_place\_holder(), pre\_run(), pre\_run\_place\_holder(), print\_action\_arguments(),  
 set\_result(), verify\_action\_arguments(), verify\_obligatory\_arguments()

***Inherited from object***

\_\_delattr\_\_(), \_\_format\_\_(), \_\_getattr\_\_(), \_\_hash\_\_(), \_\_new\_\_(), \_\_reduce\_\_(), \_\_reduce\_ex\_\_(),  
 \_\_repr\_\_(), \_\_setattr\_\_(), \_\_sizeof\_\_(), \_\_str\_\_(), \_\_subclasshook\_\_()

### 1.3.2 Properties

Name	Description
<i>Inherited from object</i>	
__class__	

### 1.3.3 Class Variables

Name	Description
<i>Inherited from htd_basic_action.htd_base_action (Section 2.3)</i>	
author, description	

## 2 Module *htd\_basic\_action*

### 2.1 Functions

<code>evaluate_constrain_condition(<i>condition</i>, <i>src</i>)</code>
---

### 2.2 Variables

Name	Description
<code>--package--</code>	<b>Value:</b> None
<code>dict_cr_RegFieldsByName</code>	<b>Value:</b> {'ACMODE_SAVE_FSCP_PM_REDIRECTIONS': {'ALL': {'access': '...}}
<code>dict_cr_RegPropertiesByName</code>	<b>Value:</b> {'ACMODE_SAVE_FSCP_PM_REDIRECTIONS': {'addressOffset': 20...
<code>dict_fuse_RegFieldsByName</code>	<b>Value:</b> {'Iunit/fp_iunit_hpll_freq': {'access': 'not-available', ...}}
<code>dict_pcu_ConstByName</code>	<b>Value:</b> {'BOOT_FSM_PRE_PCODE_WAKE': {'value': 10}, 'PCODE_INSTR.L...
<code>dict_sig_GetModulePath</code>	<b>Value:</b> {'behavioral.double_sync2': {'path': ['soc_tb.soc.par_dd...
<code>dict_tap_EncodingByName</code>	<b>Value:</b> {'AgingPatternTAPonly_CHAIN': {'ir': 274, 'irRtlPath': No...
<code>dict_tap_FieldsByEncoding</code>	<b>Value:</b> {0: {'DATA': {'access': 'RO', 'bitOffset': 0, 'bitWidth':...
<code>htdPlayer</code>	<b>Value:</b> <htd.player_ui.htd_player_ui object at 0x2aaaaed07950>
<code>mname</code>	<b>Value:</b> 'collateral_dynamic_members'
<code>status</code>	<b>Value:</b> 1

### 2.3 Class *htd\_base\_action*

object └─ `htd_basic_action.htd_base_action`

**Known Subclasses:** `htd_actions_library_top.CACHELOAD`, `htd_actions_library_top.REG`, `htd_gen_action.GEN`, `htd_signal_action.SIG`, `htd_tap_action.TAP`

### 2.3.1 Methods

**`__init__(self, action_type, action_name, locfile, loclinenum, currentFlow)`**

`x.__init__(...)` initializes `x`; see `help(type(x))` for signature

Overrides: `object.__init__` `exitit`(inherited documentation)

**`i_am_htd_base_action_object()`**

**`get_action_name(self)`**

**`get_action_type(self)`**

**`get_action_call_file(self)`**

**`get_action_call_lineno(self)`**

**`get_arguments(self)`**

**`set_result(self, res)`**

**`get_result(self)`**

**`inform(self, msg)`**

**`inform_nosrc(self, msg)`**

**`error(self, msg, exit)`**

**`error_bysrc(self, srcfile, srcline, msg, exit)`**

**`verify_obligatory_arguments(self)`**

**`get_declared_arguments(self)`**

**`get_not_declared_arguments(self)`**

**`get_all_arguments(self)`**

<code>argument_exists(self, name)</code>
--

<code>get_action_argument(self, name)</code>
--

<code>get_action_argument_last_entry(self, name)</code>
---

<code>print_action_arguments(self)</code>
---

<code>verify_action_arguments(self)</code>
--

<code>verify_arguments(self)</code>
-------------------------------------

<code>post_run_place_holder(self)</code>
--

<code>post_run(self)</code>
-----------------------------

<code>pre_run_place_holder(self)</code>
---

<code>pre_run(self)</code>
----------------------------

<code>run(self)</code>
------------------------

### *Inherited from object*

`__delattr__()`, `__format__()`, `__getattr__()`, `__hash__()`, `__new__()`, `__reduce__()`, `__reduce_ex__()`,  
`__repr__()`, `__setattr__()`, `__sizeof__()`, `__str__()`, `__subclasshook__()`

### 2.3.2 Properties

Name	Description
<i>Inherited from object</i>	
<code>__class__</code>	

### 2.3.3 Class Variables

Name	Description
<code>description</code>	<b>Value:</b> 'The htd_base_action is a base flow class that will be in...
<code>author</code>	<b>Value:</b> 'alexse'



### 3 Module *htd\_basic\_flow*

#### 3.1 Variables

Name	Description
SCHEDULED_LOAD_SEGMENTS_IP_MODULES	<b>Value:</b> []
__package__	<b>Value:</b> None
dict_cr_RegFieldsByName	<b>Value:</b> {'ACMODE_SAVE_FSCP_PM_REDIRECTIONS': {'ALL': {'access': '...}}
dict_cr_RegPropertiesByName	<b>Value:</b> {'ACMODE_SAVE_FSCP_PM_REDIRECTIONS': {'addressOffset': 20...
dict_fuse_RegFieldsByName	<b>Value:</b> {'Iunit/fp_iunit_hpll_freq': {'access': 'not-available', ...}}
dict_pcu_ConstByName	<b>Value:</b> {'BOOT_FSM_PRE_PCODE_WAKE': {'value': 10}, 'PCODE_INSTR.L...
dict_sig_GetModulePath	<b>Value:</b> {'behavioral.double_sync2': {'path': ['soc.tb.soc.par.dd...
dict_tap_EncodingByName	<b>Value:</b> {'AgingPatternTAPonly_CHAIN': {'ir': 274, 'irRtlPath': No...
dict_tap_FieldsByEncoding	<b>Value:</b> {0: {'DATA': {'access': 'RO', 'bitOffset': 0, 'bitWidth':...
htdPlayer	<b>Value:</b> <htd_player_ui.htd_player_ui object at 0x2aaaaed07950>
ip_module	<b>Value:</b> 'PchIsolation.Stage0'
mname	<b>Value:</b> 'collateral_dynamic_members'
module	<b>Value:</b> '/nfs/iil/proj/mpgbd/alexse/TE/repo/project/testproj//htd.
seg_module	<b>Value:</b> 'PchIsolation.Stage0'
status	<b>Value:</b> 1

#### 3.2 Class *htd\_segment*

object └─ **htd\_basic\_flow.htd\_segment**

**Known Subclasses:** *htd\_basic\_flow.htd\_flow\_segment*, *htd\_basic\_flow.htd\_ip\_segment*

### 3.2.1 Methods

```
__init__(self, current_flow)
```

*x.\_\_init\_\_(...)* initializes *x*; see `help(type(x))` for signature

Overrides: `object.__init__` `exitit`(inherited documentation)

```
print_interface_arguments(self)
```

```
get_currentflow(self)
```

```
assign_arguments_container(self, container, arguments, object_type,  
location)
```

```
declare_interface(self, arguments, location=[])
```

```
exec_action(self, params)
```

#### *Inherited from object*

```
__delattr__(), __format__(), __getattr__(), __hash__(), __new__(), __reduce__(), __reduce_ex__(),  
__repr__(), __setattr__(), __sizeof__(), __str__(), __subclasshook__()
```

### 3.2.2 Properties

Name	Description
<i>Inherited from object</i>	
<code>__class__</code>	

### 3.3 Class *htd\_base\_flow*



### 3.3.1 Methods

**`__init__(self, flow_type, flow_num)`**

`x.__init__(...)` initializes `x`; see `help(type(x))` for signature

Overrides: `object.__init__` `exitit` (inherited documentation)

**`help_cmd(self)`**

**`debug_readback(self)`**

**`i_am_htd_base_flow_object()`**

**`get_flow_type(self)`**

**`get_flow_num(self)`**

**`verify_obligatory_arguments(self)`**

**`get_per_action_cmd_arguments(self)`**

**`inform(self, msg, distribute_to_interface=0, level=0, prefix='Inform')`**

**`inform_bysrc(self, currfile, currline_no, msg, distribute_to_interface=0, level=0, prefix='Inform')`**

**`error(self, msg, exit)`**

**`error_bysrc(self, currfile, currline_no, msg, exit)`**

**`actions_override(self)`**

**`post_verify(self)`**

**`set_flow_arguments(self, arguments, src)`**

**`print_flow_arguments_help(self)`**

**`print_flow_arguments(self)`**

<code>action_override(self, actionName, paramName, value, lsb=-1, msb=-1)</code>
--

<code>exec_action(self, params, atype='none', location_file_str='none', location_file_lineno=0)</code>
--

<code>exec_action_obj(self, location_file_str, location_file_lineno, arguments)</code>
--

<code>exec_segment(self, arguments)</code>
--

<code>ip_connect(self, arguments)</code>
--

<code>ip_activate(self, ip_name, ena)</code>
--

<code>pre_flow_run(self)</code>
---------------------------------

<code>post_flow_run_place_holder(self)</code>
---

<code>post_flow_run(self)</code>
----------------------------------

<code>flow_run(self)</code>
-----------------------------

<code>connect_ips(self)</code>
--------------------------------

<code>flow_override(self)</code>
----------------------------------

### *Inherited from object*

`__delattr__()`, `__format__()`, `__getattribute__()`, `__hash__()`, `__new__()`, `__reduce__()`, `__reduce_ex__()`, `__repr__()`, `__setattr__()`, `__sizeof__()`, `__str__()`, `__subclasshook__()`

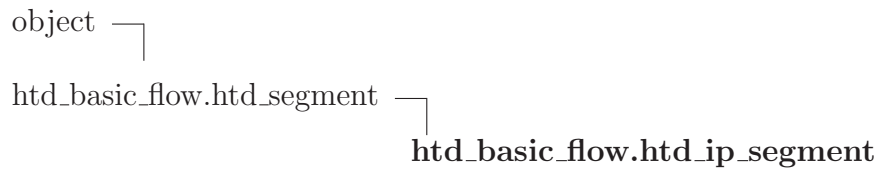
### 3.3.2 Properties

Name	Description
<i>Inherited from object</i>	
<code>__class__</code>	

### 3.3.3 Class Variables

Name	Description
description	<b>Value:</b> 'The htd_base_flow is a base flow class that will be inhe...
author	<b>Value:</b> 'alexse'

### 3.4 Class *htd\_ip\_segment*



#### 3.4.1 Methods

**\_\_init\_\_**(*self*, *current\_flow*, *ip\_name*)  
*x*.**\_\_init\_\_**(...) initializes *x*; see help(type(*x*)) for signature  
 Overrides: object.**\_\_init\_\_** extit(inherited documentation)

**get\_ip\_name**(*self*)

**enable\_ip\_segment**(*self*)

**is\_ip\_segment\_enabled**(*self*)

**error**(*self*, *msg*, *exit*)

**error\_bysrc**(*self*, *currfile*, *currline\_no*, *msg*, *exit*)

**get\_interface\_method**(*self*, *interface\_method\_name*)

**is\_debug\_interface\_method**(*self*, *interface\_method\_name*)

**get\_interface\_method\_description**(*self*, *interface\_method\_name*)

**execute\_interface\_method**(*self*, *interface\_method\_name*)

*Inherited from htd\_basic\_flow.htd\_segment(Section 3.2)*

`assign_arguments_container()`, `declare_interface()`, `exec_action()`, `get_currentflow()`,  
`print_interface_arguments()`

### *Inherited from object*

`__delattr__()`, `__format__()`, `__getattr__()`, `__hash__()`, `__new__()`, `__reduce__()`, `__reduce_ex__()`,  
`__repr__()`, `__setattr__()`, `__sizeof__()`, `__str__()`, `__subclasshook__()`

### 3.4.2 Properties

Name	Description
<i>Inherited from object</i>	
<code>__class__</code>	

## 3.5 Class `htd_flow_segment`



### 3.5.1 Methods

<b><code>__init__(self, current_flow)</code></b>  <code>x.__init__(...)</code> initializes x; see <code>help(type(x))</code> for signature Overrides: <code>object.__init__</code> extit(inherited documentation)
<b><code>error(self, msg, exit)</code></b>
<b><code>error_bysrc(self, currfile, currline_no, msg, exit)</code></b>

### *Inherited from `htd_basic_flow.htd_segment`(Section 3.2)*

`assign_arguments_container()`, `declare_interface()`, `exec_action()`, `get_currentflow()`,  
`print_interface_arguments()`

### *Inherited from object*

`__delattr__()`, `__format__()`, `__getattr__()`, `__hash__()`, `__new__()`, `__reduce__()`, `__reduce_ex__()`,  
`__repr__()`, `__setattr__()`, `__sizeof__()`, `__str__()`, `__subclasshook__()`

### 3.5.2 Properties

Name	Description
<i>Inherited from object</i>	
<code>--class--</code>	

## 4 Module *htd\_clocks*

### 4.1 Variables

Name	Description
<code>__package__</code>	<b>Value:</b> <code>None</code>
<code>mname</code>	<b>Value:</b> <code>'collateral_dynamic_members'</code>
<code>status</code>	<b>Value:</b> <code>1</code>

### 4.2 Class *htd\_clocks*



#### 4.2.1 Methods

**`__init__(self, logger)`**

`x.__init__(...)` initializes `x`; see `help(type(x))` for signature

Overrides: `object.__init__` `exitit`(inherited documentation)

**`add_new_clock(self, clk)`**

**`get_clock_rtl_path(self, clk)`**

**`get_all_clocks(self)`**

**`is_clock(self, name)`**

**`set_clock_rate(self, name, rate)`**

**`check_for_unassigned_clock_ratio(self)`**

**`set_default(self, clk)`**

**`get_default(self)`**



<code>clock_transpose(self, from_clock, from_clock_cycles, to_clock)</code>
---

<code>is_transposed_clock_modulo(self, from_clock, from_clock_cycles, to_clock)</code>
--

### *Inherited from object*

`--delattr--()`, `--format--()`, `--getattr--()`, `--hash--()`, `--new--()`, `--reduce--()`, `--reduce_ex--()`,  
`--repr--()`, `--setattr--()`, `--sizeof--()`, `--str--()`, `--subclasshook--()`

### 4.2.2 Properties

Name	Description
<i>Inherited from object</i>	
<code>--class--</code>	

## 5 Module *htd\_collaterals*

### 5.1 Variables

Name	Description
RES	<b>Value:</b> <code>htd_collaterals()</code>
CFG	<b>Value:</b> <code>{'CMD': {}, 'FlowSignals': {'BootFsmBrkPtTrigger': 'xxNOA...'}}</code>
<code>dynamic_methods_module</code>	<b>Value:</b> <code>'collateral_dynamic_members.py'</code>
<code>file_name</code>	<b>Value:</b> <code>None</code>
<code>--package--</code>	<b>Value:</b> <code>None</code>
<code>mname</code>	<b>Value:</b> <code>'collateral_dynamic_members'</code>
<code>status</code>	<b>Value:</b> <code>1</code>

### 5.2 Class *htd\_collaterals*

object └─ `htd_collaterals.htd_collaterals`

#### 5.2.1 Methods

```
__init__(self)
```

`x.__init__(...)` initializes `x`; see `help(type(x))` for signature  
 Overrides: `object.__init__` extit(inherited documentation)

```
get_collateral_file_info(self, col_name, errpostfix='')
```

```
get_col_pickle_name(self, col_names, dictionary_name)
```

```
cfg_getstr(self, var_category, var_name, obligatory=1, location_str='')
```

```
cfg_getint(self, var_category, var_name, obligatory=1)
```

```
traverse_cfg_xml_node(self, rootNode, cfg_hash, dict_name, path_to_cfg, col_type)
```

```
read_cfg_file(self, cfg_path)
```

```
read_cfg(self, xmldoc, node, path_to_cfg)
```

```
read_te_cfg(self, path_to_cfg)
```

```
read_combined_xml_cfg_value(self, value)
```

```
get_int_value(self, value)
```

```
traverse_nodes_by_path(self, rootNode, path_l, depth, strict_path=0,  
conditional_existence=0)
```

```
traverse_single_node_by_path(self, rootNode, path_l,  
conditional_existence=0)
```

```
get_xml_value_by_combined_path(self, rootNode, path_l,  
conditional_existence=0)
```

```
is_single_node_hierarchy(self, rootNode, path_l, conditional_existence=0)
```

```
add_normalized_string_value_to_dictionary(self, res, str_value, islist=0)
```

```
apply_current_dictionary_on_current_user_collateral(self, dict_name,  
dictionary, matched_entries, coll_name, line_num, res)
```

```
apply_current_dictionary_on_current_tab_collateral(self, dict_name,  
dictionary, tabed_entries, coll_name, line_num, res)
```

```
apply_current_dictionary_on_current_xml_collateral(self, dict_name,  
keyNodePath, dictionary, rootNode, res)
```

```
parse_all_collaterals(self)
```

```
traverse_single_xml_node(self, parent_node, key, xmllcfg, xml_hash, col_tag,  
col_type)
```

```
traverse_xml_entry(self, parent_node, col_tag, col_type, xmllcfg, xml_hash)
```

```
findChildNodeByName(self, parent, name, err=1)
```

<code>getChildNodeValByName(self, parent, name, err=1)</code>
---

<code>get_xml_tree_str(self, node, indentationLevel=0)</code>
---

<code>create_dynamic_methods_module(self, file_name)</code>
---

### *Inherited from object*

`__delattr__()`, `__format__()`, `__getattr__()`, `__hash__()`, `__new__()`, `__reduce__()`, `__reduce_ex__()`,  
`__repr__()`, `__setattr__()`, `__sizeof__()`, `__str__()`, `__subclasshook__()`

### 5.2.2 Properties

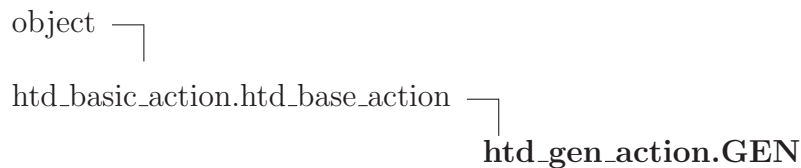
Name	Description
<i>Inherited from object</i>	
<code>__class__</code>	

## 6 Module htd\_gen\_action

### 6.1 Variables

Name	Description
<code>__package__</code>	<b>Value:</b> None
<code>dict_cr_RegFieldsByName</code>	<b>Value:</b> {'ACMODE_SAVE_FSCP_PM_REDIRECTIONS': {'ALL': {'access': '...'}}
<code>dict_cr_RegPropertiesByName</code>	<b>Value:</b> {'ACMODE_SAVE_FSCP_PM_REDIRECTIONS': {'addressOffset': 20...
<code>dict_fuse_RegFieldsByName</code>	<b>Value:</b> {'Iunit/fp_iunit_hpll_freq': {'access': 'not-available', ...
<code>dict_pcu_ConstByName</code>	<b>Value:</b> {'BOOT_FSM_PRE_PCODE_WAKE': {'value': 10}, 'PCODE_INSTR.L...
<code>dict_sig_GetModulePath</code>	<b>Value:</b> {'behavioral.double_sync2': {'path': ['soc_tb.soc.par_dd...
<code>dict_tap_EncodingByName</code>	<b>Value:</b> {'AgingPatternTAPonly_CHAIN': {'ir': 274, 'irRtlPath': No...
<code>dict_tap_FieldsByEncoding</code>	<b>Value:</b> {0: {'DATA': {'access': 'RO', 'bitOffset': 0, 'bitWidth':...
<code>htdPlayer</code>	<b>Value:</b> <htd_player_ui.htd_player_ui object at 0x2aaaaed07950>
<code>mname</code>	<b>Value:</b> 'collateral_dynamic_members'
<code>status</code>	<b>Value:</b> 1

### 6.2 Class GEN



#### 6.2.1 Methods

```

__init__(self, action_name, source_file, source_lineno, currentFlow)
x.__init__(...) initializes x; see help(type(x)) for signature
Overrides: object.__init__ extit(inherited documentation)

```

<b>verify_arguments</b> ( <i>self</i> )
---

Overrides: htd.basic.action.htd_base_action.verify_arguments
--

<b>run</b> ( <i>self</i> )
----------------------------

Overrides: htd.basic.action.htd_base_action.run
---

### *Inherited from htd.basic.action.htd\_base\_action(Section 2.3)*

argument\_exists(), error(), error\_by\_src(), get\_action\_argument(), get\_action\_argument\_last\_entry(),  
 get\_action\_call\_file(), get\_action\_call\_lineno(), get\_action\_name(), get\_action\_type(),  
 get\_all\_arguments(), get\_arguments(), get\_declared\_arguments(), get\_not\_declared\_arguments(),  
 get\_result(), i\_am\_htd\_base\_action\_object(), inform(), inform\_nosrc(), post\_run(),  
 post\_run\_place\_holder(), pre\_run(), pre\_run\_place\_holder(), print\_action\_arguments(),  
 set\_result(), verify\_action\_arguments(), verify\_obligatory\_arguments()

### *Inherited from object*

\_\_delattr\_\_(), \_\_format\_\_(), \_\_getattr\_\_(), \_\_hash\_\_(), \_\_new\_\_(), \_\_reduce\_\_(), \_\_reduce\_ex\_\_(),  
 \_\_repr\_\_(), \_\_setattr\_\_(), \_\_sizeof\_\_(), \_\_str\_\_(), \_\_subclasshook\_\_()

#### 6.2.2 Properties

Name	Description
<i>Inherited from object</i>	
__class__	

#### 6.2.3 Class Variables

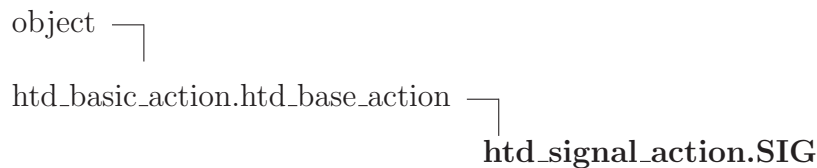
Name	Description
<i>Inherited from htd.basic.action.htd_base_action (Section 2.3)</i>	
author, description	

## 7 Module htd\_signal\_action

### 7.1 Variables

Name	Description
<code>__package__</code>	<b>Value:</b> None
<code>dict_cr_RegFieldsByName</code>	<b>Value:</b> {'ACMODE_SAVE_FSCP_PM_REDIRECTIONS': {'ALL': {'access': '...'}}
<code>dict_cr_RegPropertiesByName</code>	<b>Value:</b> {'ACMODE_SAVE_FSCP_PM_REDIRECTIONS': {'addressOffset': 20...
<code>dict_fuse_RegFieldsByName</code>	<b>Value:</b> {'Iunit/fp_iunit_hpll_freq': {'access': 'not-available', ...}
<code>dict_pcu_ConstByName</code>	<b>Value:</b> {'BOOT_FSM_PRE_PCODE_WAKE': {'value': 10}, 'PCODE_INSTR.L...
<code>dict_sig_GetModulePath</code>	<b>Value:</b> {'behavioral.double_sync2': {'path': ['soc_tb.soc.par_dd...
<code>dict_tap_EncodingByName</code>	<b>Value:</b> {'AgingPatternTAPonly_CHAIN': {'ir': 274, 'irRtlPath': No...
<code>dict_tap_FieldsByEncoding</code>	<b>Value:</b> {0: {'DATA': {'access': 'RO', 'bitOffset': 0, 'bitWidth':...
<code>htdPlayer</code>	<b>Value:</b> <htd_player_ui.htd_player_ui object at 0x2aaaaed07950>
<code>mname</code>	<b>Value:</b> 'collateral_dynamic_members'
<code>status</code>	<b>Value:</b> 1

### 7.2 Class SIG



#### 7.2.1 Methods

```

__init__(self, action_name, source_file, source_lineno, currentFlow)

x.__init__(...) initializes x; see help(type(x)) for signature
Overrides: object.__init__ extit(inherited documentation)

```

<b>verify_arguments</b> ( <i>self</i> )
---

Overrides: htd_basic_action.htd_base_action.verify_arguments
--

<b>run</b> ( <i>self</i> )
----------------------------

Overrides: htd_basic_action.htd_base_action.run
---

### ***Inherited from htd\_basic\_action.htd\_base\_action(Section 2.3)***

argument\_exists(), error(), error\_bysrc(), get\_action\_argument(), get\_action\_argument\_last\_entry(),  
 get\_action\_call\_file(), get\_action\_call\_lineno(), get\_action\_name(), get\_action\_type(),  
 get\_all\_arguments(), get\_arguments(), get\_declared\_arguments(), get\_not\_declared\_arguments(),  
 get\_result(), i\_am\_htd\_base\_action\_object(), inform(), inform\_nosrc(), post\_run(),  
 post\_run\_place\_holder(), pre\_run(), pre\_run\_place\_holder(), print\_action\_arguments(),  
 set\_result(), verify\_action\_arguments(), verify\_obligatory\_arguments()

### ***Inherited from object***

\_\_delattr\_\_(), \_\_format\_\_(), \_\_getattr\_\_(), \_\_hash\_\_(), \_\_new\_\_(), \_\_reduce\_\_(), \_\_reduce\_ex\_\_(),  
 \_\_repr\_\_(), \_\_setattr\_\_(), \_\_sizeof\_\_(), \_\_str\_\_(), \_\_subclasshook\_\_()

## **7.2.2 Properties**

Name	Description
<i>Inherited from object</i>	
__class__	

## **7.2.3 Class Variables**

Name	Description
<i>Inherited from htd_basic_action.htd_base_action (Section 2.3)</i>	
author, description	

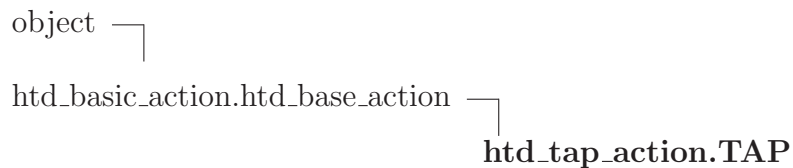


## 8 Module htd.tap\_action

### 8.1 Variables

Name	Description
<code>__package__</code>	<b>Value:</b> None
<code>dict_cr_RegFieldsByName</code>	<b>Value:</b> {'ACMODE_SAVE_FSCP_PM_REDIRECTIONS': {'ALL': {'access': '...'}}
<code>dict_cr_RegPropertiesByName</code>	<b>Value:</b> {'ACMODE_SAVE_FSCP_PM_REDIRECTIONS': {'addressOffset': 20...
<code>dict_fuse_RegFieldsByName</code>	<b>Value:</b> {'Iunit/fp_iunit_hpll_freq': {'access': 'not-available', ...}
<code>dict_pcu_ConstByName</code>	<b>Value:</b> {'BOOT_FSM_PRE_PCODE_WAKE': {'value': 10}, 'PCODE_INSTR.L...
<code>dict_sig_GetModulePath</code>	<b>Value:</b> {'behavioral.double_sync2': {'path': ['soc_tb.soc.par_dd...
<code>dict_tap_EncodingByName</code>	<b>Value:</b> {'AgingPatternTAPonly_CHAIN': {'ir': 274, 'irRtlPath': No...
<code>dict_tap_FieldsByEncoding</code>	<b>Value:</b> {0: {'DATA': {'access': 'RO', 'bitOffset': 0, 'bitWidth':...
<code>htdPlayer</code>	<b>Value:</b> <htd.player_ui.htd.player_ui object at 0x2aaaaed07950>
<code>mname</code>	<b>Value:</b> 'collateral_dynamic_members'
<code>status</code>	<b>Value:</b> 1

### 8.2 Class TAP



#### 8.2.1 Methods

```

__init__(self, action_name, source_file, source_lineno, currentFlow)
x.__init__(...) initializes x; see help(type(x)) for signature
Overrides: object.__init__ extit(inherited documentation)

```

<b>debug_readback</b> ( <i>self</i> )
---------------------------------------

<b>verify_arguments</b> ( <i>self</i> )
---

Overrides: htd.basic_action.htd_base_action.verify_arguments
--

<b>run</b> ( <i>self</i> )
----------------------------

Overrides: htd.basic_action.htd_base_action.run
---

***Inherited from htd.basic\_action.htd\_base\_action(Section 2.3)***

argument\_exists(), error(), error\_bysrc(), get\_action\_argument(), get\_action\_argument\_last\_entry(), get\_action\_call\_file(), get\_action\_call\_lineno(), get\_action\_name(), get\_action\_type(), get\_all\_arguments(), get\_arguments(), get\_declared\_arguments(), get\_not\_declared\_arguments(), get\_result(), i\_am\_htd\_base\_action\_object(), inform(), inform\_nosrc(), post\_run(), post\_run\_place\_holder(), pre\_run(), pre\_run\_place\_holder(), print\_action\_arguments(), set\_result(), verify\_action\_arguments(), verify\_obligatory\_arguments()

***Inherited from object***

\_\_delattr\_\_(), \_\_format\_\_(), \_\_getattr\_\_(), \_\_hash\_\_(), \_\_new\_\_(), \_\_reduce\_\_(), \_\_reduce\_ex\_\_(), \_\_repr\_\_(), \_\_setattr\_\_(), \_\_sizeof\_\_(), \_\_str\_\_(), \_\_subclasshook\_\_()

## 8.2.2 Properties

Name	Description
<i>Inherited from object</i>	
__class__	

## 8.2.3 Class Variables

Name	Description
<i>Inherited from htd.basic_action.htd_base_action (Section 2.3)</i>	
author, description	

## 9 Module `htd_te_manager`

### 9.1 Variables

Name	Description
<code>version</code>	<b>Value:</b> 1.0
<code>CURRENT_FLOW_OBJ</code>	<b>Value:</b> None
<code>dbgmsg</code>	<b>Value:</b> "Number of arguments:", len(sys.argv), "\nArgument List:..."
<code>manager_arguments</code>	<b>Value:</b> htd_argument_containter(HTD_ARGUMENTS_DECLARED_ONLY)
<code>flows_list</code>	<b>Value:</b> {}
<code>misc_modules</code>	<b>Value:</b> {}
<code>print_help_only_mode</code>	<b>Value:</b> 1
<code>temp_flow</code>	<b>Value:</b> htd_base_flow("", 0)
<code>dummy_action</code>	<b>Value:</b> htd_base_action("", "dummy", "", 0, 0)
<code>cfg_override</code>	<b>Value:</b> {}
<code>keylist</code>	<b>Value:</b> flows_list.keys()

## 10 Module *htd\_utilities*

### 10.1 Functions

```
list_resize(list_src, size, item, up_direct=1, increase_only=1)
```

```
execute_all_flow_in_module(flow_obj, module_obj, module_name)
```

```
dynamic_load_external_module(module_path)
```

```
caller_name(skip=2)
```

Get a name of a caller in the format module.class.method

‘skip’ specifies how many levels of stack to skip while getting caller name.  
skip=1 means ”who calls me”, skip=2 ”who calls my caller” etc.

An empty string is returned if skipped levels exceed stack height

```
int_to_binstr(i, size)
```

```
itersubclasses(cls)
```

Generator over all subclasses of a given class, in depth first order.

```
>>> list(itersubclasses(int)) == [bool]
True
>>> class A(object): pass
>>> class B(A): pass
>>> class C(A): pass
>>> class D(B,C): pass
>>> class E(D): pass
>>>
>>> for cls in itersubclasses(A):
...     print(cls.__name__)
B
D
E
C
>>> # get ALL (new-style) classes currently defined
>>> [cls.__name__ for cls in itersubclasses(object)] #doctest: +ELLIPSIS
['type', ...'tuple', ...]
```

```
itersubclasses_names(cls, _seen=None)
```

```
get_int_sub_range(lsb, msb, orig_val)
```

```
format_sorce_location_info(src_info)
```

```
get_class_method_names(obj, postfix='')
```

```
retrieve_obj_members(obj)
```

## 10.2 Variables

Name	Description
<code>htdte_clocks</code>	<b>Value:</b> <code>htd_clocks(htdte_logger)</code>
<code>__package__</code>	<b>Value:</b> <code>None</code>
<code>dict_cr_RegFieldsByName</code>	<b>Value:</b> { <code>'ACMODE_SAVE_FSCP_PM_REDIRECTIONS'</code> : { <code>'ALL'</code> : { <code>'access'</code> : <code>'...</code>
<code>dict_cr_RegPropertiesByName</code>	<b>Value:</b> { <code>'ACMODE_SAVE_FSCP_PM_REDIRECTIONS'</code> : { <code>'addressOffset'</code> : <code>20...</code>
<code>dict_fuse_RegFieldsByName</code>	<b>Value:</b> { <code>'Iunit/fp_iunit_hp11_freq'</code> : { <code>'access'</code> : <code>'not-available'</code> , ...
<code>dict_pcu_ConstByName</code>	<b>Value:</b> { <code>'BOOT_FSM_PRE_PCODE_WAKE'</code> : { <code>'value'</code> : <code>10</code> }, <code>'PCODE_INSTR_L...</code>
<code>dict_sig_GetModulePath</code>	<b>Value:</b> { <code>'behavioral.double_sync2'</code> : { <code>'path'</code> : [ <code>'soc.tb.soc.par.dd...</code>
<code>dict_tap_EncodingByName</code>	<b>Value:</b> { <code>'AgingPatternTAPonly_CHAIN'</code> : { <code>'ir'</code> : <code>274</code> , <code>'irRtlPath'</code> : <code>No...</code>
<code>dict_tap_FieldsByEncoding</code>	<b>Value:</b> { <code>0</code> : { <code>'DATA'</code> : { <code>'access'</code> : <code>'RO'</code> , <code>'bitOffset'</code> : <code>0</code> , <code>'bitWidth'</code> : ...
<code>mname</code>	<b>Value:</b> <code>'collateral_dynamic_members'</code>
<code>status</code>	<b>Value:</b> <code>1</code>

## 10.3 Class *htd\_action\_argument\_entry*

object  `htd_utilities.htd_action_argument_entry`

### 10.3.1 Methods

```
__init__(self, argvalue, src, lsb=-1, msb=-1, strobe=0, label='', capture=0, mask=0)
```

`x.__init__(...)` initializes `x`; see `help(type(x))` for signature

Overrides: `object.__init__` `exitit`(inherited documentation)

#### *Inherited from object*

`__delattr__()`, `__format__()`, `__getattr__()`, `__hash__()`, `__new__()`, `__reduce__()`, `__reduce_ex__()`, `__repr__()`, `__setattr__()`, `__sizeof__()`, `__str__()`, `__subclasshook__()`

### 10.3.2 Properties

Name	Description
<i>Inherited from object</i>	
<code>__class__</code>	

## 10.4 Class Logger



### 10.4.1 Methods

```
__del__(self)
```

```
__init__(self, fileName)
```

`x.__init__(...)` initializes `x`; see `help(type(x))` for signature

Overrides: `object.__init__` `exitit`(inherited documentation)

```
callBack_for_extensions(self, line)
```

```
close(self)
```

```
debug(self, line, level)
```

```
error(self, line)
```

```
error_str(self, line)
```

```
inform(self, line, distribute_to_callback=0, level=0, prefix='Inform')
```

```
log(self, line)
```

```
warn(self, line)
```

### *Inherited from object*

```
__delattr__(), __format__(), __getattr__(), __hash__(), __new__(), __reduce__(), __reduce_ex__(),  
__repr__(), __setattr__(), __sizeof__(), __str__(), __subclasshook__()
```

#### 10.4.2 Properties

Name	Description
<i>Inherited from object</i>	
<code>__class__</code>	

## 10.5 Class `htd_argument_containter`

```
object └─ htd_utilities.htd_argument_containter
```

### 10.5.1 Methods

```
__init__(self, declared_arguments_only_mode=0)
```

`x.__init__(...)` initializes `x`; see `help(type(x))` for signature

Overrides: `object.__init__` `exitit`(inherited documentation)

```
argument_assigned(self, arg)
```

```
argument_is_assigned(self, arg_name)
```

```
declare_arg(self, argname, description, typeval, default_value='---',  
obligatory=0)
```

```
declared_keys(self)
```

```
ever_accessed(self, argname)
```

```
exists_not_declared_argument(self, argname)
```

```
get_argument(self, argname, noerr=0, location='')
```

```
get_argument_lsb_msb(self, argname, err=1, location='')
```

```
get_argument_src(self, argname, location='')
```

```
get_declared_argument_indexes(self, argname, noerr=0, location='')
```

```
get_not_declared_arguments(self)
```

```
insert_not_declared_argument_value(self, arg_name, src, arg_value, lsb,  
msb)
```

```
is_declared_argument(self, argname)
```

```
is_obligatory_argument(self, argname)
```

```
keys(self)
```

```
normalize_indexes(self, first, second)
```

```
not_declared_keys(self)
```

```
overrideByOtherArgumentContainer(self, override_arguments,  
filter_mode=0)
```

```
overrideSingleArgument(self, argName, value, location='', lsb=-1,  
msb=-1)
```

```
parse_argument_name_indexation(self, arg_name)
```



<code>parse_not_declared_argument_tokens(self, arg_name, arg_value, lsb, msb)</code>
--

<code>print_arguments(self, header='')</code>
---

<code>print_help(self)</code>
-------------------------------

<code>set_accessed(self, argname)</code>
--

<code>set_argument(self, arg_name, arg_value, src='', lsb=-1, msb=-1)</code>
--

<code>set_obligatory(self, argname)</code>
--

<code>verify_obligatory_arguments(self, header, location='')</code>
---

### *Inherited from object*

`__delattr__()`, `__format__()`, `__getattr__()`, `__hash__()`, `__new__()`, `__reduce__()`, `__reduce_ex__()`,  
`__repr__()`, `__setattr__()`, `__sizeof__()`, `__str__()`, `__subclasshook__()`

### 10.5.2 Properties

Name	Description
<i>Inherited from object</i>	
<code>__class__</code>	

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