ZD-Converter2000 Python SDK

Description Manual

V1.0

Change History

Date	Version	Author	Description of change
08.07.2021	1.0	Hongyu Zheng	New document

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Overview

- ZD-Converter2000 Python SDK

1. General information

Python SDK package name: zcts
Python SDK version: 1.0
Target environment: Windows 10

2. Installation

- **Online install**

  pip install --index-url https://test.pypi.org/simple/ --no-deps zcts

- **Offline install**
  Install the .*whl* file in offline environment

3. SDK Description

This chapter describes the SDK description and usage.

3.1 detect_comports

Check that the current host is connected to the corresponding port number on the computer.

Arguments

None

Returns

The list of serial COM ports in use :list[com]

Parameters Name	Type	Description
com	string	Serial port number

Example

Code

```
from zcts import *

a=detect_comports()
print(a)
```

Output

```
['COM186']
```

3.2 get_version

Get the current version information of ZD-Converter2000 software

Argument: serial_num: str

Arguments

Name	Type	Description	Required	Default
serial_num	string	The host port number used by the current connection	Yes	

Returns
None.

Example
Code
```
from zcts import *

comports='COM186'
get_sw_version(comports)
```

Output
```
[GET_SW_VERSION{v1.4 (Jun 23 2021 14:30:47)}]
```

3.3 reboot_sys

Reboot system.

Arguments

Name	Type	Description	Required	Default
serial_num	string	The host port number used by the current connection	Yes	

Returns

None

Example

Code

```python
from zcts import *

comports='COM186'
reboot_sys(comports)
```

Output

```
[REBOOT_SYS{ok}]

Rebooting... 3-2-1-0
```

3.4 save_config

Save configuration.

Arguments

Name	Type	Description	Required	Default
serial_num	string	The host port number used by the current connection	Yes	

Returns

Save status: bool

Example

Code

```python
from zcts import import *

comports='COM186'
a = save_config(comports)
print(a)
```

Output

```
-------------------- ZD-Converter2000 Current Configuration ------------
---------

   FlashAddr: f000 (60KB)           Size: 56B

  valid_flag: 88889999      prog_op_mode: -1

  eth1_speed:   -1       eth1_admin_down: -1
  eth2_speed:   -1       eth2_admin_down: -1
  brr1_speed:   -1       brr1_admin_down: -1       brr1_role:-1
brr1_mode:-1
  brr2_speed:   -1       brr2_admin_down: -1       brr2_role:-1
brr2_mode:-1
-----------------------------------------------------------------------
---------
[SAVE_CONFIG{ok}]

True
```

3.5 clear_config

Clear configuration.

Arguments

Name	Type	Description	Required	Default
serial_num	string	The host port number used by the current connection	Yes	

Returns

Clear status: bool

Example

Code

```python
from zcts import *

comports='COM186'
a = clear_config(comports)
print(a)
```

Output

```
[CLEAR_CONFIG{ok}]

True
```

3.6 disp_config

Display current configuration.

Arguments

Name	Type	Description	Required	Default
serial_num	string	The host port number used by the current connection	Yes	

Returns

Display result: bool

Example

Code

```
from zcts import *

comports='COM186'
a = disp_config(comports)
print(a)
```

Output

```
[DISP_CONFIG{ok}]

-------------------- ZD-Converter2000 Current Configuration --------------------
  FlashAddr: f000 (60KB)          Size: 56B

  valid_flag: ffffffff      prog_op_mode: -1

  eth1_speed:   -1      eth1_admin_down: -1
  eth2_speed:   -1      eth2_admin_down: -1
  brr1_speed:   -1      brr1_admin_down: -1      brr1_role:-1      brr1_mode:-1
  brr2_speed:   -1      brr2_admin_down: -1      brr2_role:-1      brr2_mode:-1


--------------------------------------------------------------------------------


True
```

3.7 disp_port_status

Show the status of ZD-Converter2000's 4 ethernet ports speed, role, link up status etc

Precondition: Converter ethernet port are connecting with another device

Arguments

Name	Type	Description	Required	Default
serial_num	string	The host port number used by the current connection	Yes	

Returns

Display result: bool

Example

Code

```
from zcts import *

comports='COM186'
a = disp_port_status(comports)
print(a)
```

Output

```
[DISP_PORT_STATUS{ok}]

brr1(1000Base-T1)    Master    1000Mbps    Down (legacy)

brr2(1000Base-T1)    Slave     1000Mbps    *UP* (ieee_compliant)

eth1(1000Base-T )    Auto        10Mbps    Down

eth2(1000Base-T )    Auto        10Mbps    Down

True
```

3.8 disp_port_statistics

Display Statistics Information

Arguments

Name	Type	Description	Required	Default
serial_num	string	The host port number used by the current connection	Yes	

Returns

Display result: bool

Example

Code

```python
from zcts import *

comports='COM186'
a = disp_port_statistics(comports)
print(a)
```

Output

```
[DISP_PORT_STATISTICS{ok}]

========================= Port Statistics =========================

BRR1:

  RX      packets 0       bytes 0 (0.0 KB)

          errors 0        dropped 0

  TX      packets 0       bytes 0 (0.0 KB)

          errors 0        dropped 0


BRR2:

  RX      packets 295     bytes 40320 (40.3 KB)
```

```
        errors 0         dropped 0
  TX    packets 0        bytes 0 (0.0 KB)
        errors 0         dropped 0


ETH1:
  RX    packets 0        bytes 0 (0.0 KB)
        errors 0         dropped 0
  TX    packets 0        bytes 0 (0.0 KB)
        errors 0         dropped 0


ETH2:
  RX    packets 0        bytes 0 (0.0 KB)
        errors 0         dropped 0
  TX    packets 0        bytes 0 (0.0 KB)
        errors 0         dropped 0


True
```

3.9 set_op_mode

Set the configuration of operation mode.

Notice: this setting can only be persistent after save_config()

Arguments

Name	Type	Description	Required	Default
serial_num	string	The host port number used by the current connection	Yes	
mode	integer	0: mode 0; 1: mode 1; 2: mode 2; 3: mode 3	Yes	

Returns

Set the configuration of operation mode: bool

Example

Code

```
from zcts import *

a = set_op_mode('COM186',1)
print(a)
```

Output

```
[SET_OP_MODE{1}]

True
```

3.10 get_op_mode

Get operation mode

Arguments

Name	Type	Description	Required	Default
serial_num	string	The host port number used by the current connection	Yes	

Returns

Currently Operation Mode: list[enable, config, status]

Parameters Name	Type	Value	Description
enable	str	0: Manual Mode 1: Program Mode	Current Manual Mode Setting
config	str	-1: default 0: mode 0; 1: mode 1 2: mode 2; 3: mode 3	Operation Mode setting in configuration
status	str	0: mode 0; 1: mode 1 2: mode 2; 3: mode 3	current Operation Mode setting status

Example

Code

```python
from zcts import import *

a = get_op_mode('COM186')
print(a)
```

Output

```
[GET_OP_MODE{1, 2, 1}]

['1', ' 2', ' 1']
```

3.11 set_eth_speed
Set ETH speed

Notice: this setting can only be persistent after save_config() command is issued

Arguments

Name	Type	Description	Required	Default
serial_num	string	The host port number used by the current connection	Yes	
port	integer	1: ETH 1; 2: ETH 2	Yes	
speed	integer	100: 100M; 1000: 1000M	Yes	

Returns
Set ETH Speed result: bool

Example
Code
```
from zcts import *

a = set_eth_speed('COM186',1,100)
print(a)
```

Output
```
[SET_ETH_SPEED{1,100}]

True
```

3.12 get_eth_speed

Get Eth speed

Arguments

Name	Type	Description	Required	Default
serial_num	string	The host port number used by the current connection	Yes	
port	int	1: ETH 1; 2: ETH 2	Yes	

Returns

Get list of the Configuration of ETH Speed in Ram and current Setting: list[port,config,status]

Parameters Name	Type	Value	Description
port	str	1: ETH 1; 2: ETH 2 (GE)	ETH port
config	str	-1: default 100: 100M 1000: 1000M	Configuration of ETH Speed in Ram
status	str	10: 10M; 100: 100M; 1000: 1000M	Current ETH Speed

Example

Code

```
from zcts import *

a = get_eth_speed('COM186',1)
print(a)
```

Output

```
[GET_ETH_SPEED{1,100,10}]

['1', '100', '10']
```

3.13 set_eth_down

Set ETH Operator of Force Down
Notice: this setting can only be persistent after save_config() command is issued

Arguments

Name	Type	Description	Required	Default
serial_num	string	The host port number used by the current connection	Yes	
port	integer	1: ETH1; 2: ETH2	Yes	
com	integer	0: not down; 1: down	Yes	

Returns

Set ETH Operator of Force Down result: bool

Example

Code

```
from zcts import *

a = set_eth_down('COM186',1,0)
print(a)
```

Output

```
[SET_ETH_DOWN{1, 0}]

True
```

3.14 get_eth_down

Get Eth operator of force down

Arguments

Name	Type	Description	Required	Default
serial_num	string	The host port number used by the current connection	Yes	
port	integer	1: ETH 1; 2: ETH 2	Yes	

Returns

Get list of Currently ETH Operator of Force Down: list[port,config,status]

Parameters Name	Type	Value	Description
port	str	1: ETH 1; 2: ETH 2	ETH port
config	str	-1: default 0: not down; 1: down	Configuration of Force Down in Ram
status	str	0: not down; 1: down	Current Link Status of ETH

Example

Code

```python
from zcts import *

a = get_eth_down('COM186',1)
print(a)
```

Output

```
[GET_ETH_DOWN{1, 0, 0}]

['1', ' 0', ' 0']
```

3.15 set_brr_speed

Set the Configuration of BRR Speed
Notice: this setting can only be persistent after save_config()

Arguments

Name	Type	Description	Required	Default
serial_num	string	The host port number used by the current connection	Yes	
port	integer	1: BRR 1 2: BRR 2	Yes	
speed	integer	100: 100M 1000: 1000M	Yes	

Returns

Set BRR Speed result: bool

Example

Code

```python
from zcts import *

a = set_brr_speed('COM186',1,1000)
print(a)
```

Output

```
[SET_BRR_SPEED{1,1000}]

True
```

3.16 get_brr_speed
Get BRR speed

Arguments

Name	Type	Description	Required	Default
serial_num	string	The host port number used by the current connection	Yes	
port	integer	1: BRR 1; 2: BRR 2	Yes	

Returns

Get list of currently Get BRR Speed: list[port,config,status]

Parameters Name	Type	Value	Description
port	str	1: BRR 1; 2: BRR 2	BRR port
config	str	-1: default 100: 100M; 1000: 1000M	Configuration of BRR Speed in Ram
status	str	100: 100M; 1000: 1000M	Current BRR Speed

Example

Code

```
from zcts import *

a = get_brr_speed('COM186',1)
print(a)
```

Output

```
[GET_BRR_SPEED{1,1000,1000}]

['1', '1000', '1000']
```

3.17 set_brr_down

Set BRR Operator of Force Down

Arguments

Name	Type	Description	Required	Default
serial_num	string	The host port number used by the current connection	Yes	
port	integer	1: BRR 1; 2: BRR 2	Yes	
com	integer	0: not down; 1: down	Yes	

Returns

Set BRR Operator of Force Down result: bool

Example

Code

```
from zcts import *

a = set_brr_down('COM186',1,0)
print(a)
```

Output

```
[SET_BRR_DOWN{1, 0}]

True
```

3.18 get_brr_down

Get BRR Operator of Force Down

Arguments

Name	Type	Description	Required	Default
serial_num	string	The host port number used by the current connection	Yes	
port	integer	1: BRR 1; 2: BRR 2	Yes	

Returns

Get list of the Configuration of the Operator of Force Down: list[port,config,status]

Parameters Name	Type	Value	Description
port	str	1: BRR 1; 2: BRR 2	BRR port
config	str	-1: default 0: not down; 1: down	Configuration of Force Down in Ram
status	str	0: not down; 1: down	Current Link Status of BRR

Example

Code

```
from zcts import *

a = get_brr_down('COM186',1)
print(a)
```

Output

```
[GET_BRR_DOWN{1, 0, 0}]

['1', ' 0', ' 0']
```

3.19 set_brr_role

Set the Configuration of BRR Role
Notice: this setting can only be persistent after save_config().

Arguments

Name	Type	Description	Required	Default
serial_num	string	The host port number used by the current connection	Yes	
port	integer	1: BRR 1; 2: BRR 2	Yes	
com	integer	0:master; 1:slave	Yes	

Returns

Set BRR Role result: bool

Example

Code

```python
from zcts import *

a = set_brr_role('COM186',1,0)
print(a)
```

Output

```
[SET_BRR_ROLE{1, 0}]

True
```

3.20 get_brr_role

Get the Configuration of BRR Role and current Role status.

Arguments

Name	Type	Description	Required	Default
serial_num	string	The host port number used by the current connection	Yes	
port	integer	1: BRR 1; 2: BRR 2	Yes	

Returns

Get list of currently Get BRR Role: list[port,config,status]

Parameters Name	Type	Value	Description
port	str	1: BRR 1; 2: BRR 2	BRR port
config	str	-1: default 0: master; 1: slave	BRR Role of Master or Slave in Ram
status	str	0: master; 1: slave	Current BRR Role of Master or Slave

Example

Code

```python
from zcts import *

a = get_brr_role('COM186',1)
print(a)
```

Output

```
[GET_BRR_ROLE{1, 1, 1}]

['1', ' 1', ' 1']
```

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3.21 set_brr_mode

Set the Configuration of BRR mode

Notice: this setting can only be persistent after save_config()

Arguments

Name	Type	Description	Required	Default
serial_num	string	The host port number used by the current connection	Yes	
port	integer	1: BRR 1; 2: BRR 2	Yes	
com	integer	0:ieee-compliant 1:legacy	Yes	

Returns

Set BRR Mode result: bool

Example

Code

```
from zcts import *

a = set_brr_mode('COM186',1,0)
print(a)
```

Output

```
[SET_BRR_MODE{1, 0}]

True
```

3.22 get_brr_mode

Get BRR mode

Arguments

Name	Type	Description	Required	Default
serial_num	string	The host port number used by the current connection	Yes	
port	integer	1: BRR 1; 2: BRR 2	Yes	

Returns

Get list of currently Get BRR Mode: list[port,config,status]

Parameters Name	Type	Value	Description
port	str	1: BRR 1; 2: BRR 2	BRR port
config	str	-1: default 0: ieee-compliant; 1: legacy	BRR Mode in Ram
status	str	0: ieee-compliant; 1: legacy	Current BRR Mode status

Example

Code

```python
from zcts import *

a = get_brr_mode('COM186',1)
print(a)
```

Output

```
[GET_BRR_MODE{1, 0, 0}]

['1', ' 0', ' 0']
```

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