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Note: There may be some changes between versions. So, your software may look a bit different from this manual.

Before Start

Hardware Connection

Attention:

Please make sure *MDC* and *MDIO* signals of target board are 3.3V Tolerant, otherwise you could NOT use WH-USB-HiJTAG cable. Please read cable and software user manual before starting. Please obey safety requirements and operating instruction of your target system at any time.

- 1. Power off the target board.
- 2. Disconnect USB cable from your computer.
- 3. Connect GND, MDC and MDIO to the target board (no power supply from target board if you are using WH-USB-HiJTAG cable. For other cables, please check user manual).
- 4. Connect USB cable to your computer.
- 5. Power on the target board.

Run the Software

Clicking loader.exe to start. You should see this main dialog:

| Cable Speed 921600 Set PHY Addr 0x0f |
|---|
| PHY Addr Øx0f |
| |
| Reg Addr 0x00 Read Number 26 Read |
| Reg Value 0x0001 Write |
| Г |
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| · |

Here We Go

Set Cable Description

| 🔆 EthCfg Allo | wOtherCable | - • × |
|---|---|-----------|
| Cable Speed | 921600 Set Description USB <-> Serial Cable A | Delay 0 0 |
| PHY Addr | 0x0f | |
| Reg Addr | 0x00 Read Number 26 Read | |
| Reg Value | 0x0001 Write | |
| Address : 000000000 : 000000008 : 000000010 : 000000018 : | 0 1 2 3 4 5 6 7 ASCII 0100 0302 0504 0706 0908 0b0a 0d0c 0f0e 1110 1312 1514 1716 1918 1b1a 1d1c 1f1e 2120 2322 2524 2726 2928 2b2a 2d2c 2f2e 3130 3332 3534 3736 3938 3b3a | |

- If you are using the official cable, please skip this section.
- If this feature is not enabled in your software, you could not this is textbox. Please use the official cable.

• If you are not using the official cable and your supported supports it, please enter cable description of your cable.

When the software failed when checking cables (the error code is 1), it will show you the detected description. Please fill the cable description which is connected to your MDIO (**Cable Description** is the string after "Device n is ", n is zero based). See screenshot below:



In this example, the 1st channel is connected to MDIO, so the cable description should be RS232R USB A. See screenshot below:

| Cable Speed 921600 Set Description RS232R USB A Pelay 0 PHY Addr 0x0f Reg Addr 0x00 Read Number 26 Read Reg Value 0x0001 Write Address : 0 1 2 3 4 5 6 7 8 9 A B C D E F ASCII 000000000 : | 0 |
|---|---|
| PHY Addr Øx0f Reg Addr Øx00 Read Number 26 Read Reg Value Øx0001 Write Write Address : 0 1 2 3 4 5 6 7 8 9 A B C D E F ASCII Address : 0 1 2 3 4 5 6 7 8 9 A B C D E F ASCII 0000000000 : Image: Comparison of the second | |
| Reg Addr Øx00 Read Number 26 Read Reg Value Øx0001 Write Write Address : 0 1 2 3 4 5 6 7 8 9 A B C D E F ASCII 000000000000000000000000000000000000 | |
| Reg Value 0x0001 Write Address : 0 1 2 3 4 5 6 7 8 9 A B C D E F ASCII 000000000000000000000000000000000000 | |
| Address : 0 1 2 3 4 5 6 7 8 9 A B C D E F ASCII 000000000 : | |
| | * |

Note: Sometimes you may see no description is displayed. Here is an example:



There are two main reasons:

1, The USB device is enumerating.

2, The USB device is occupied by other program (e.g. another instance of EthCfg, or other terminal software using USB COM ports).

Cable Speed

| 20 20 | | EthCf | g AllowOtherCable | - | × |
|-------------|--------|-------------|-------------------|---|-----|
| Cable Speed | 921600 | Set | | | |
| PHY Addr | 0x0f | | - | | |
| Reg Addr | 0x00 | Read Number | 26 Read | | |
| Reg Value | 0×0001 | Write | | | |
| | | | | | < |
| 1 | | | | | 11. |

Default value is OK. No change is needed at most time.

If the cable speed is set properly, you will see a message box like below:



PHY Address

| 34 34 | EthCfg AllowOtherCable | - | x |
|----------------|-------------------------|---|--------|
| Cable Speed 92 | 21600 Set | | |
| PHY Addr 0 | x0f | | |
| Reg Addr 0> | x00 Read Number 26 Read | | |
| Reg Value | x0001 Write | | |
| | | | ^ |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | \sim |
| | | | 11. |

Input PHY address. Decimal and Hex are both accepted.

Read Register Value

| Cable Speed 921600 Set | |
|--|----|
| PHY Addr 10x0f | |
| Reg Addr 20x00 Read Number 26 3 Read 4 | |
| Reg Value Øx0001 Write | |
| | ^ |
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Check **PHY Address**, input **Register Address**, input **Register Numbers** to be read (you can read multi registers one time), then click **Read** button. Register values will be displayed if read successfully.

Write Register

| 1944 1947 | EthCfg AllowOtherCable | × |
|--------------------|------------------------|--------|
| Cable Speed 921600 | Set | |
| PHY Addr 10x0f |] | |
| Reg Addr 20x00 | Read Number 26 Read | |
| Reg Value 3 0x0001 | Write 4 | |
| | | ^ |
| | | |
| | | |
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| | | |
| | | \sim |
| | | 11. |

Check **PHY Address**, input **Register Address**, input **Register Value** to be written, then click **Write** button. A message box is popped if write successfully.



Error Codes

| Error | Error Info | Possible Causes | Suggestions |
|-------|--------------------------|-------------------------|--|
| Code | | | |
| 1 | Initialization failed. | No cable detected; | Please check cable connections and try again; If |
| | | | the cable was once plugged out, please exit the |
| | | | software and run again. |
| 2 | Transmit address failed. | Bad cable; | Use a good cable; |
| | | Target board H/W issue; | Check target board H/W; |

| 3 | Read turn around failed. | Bad cable; | Use a good cable; |
|----|------------------------------------|-------------------------|---|
| | | Target board H/W issue; | Check target board H/W; |
| 4 | Read data failed. | Bad cable; | Use a good cable; |
| | | Target board H/W issue; | Check target board H/W; |
| 5 | Write data failed. | Bad cable; | Use a good cable; |
| | | Target board H/W issue; | Check target board H/W; |
| 6 | Set cable speed failed. | Bad cable; | Use a good cable; |
| 7 | Cfg cable failed when reading | Bad cable; | Use a good cable; |
| 8 | Cfg cable failed when reading | Bad cable; | Use a good cable; |
| 9 | Set clock high failed when reading | Bad cable; | Use a good cable; |
| 10 | Read input data failed | Bad cable; | Use a good cable; |
| 11 | Set clock low failed when reading | Bad cable; | Use a good cable; |
| 12 | Check cable failed | No cable detected | User a good cable; |
| | | | If you are using 3 rd party cable, please ensure |
| | | | you have set the correct description; |

| Date | Version | Author | Changes |
|------------|---------|--------|--------------------------------------|
| 2015/4/21 | | | Add error code 7 to 12; |
| | | | Add section 'Add Cable Description'; |
| 2015/4/18 | | | Add error code 6; |
| 2014/11/18 | | | First Release; |

Revision History: