

User Guide – ARM ICE to Program Serial Flash with BCM5301x

Version 0.1

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Revision History

Version	Comments	Date
0.1	Initial Release	June 14, 2012

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1 Requirements

1. BCM5301x board with a serial flash
2. ARM RealView ICE
3. ARM RealView Debugger software v4.0 or later
4. Broadcom supplied ICE script: `program_sflash.inc`
5. The file to be programmed into the serial flash

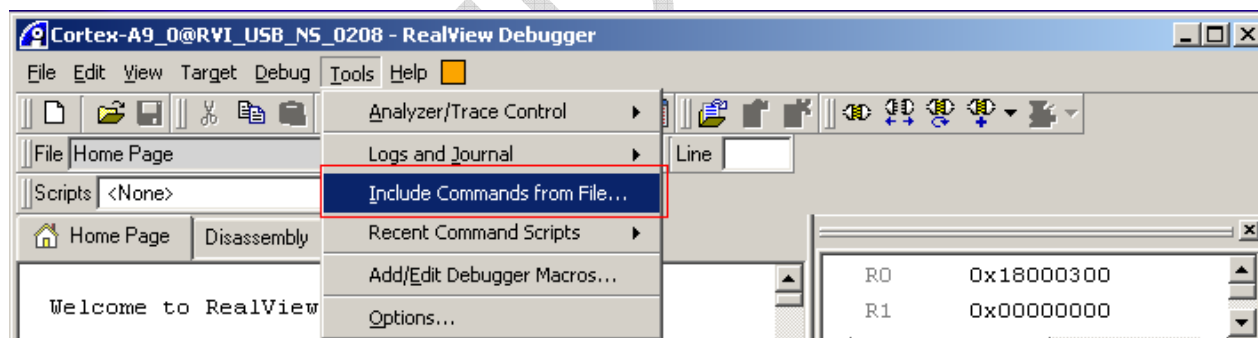
2 Instructions to program the serial flash

2.1 Connect the RealView ICE to the target

Please follow instructions in Appendix A to setup a connection and connect to the target.

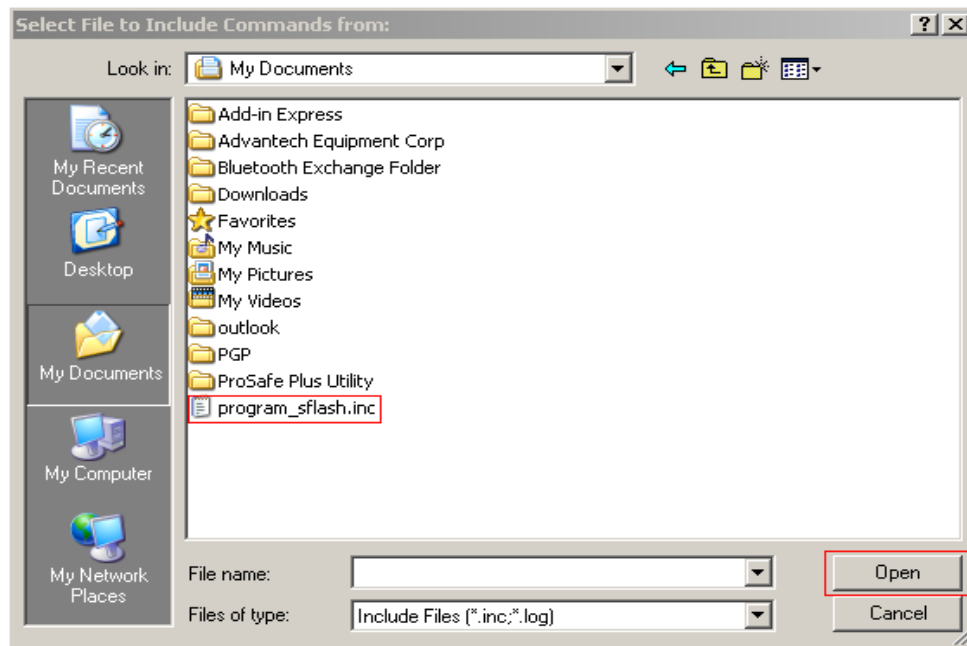
2.2 Execute the Broadcom supplied ICE script `program_sflash.inc`

1. Select **Tools** → **Include Commands from File**

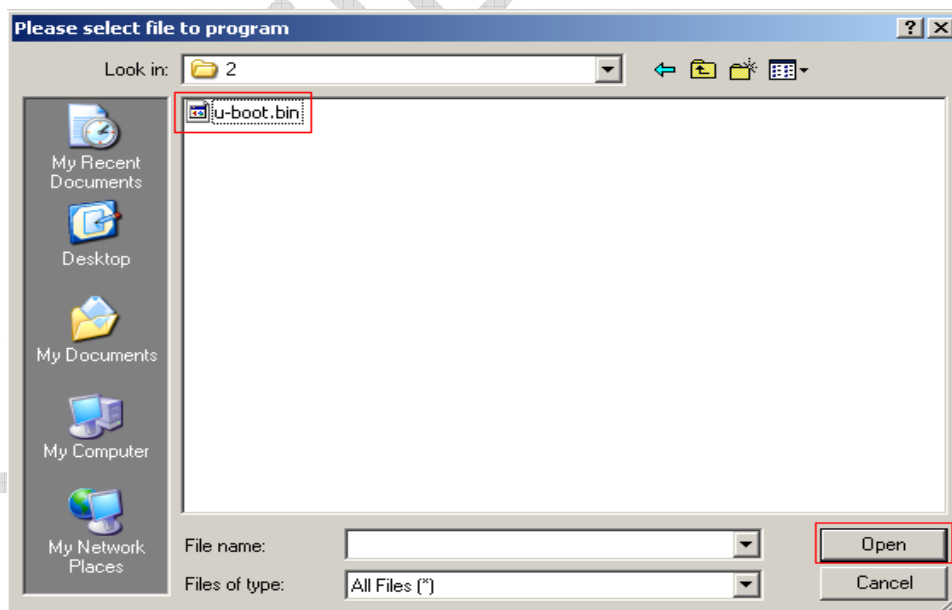


2. Select the Broadcom supplied script `program_sflash.inc` in the file selection dialog and click **Open** (or simply double click on the script).



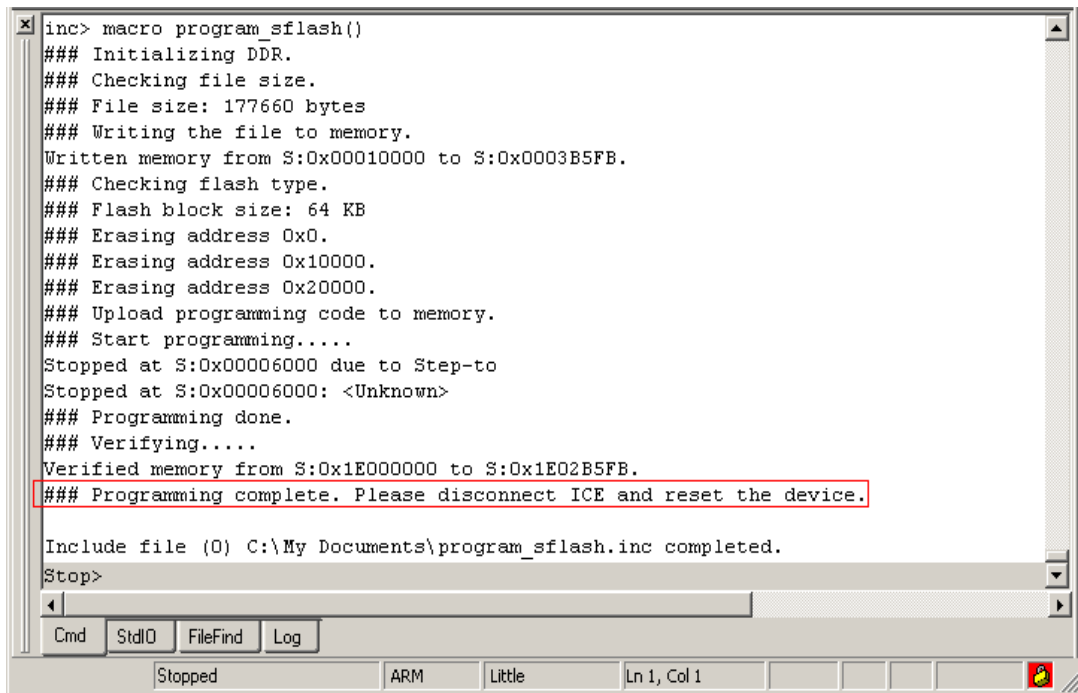


2.3 Select the image file to be programmed when a file selection dialog appears.



2.4 The script will perform necessary steps to program the file to the serial flash.

You can check the progress from the Output panel (usually at the bottom).



```
inc> macro program_sflash()
### Initializing DDR.
### Checking file size.
### File size: 177660 bytes
### Writing the file to memory.
Written memory from S:0x00010000 to S:0x0003B5FB.
### Checking flash type.
### Flash block size: 64 KB
### Erasing address 0x0.
### Erasing address 0x10000.
### Erasing address 0x20000.
### Upload programming code to memory.
### Start programming.....
Stopped at S:0x00006000 due to Step-to
Stopped at S:0x00006000: <Unknown>
### Programming done.
### Verifying.....
Verified memory from S:0x1E000000 to S:0x1E02B5FB.
### Programming complete. Please disconnect ICE and reset the device.

Include file (0) C:\My Documents\program_sflash.inc completed.
Stop>
```

Cmd StdIO FileFind Log

Stopped ARM Little Ln 1, Col 1

2.5 After it's done, disconnect ICE and power off the device.

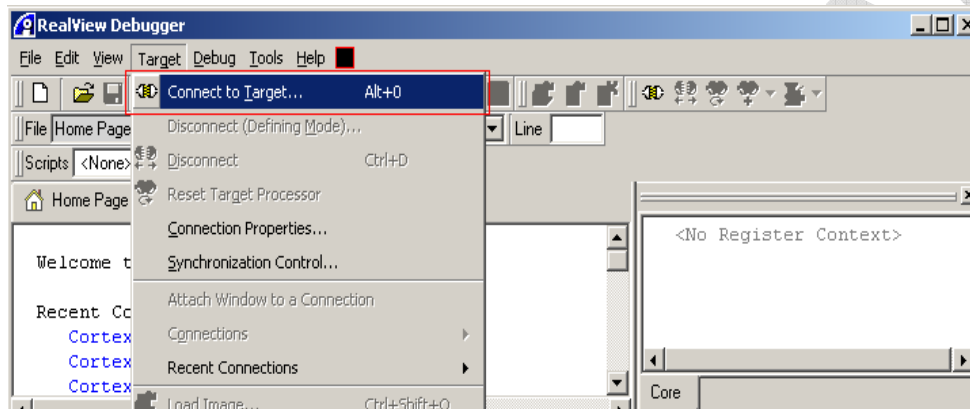
3 Limitations

- 3.1 Files larger than 16MB couldn't be programmed correctly.
- 3.2 Serial flashes that only accept 4-byte addresses are not supported.

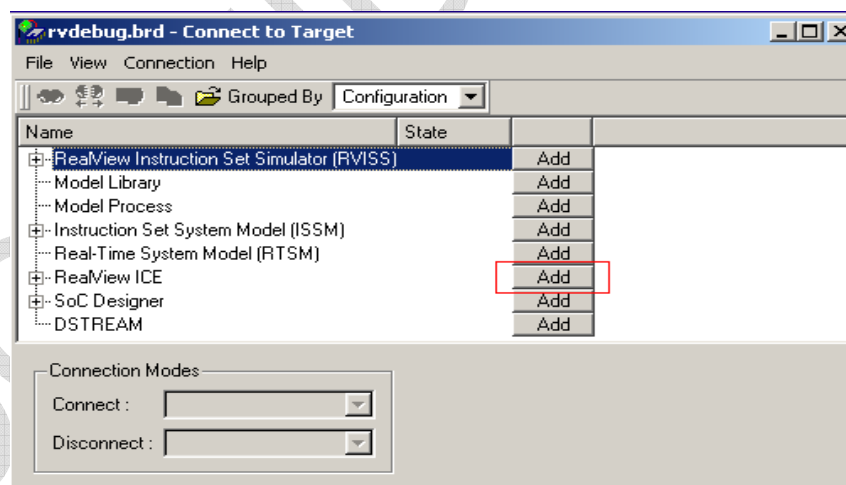


Appendix A. Instructions to create an ICE debugging connection to BCM5301x

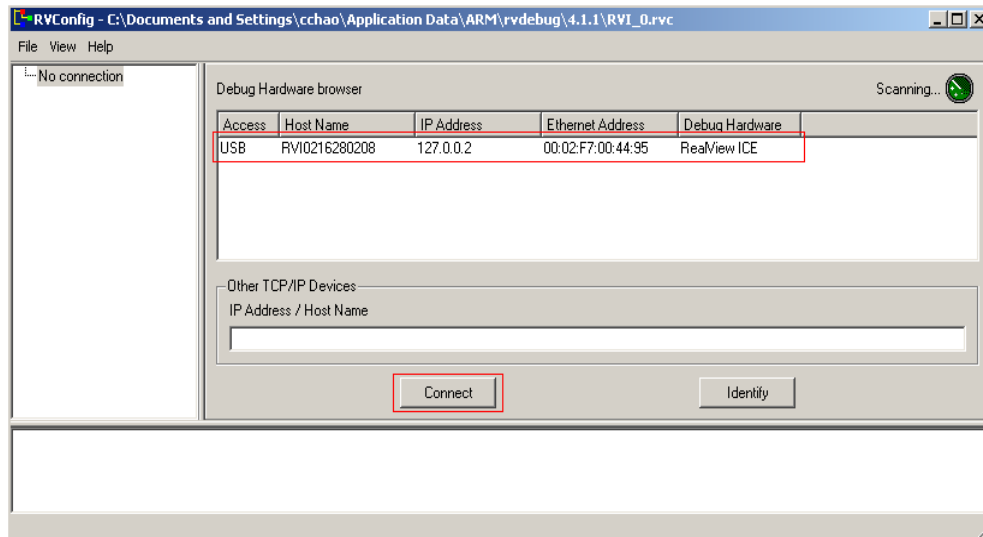
1. Power on RealView ICE, connect JTAG cable to the target and power on the target.
2. In the RealView Debugger, select **Target**→**Connect to Target**



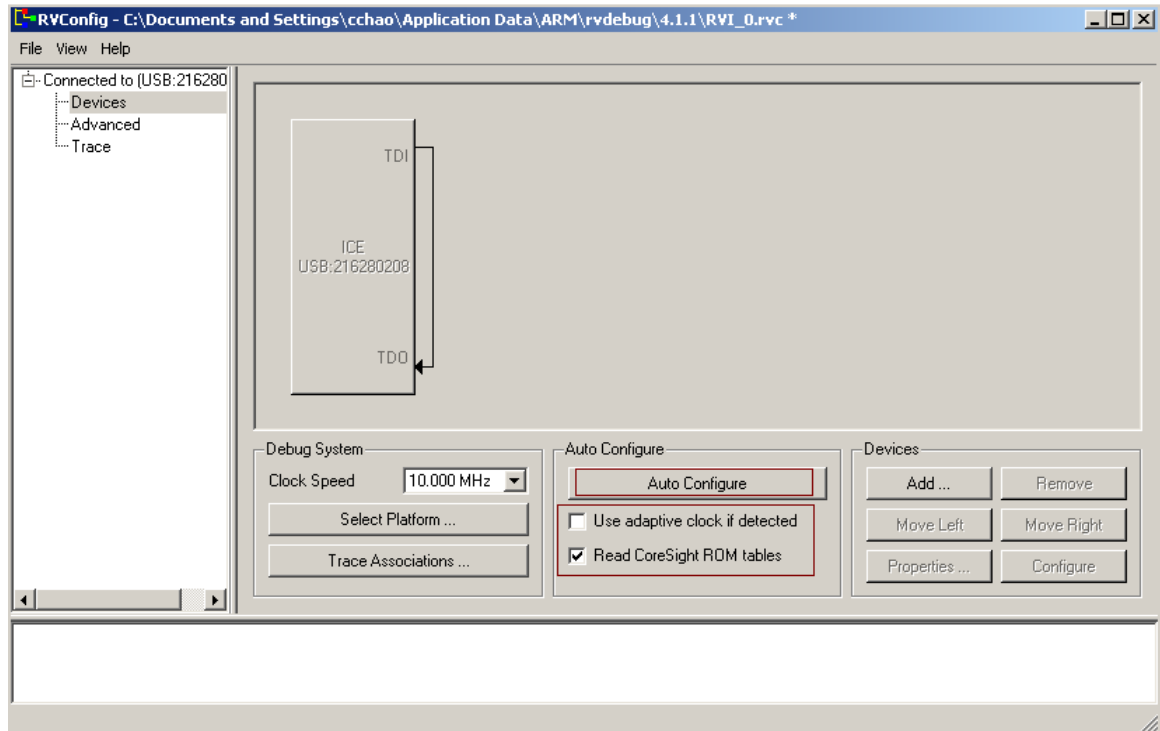
3. A “Connect to Target” dialog will appear. Click the **Add** button for the “RealView ICE”.



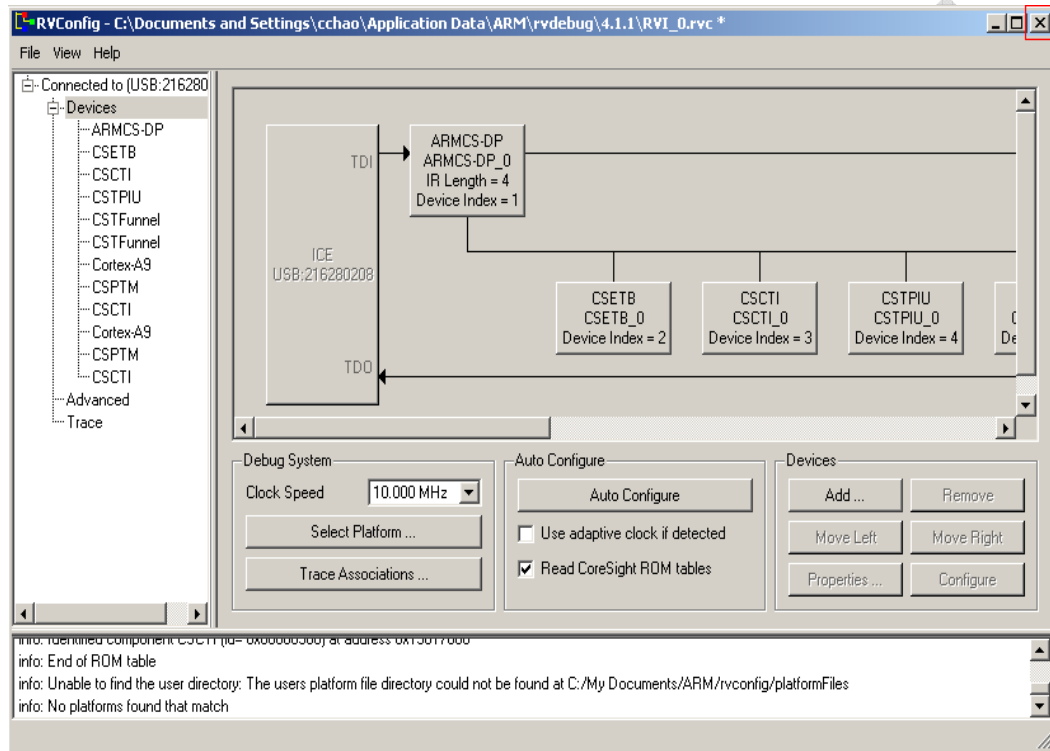
4. A “RVConfig” dialog will appear. Select the RealView ICE you’re using and click “Connect”. If your device is in a remote network, enter the IP address then click “Connect”.



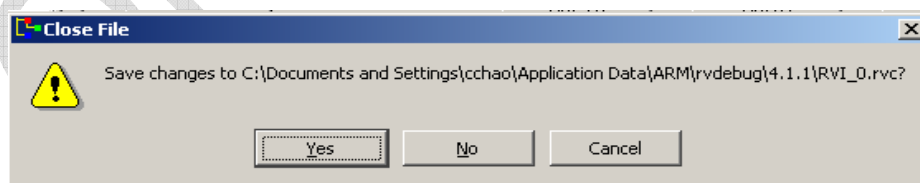
5. The default configuration of the RealView ICE will be shown. Uncheck “*Use adaptive clock if detected*” then click “*Auto Configure*” button.



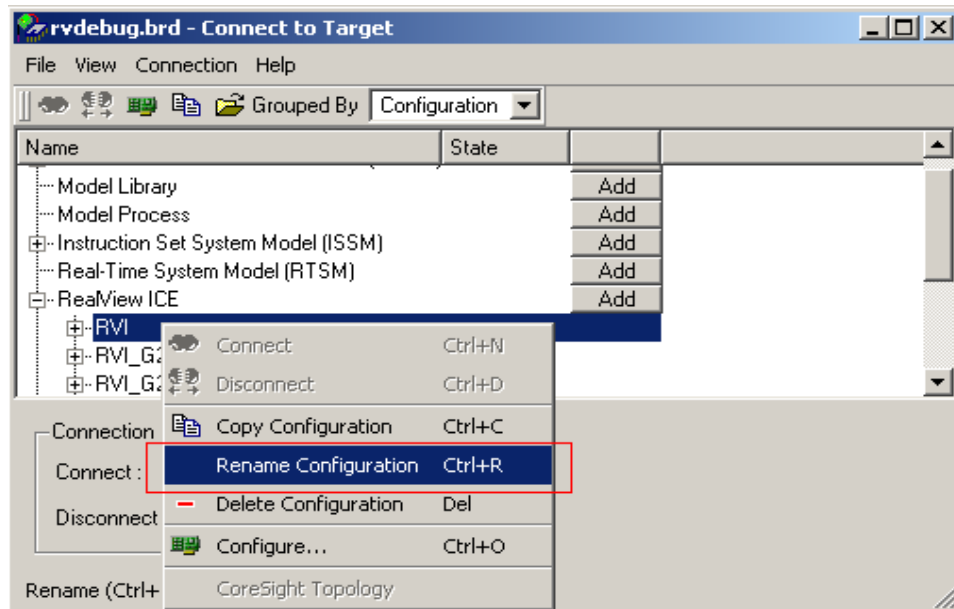
- The RealView ICE will connect to the target and configure it automatically. Now close the dialog by clicking the top-right corner 'x' button.



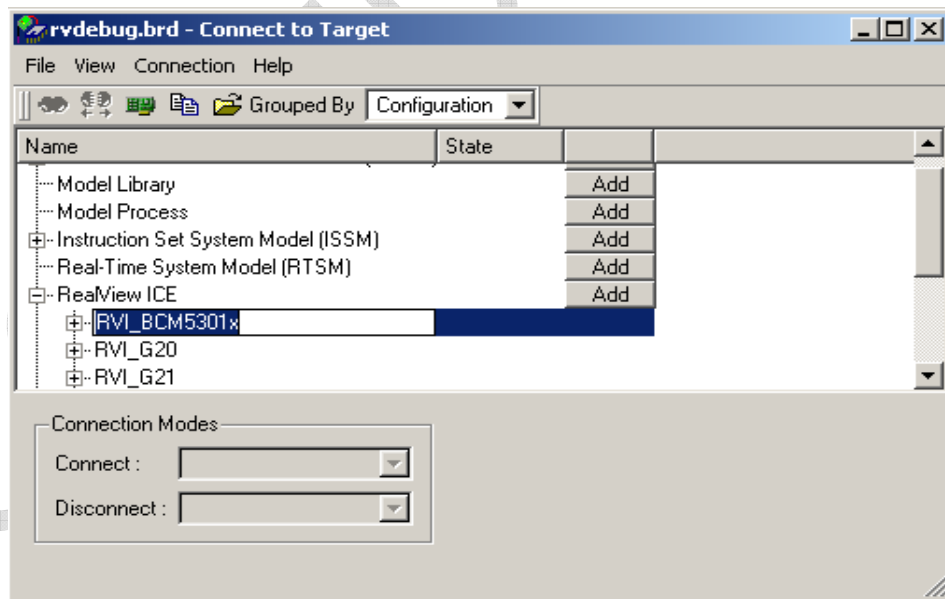
- When the file close confirmation dialog appears, select "Yes" to save the configuration.



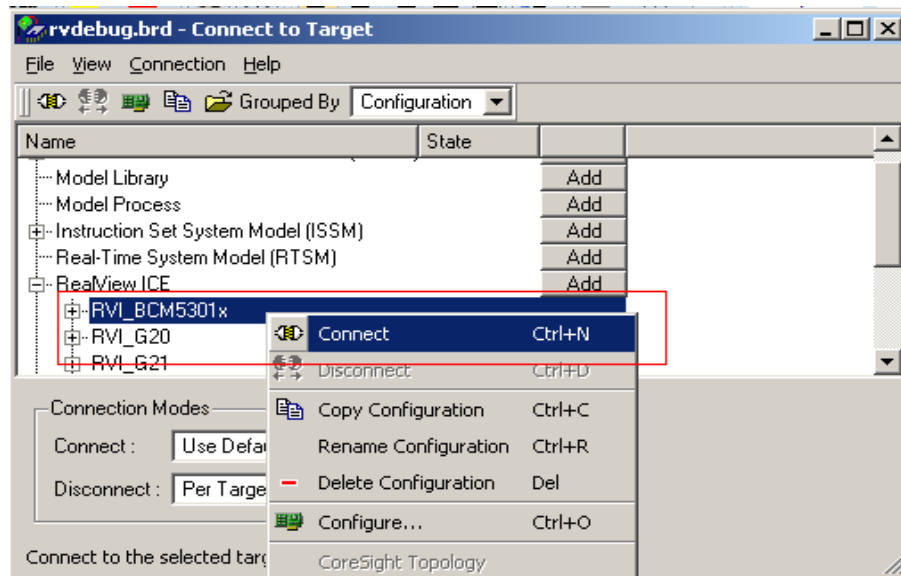
8. For convenience, it's recommended to rename the configuration for easier identification later.



Assume we rename it to be RVI_BCM5301x:



9. To connect to the target, right click on this configuration and select “**Connect**”.



10. You can tell whether it's connected or not by checking the window title of the RealView Debugger.

