

# General Exception Handling

Driving Innovations™

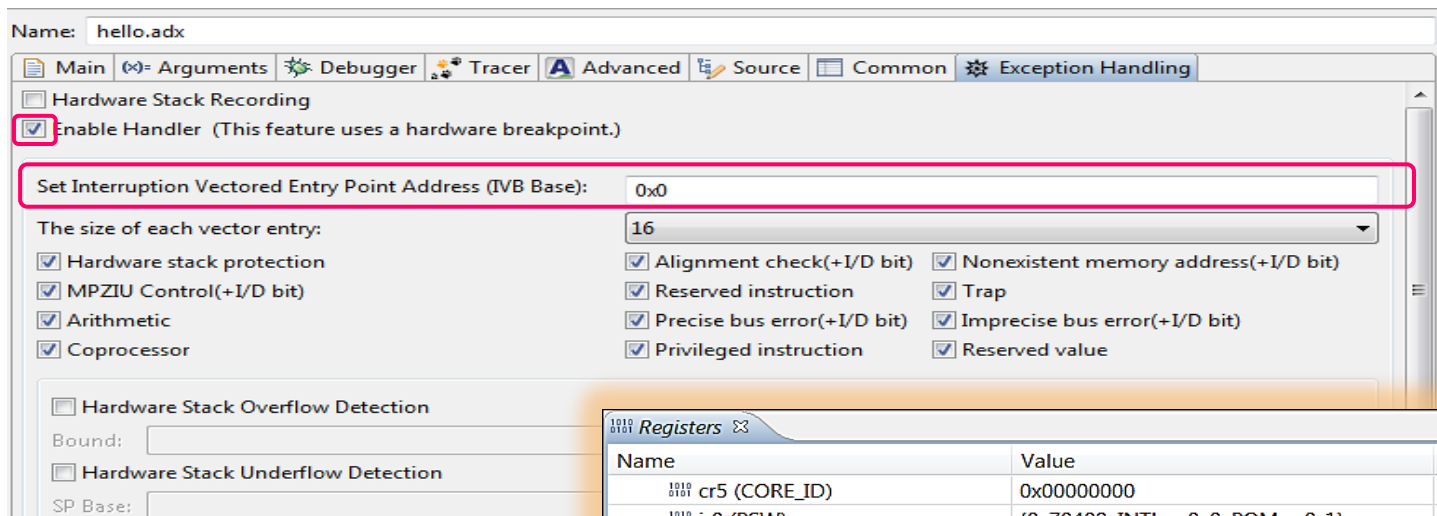


# How to Implement

- ❖ AndeSight™ offers the user a provision to stop program execution when a selected type of general exception occurs.
- ❖ Such a “handler” of specified exception types during program execution consumes a hardware breakpoint if the interrupt vector is in ROM or flash.
- ❖ Go to AndeSight™ window, import the project of interest and build it.
- ❖ Right click on project>Debug Configurations and right click on Application Program to launch a new debug session.
- ❖ Under Exception Handling tab check Enable Handler and assign the handler to a vector address based on the interrupt vector setting in the program.
- ❖ Now select an exception handler item and Debug.

# IVB

- ❖ We can lookup the values in the register view from the debug session.
- ❖ Specifying one or multiple exception types we can catch the exception during program execution.



The screenshot shows the 'Registers' window in a debugger. The 'ir3 (IVB)' register is selected and highlighted with a blue background. The 'Value' column shows '0x480b, ESZ = 0x1, IVBASE = 0x0', with 'ESZ = 0x1, IVBASE = 0x0' highlighted by a red box. Below the table, the details for the 'ir3 (IVB)' register are displayed, including Hex, Decimal, Octal, Binary, Default, and Raw values. The 'Default' value is highlighted with a red box.

Name	Value	Description
cr5 (CORE_ID)	0x00000000	(CORE_ID) Core Identification Register
ir0 (PSW)	{0x70409, INTL = 0x0, POM = 0x1}	(PSW) Processor Status Word Register
ir1 (IPSW)	{0x70009, INTL = 0x0, POM = 0x1}	(IPSW) Interruption PSW Register
ir3 (IVB)	{0x480b, ESZ = 0x1, IVBASE = 0x0}	(IVB) Interruption Vector Base Register
ir4 (EVA)	0x00015C20	(EVA) Exception Virtual Address Register
ir6 (ITYPE)	{0x50363, ETYPE = 0x3, SWID = 0x5}	(ITYPE) Interruption Type Register

Name : ir3 (IVB)  
Hex:{0x480b, ESZ = 0x1, IVBASE = 0x0}  
Decimal:{18443, ESZ = 1, IVBASE = 0}  
Octal:{044013, ESZ = 01, IVBASE = 0}  
Binary:{1001000000001011, ESZ = 1, IVBASE = 0}  
Default:[ ], ESZ = 16 byte, IVBASE = 0  
Raw:0x0000480B

# Result

- ✦ Whenever a specified exception occurs, a dialog pops out notifying the user about its information.

