

The manual of megawin Pack (Keil V5)

Pack

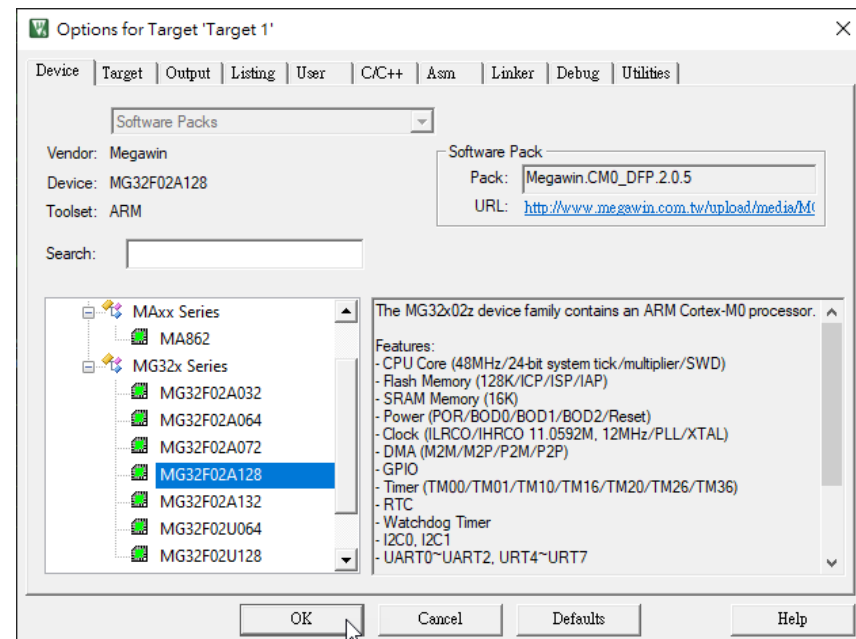
- *Change log*
 - ▣ *V1.0.9*
 - Add MG32F02A032 device
 - ▣ *V2.0.0*
 - Add MG32F02A128/U128/A064/U064 device
 - ▣ *V2.0.5 (the last)*
 - Add/Improve project , Sample code
 - Modify Middleware

purpose

- *Change device*
 - *Adjust corresponding Startup/wizard/driver ...(Auto)*
- *Project Size (smaller)*
 - *Middleware / Driver / Header ... from Pack*
- *NVIC Enable control*
- *IEC60730 support*
 - *Safety Test Library(Class-B)*
- *Sample Code / Example project*

Change Device

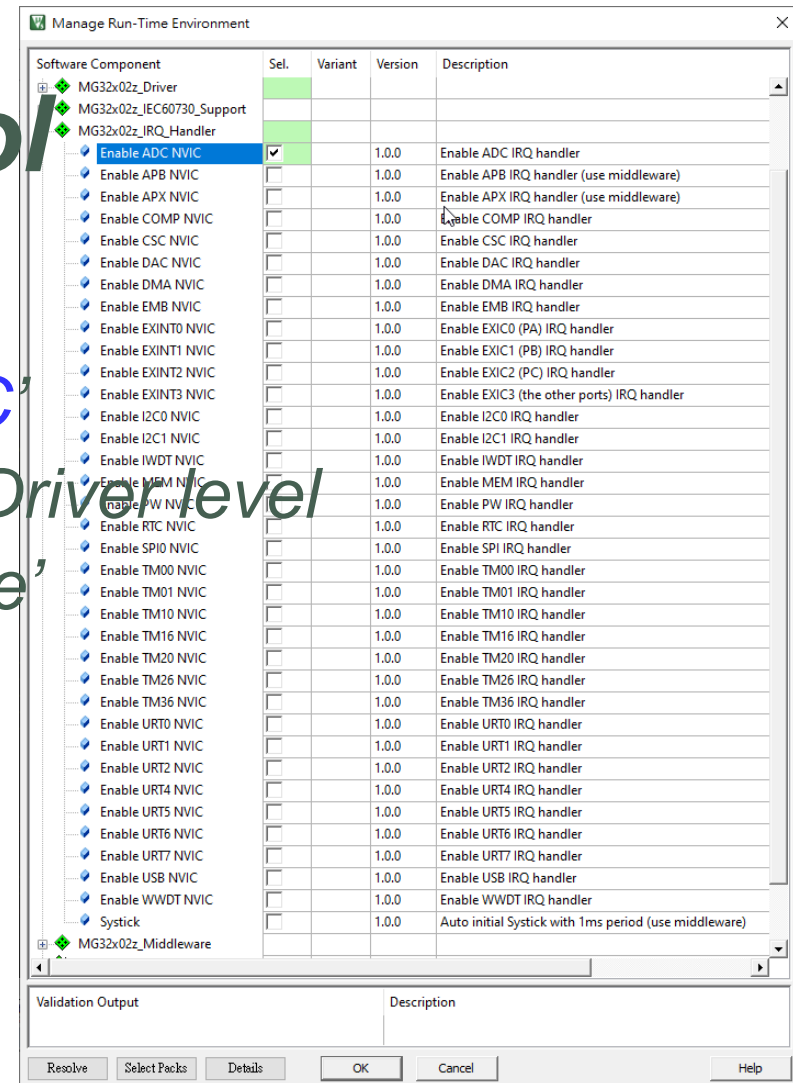
- *Adjust corresponding file (Auto)*
 - *Chip initial(CSC, GPIO...)*
 - *Driver / Middleware*
 - *IEC60730*
 - *NVIC enable item*



NVIC Enable control

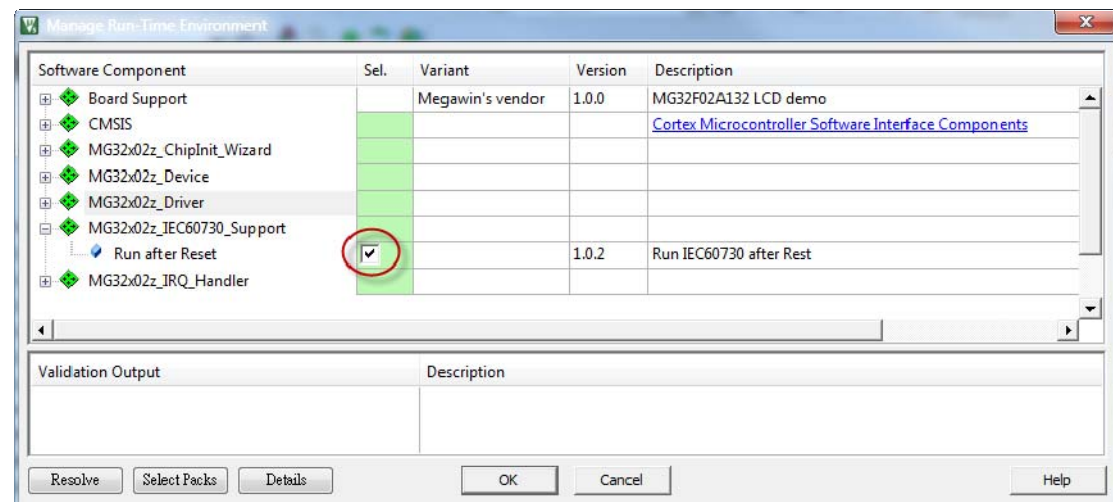
• e.g.:

1. Select '*Enable ADC NVIC*'
2. User offer `ADC_IRQ()` – Driver level
3. from 'User Code Template'



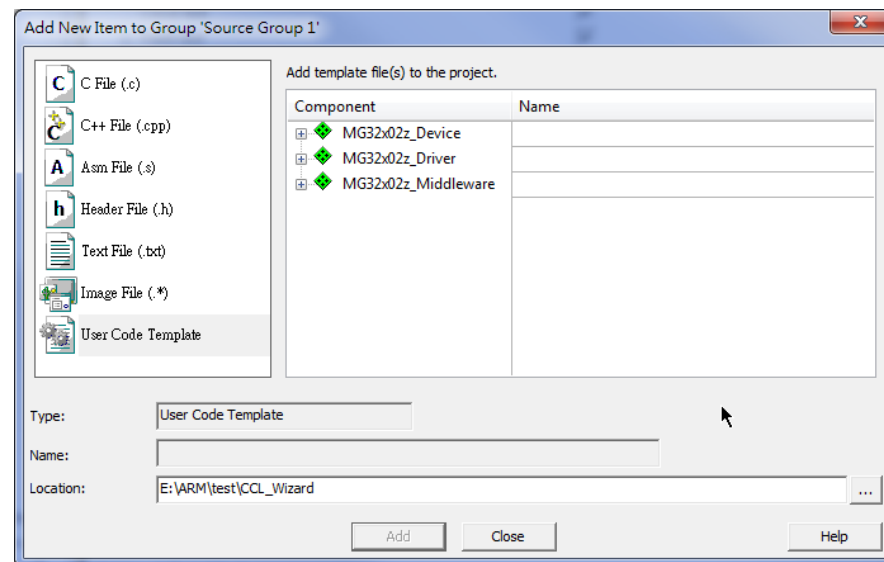
IEC60730 support

- *Enable / Disable*
 - *Safety Test Library (CSC, ADC, CPU, Reg, RAM, Flash, GPIO ...)*



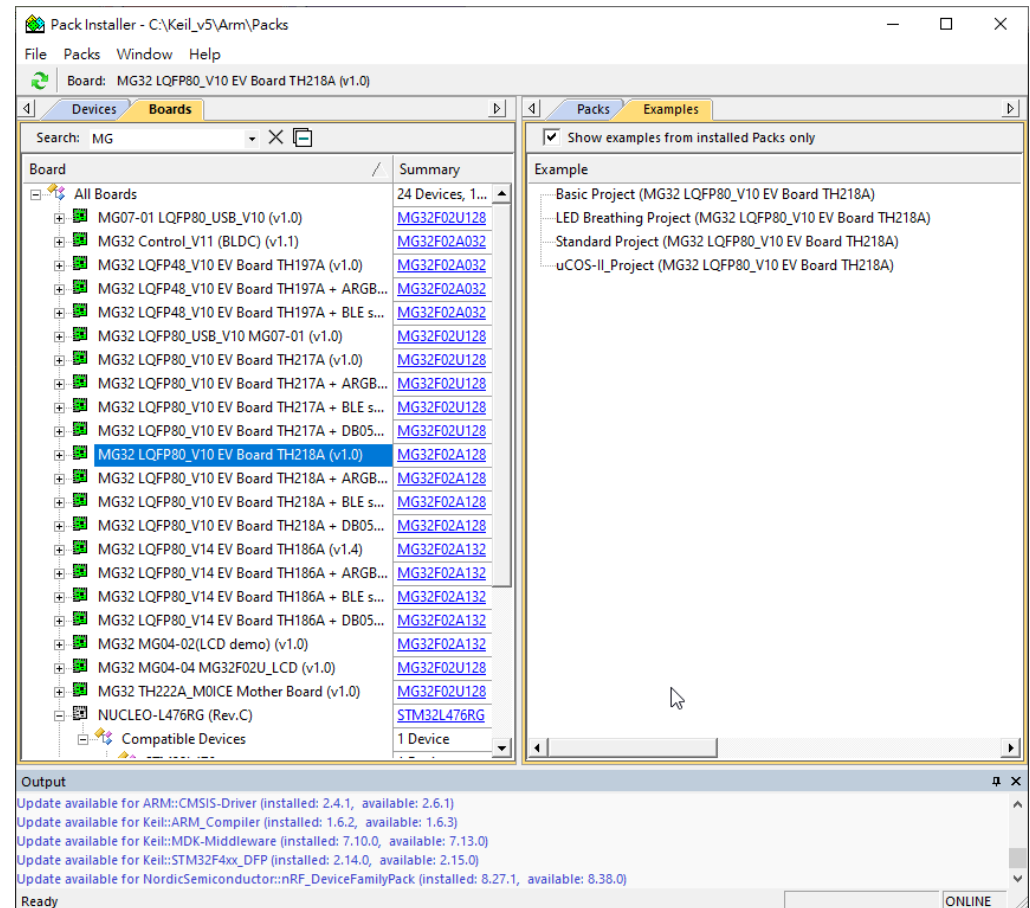
Sample Code

- *Add template file(s)*
 - *Driver level*
 - *Middleware level*



Example Project

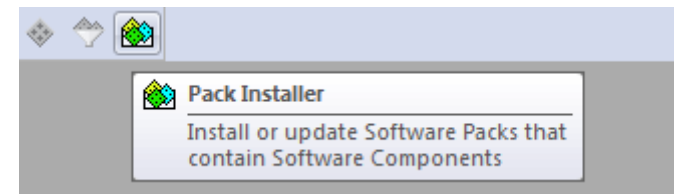
- *LED demo*
- *IEC60730_Pack*
- *Standard Project*
- *Basic Project*
- *BLDC drive*
- *DAC Audio*
- *ARGB(LED)*
- *BLE*
- *USB keyboard / Easy COM*
- *uCOS-II*
- ...



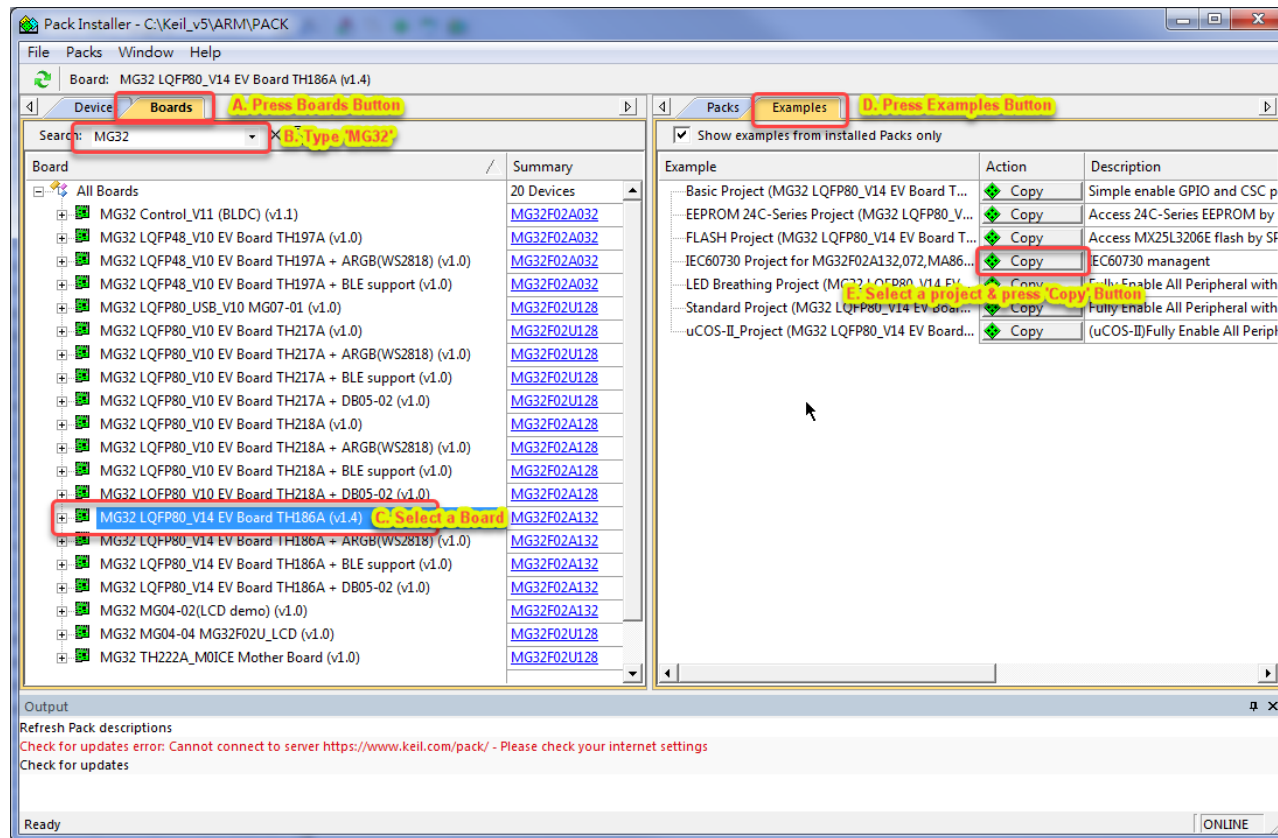
Example project

Demo-1

- *Copy from a example project*
 1. *Press 'Pack installer'*
 2. *Select Board*
 3. *Type 'MG32' in Search line.*
 4. *Select Examples*
 5. *Press Copy*

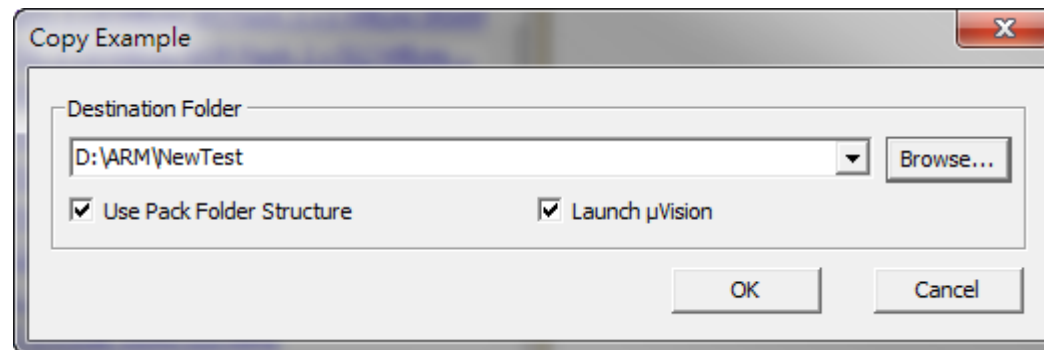


Demo-2



Demo-3

(input folder path)



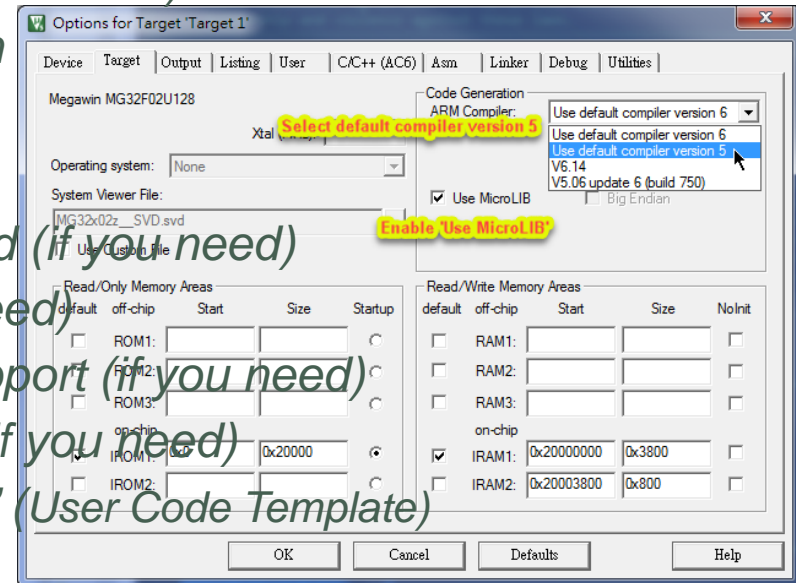
Create a new project

Demo

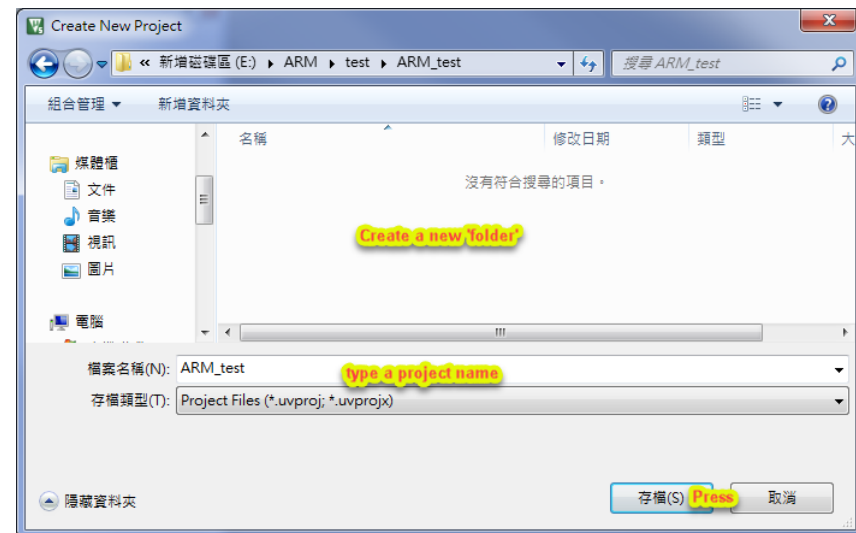
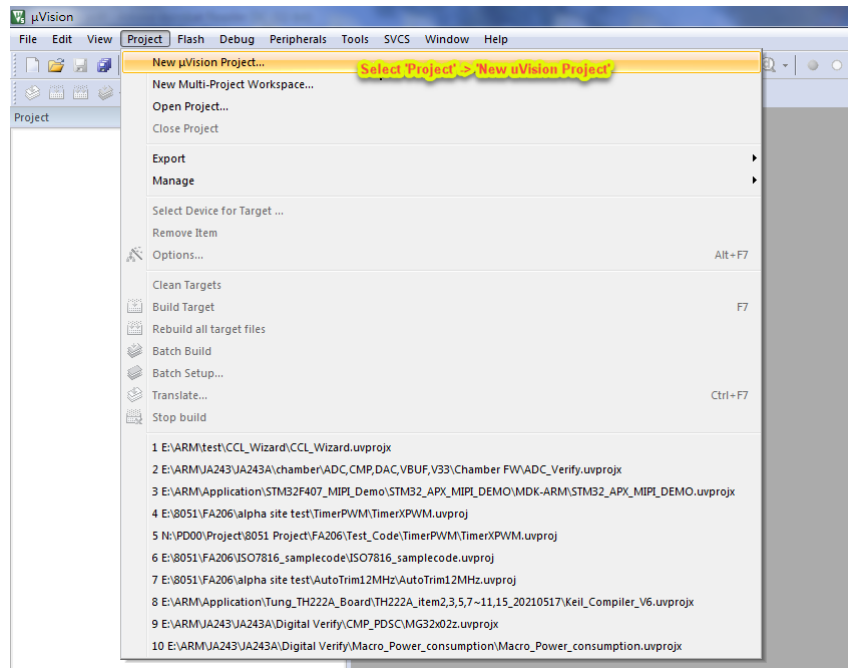
- *Create(Replace) a new project*

- *Major items*

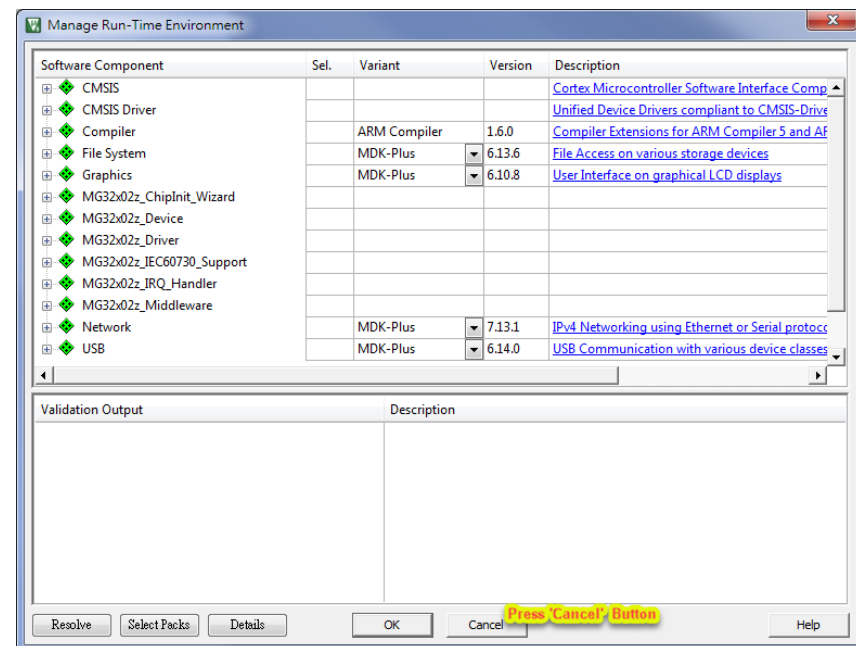
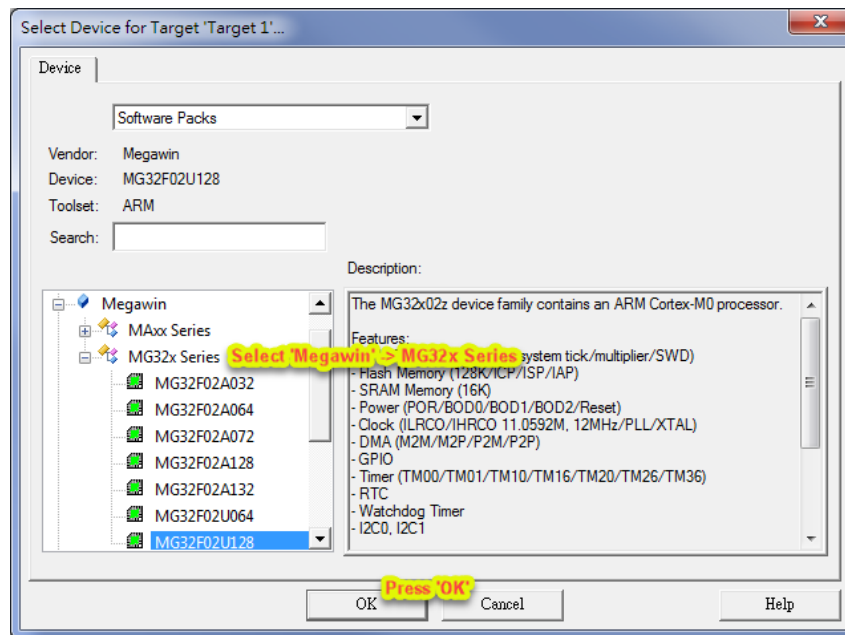
1. *Select device (MA862 / MG32F02A132 ...)*
2. *Enable keil's 'Use MicroLIB' option*
3. *Select CMSIS's CORE*
4. *Select MG32x02z_Device*
5. *Select MG32x02z_ChipInit_Wizard (if you need)*
6. *Select MG32x02z_Driver(if you need)*
7. *Select MG32x02z_IEC60730_Support (if you need)*
8. *Select MG32x02z_IRQ_Handler (if you need)*
9. *Add New Item to 'Source Group 1' (User Code Template)*



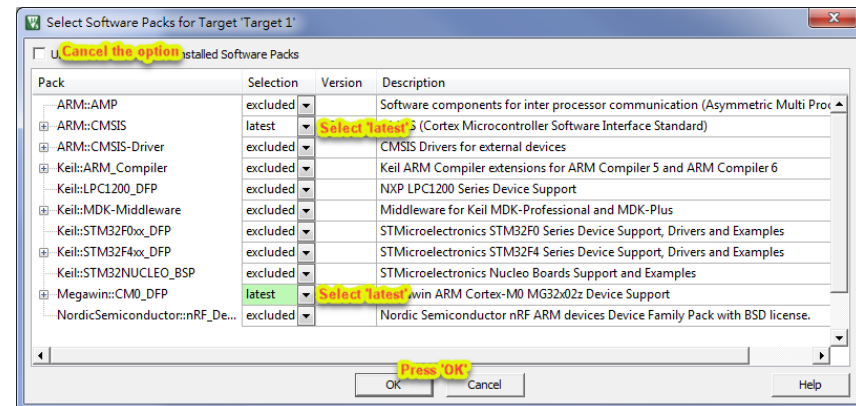
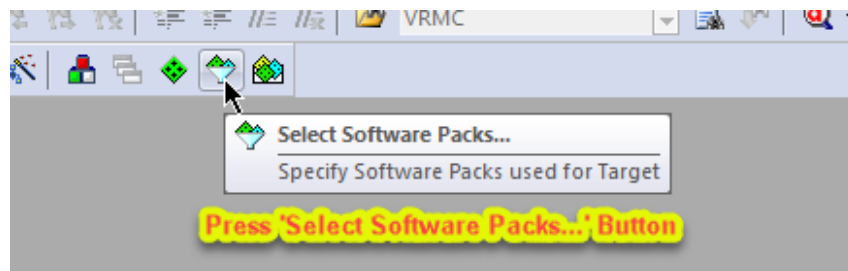
Demo-1



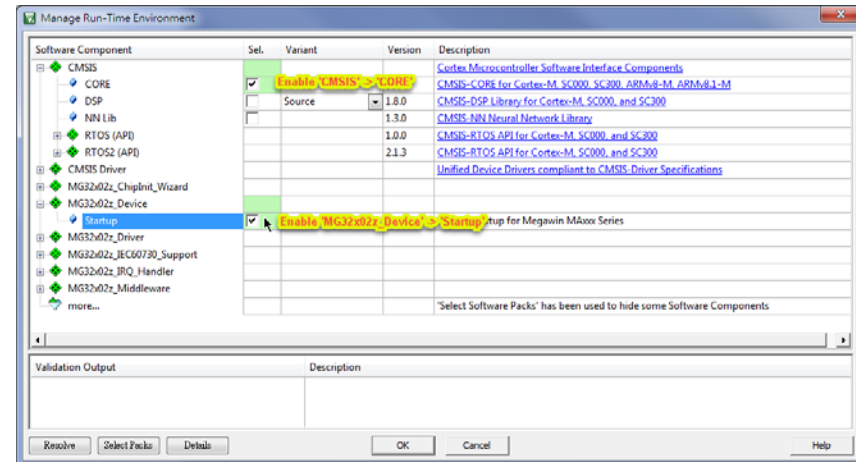
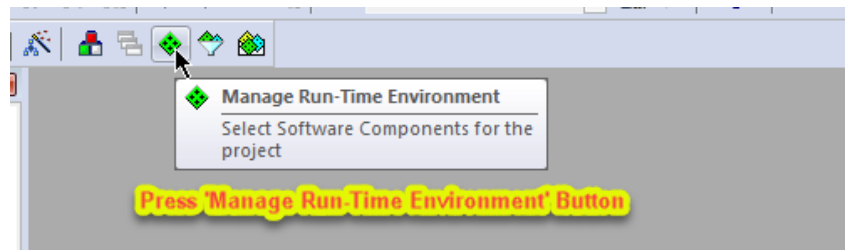
Demo-2



Demo-3

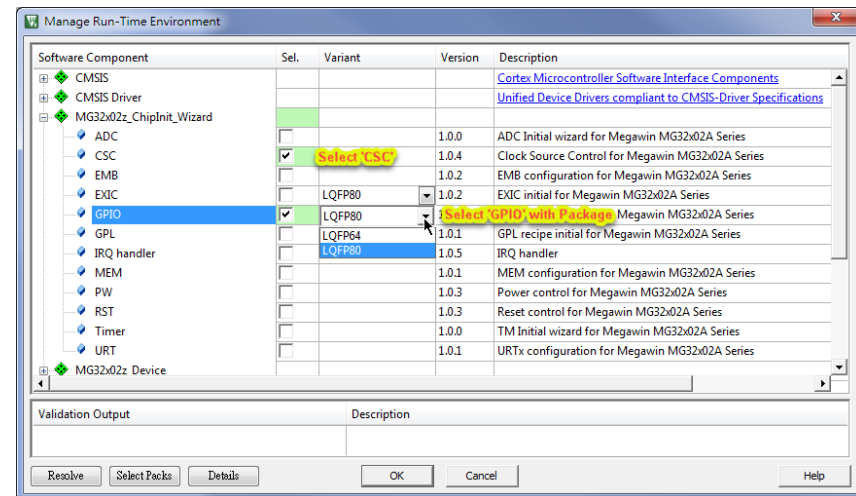


Demo-4



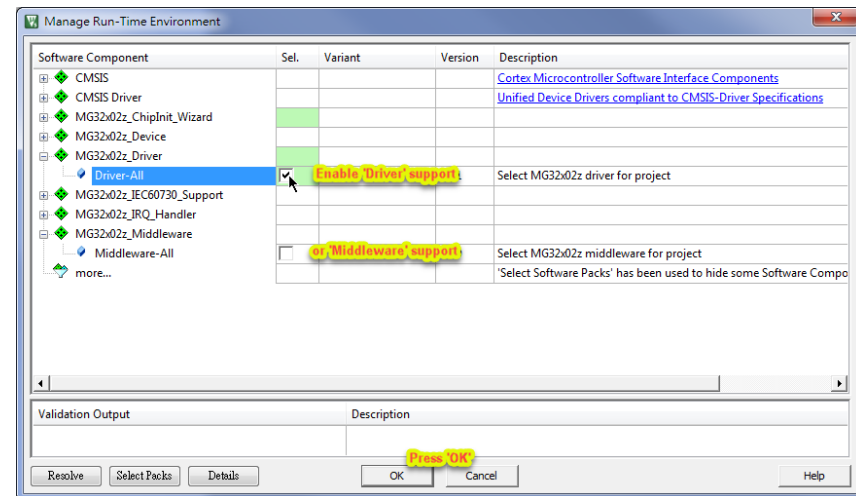
Demo-5

- MG32x02z_ChipInit_Wizard
 - URT: RS-232 initial
 - RST: Reset control
 - PW: Power control
 - MEM: Access IAP
 - IRQ handler: Handler all IRQ
 - I2C: I2C access
 - GPL: Data Invert, Reverse ... CRC
 - GPIO: GOIO's mode/AFS
 - EXIC: Interrupt/External interrupt
 - CSC: Clock control
 - ... (ADC/EMB/Timer ...)



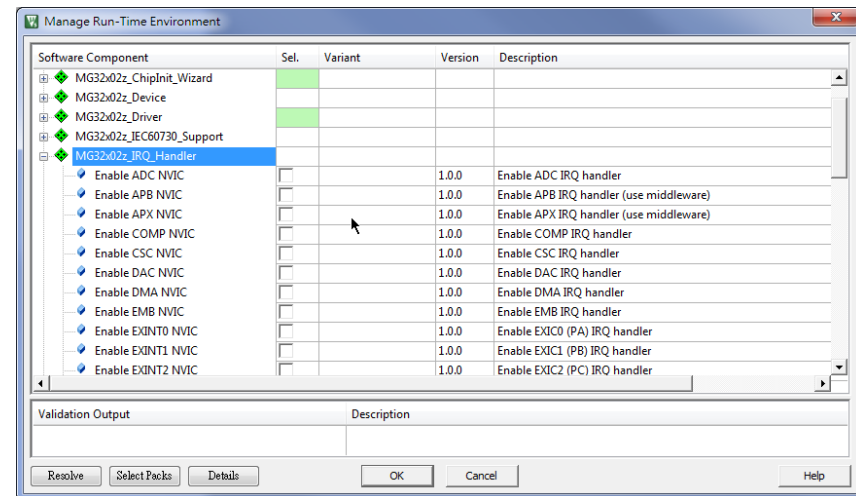
Demo-6

- MG32x02z_Driver /
Middleware
 - Enable / Disable support



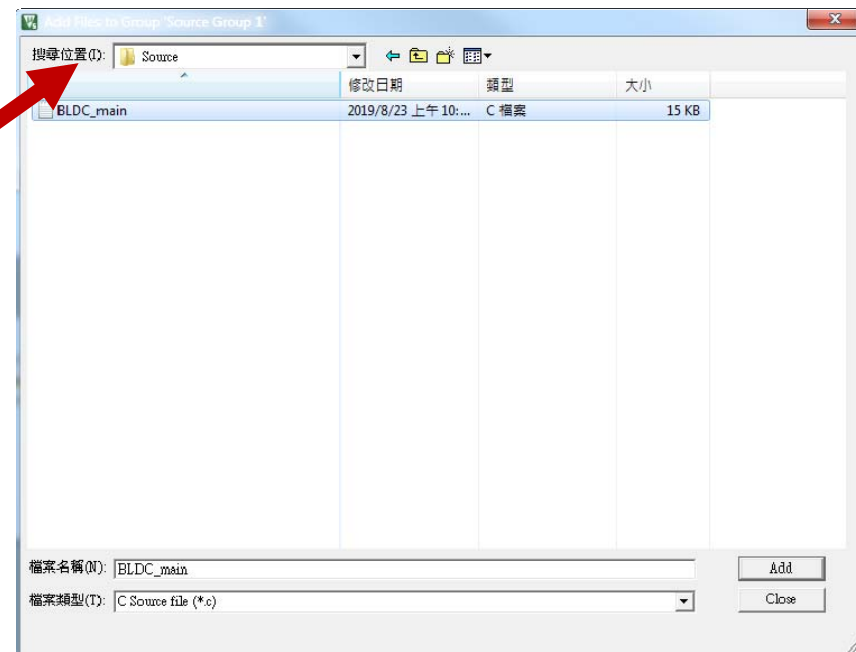
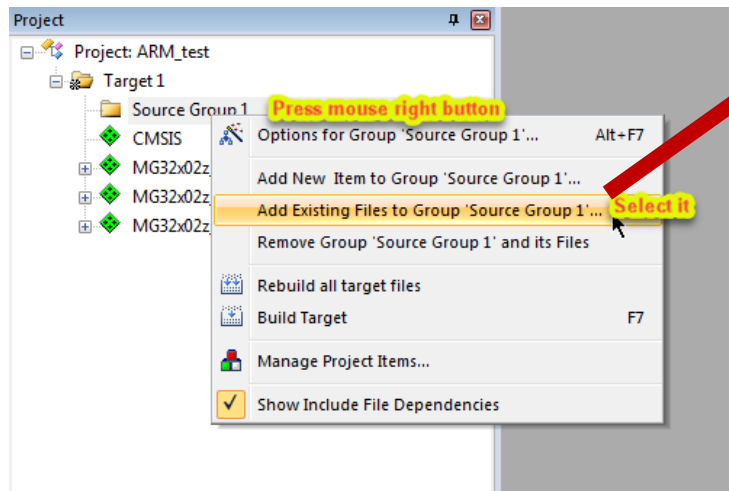
Demo-7

- MG32x02z_IRQ_Handler
 - Enable macro IRQ if user needs
 - with 'IRQ handler' in MG32x02z_ChipInit_Wizard'



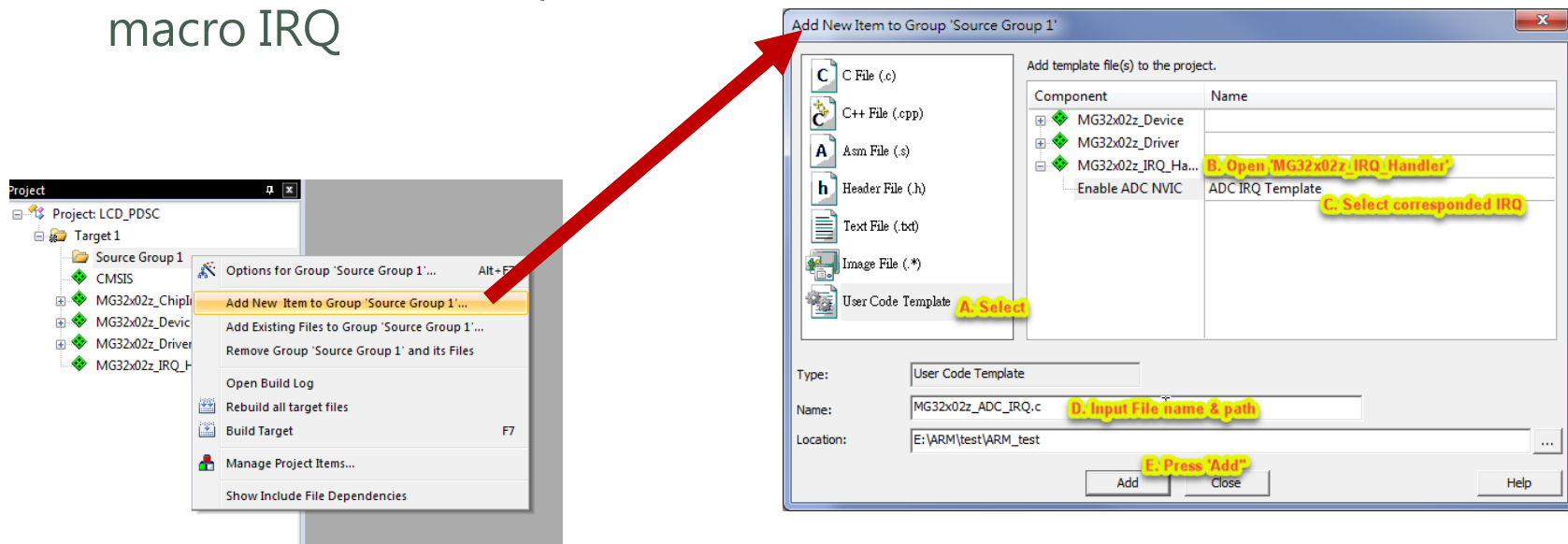
Demo-8

- Add Files to Group 'Source Group 1'
 - User's code



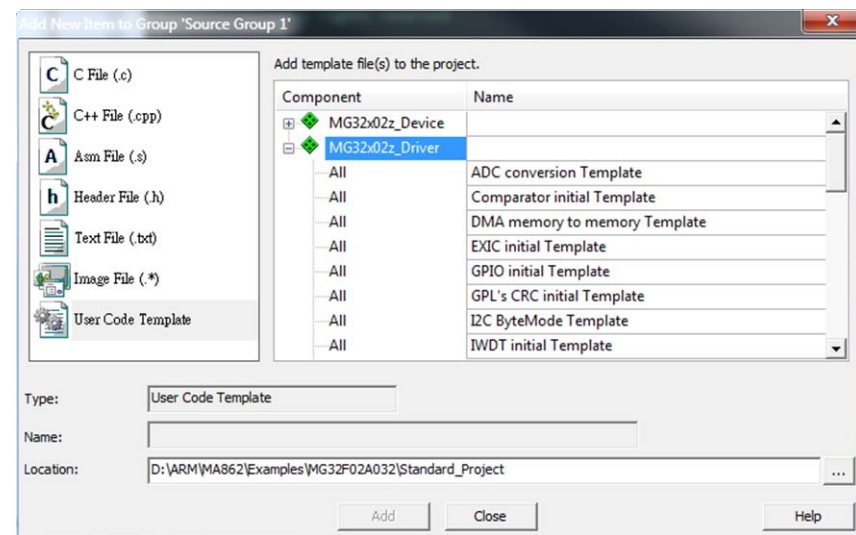
Demo-9

- Add IRQ sample code
 - Please select corresponded macro IRQ



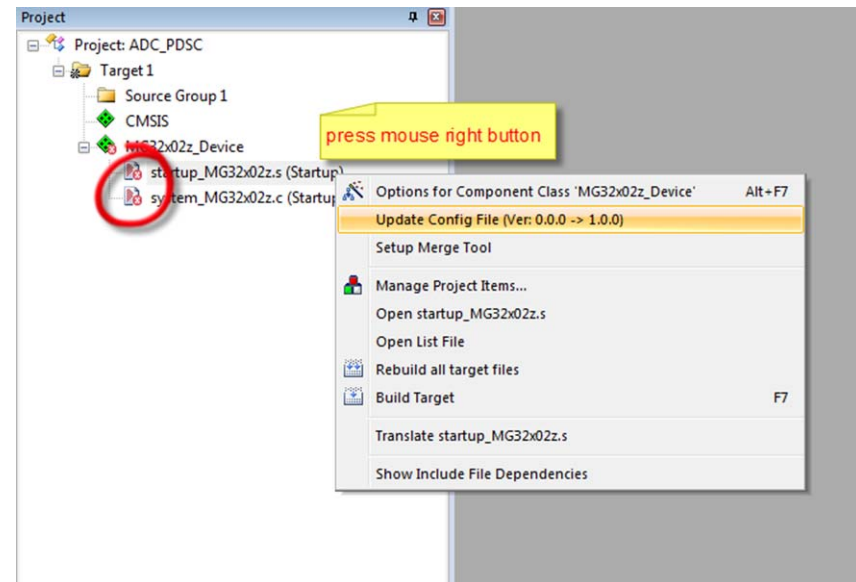
Demo-10

- Add macro's sample code
 - Please select corresponded driver before.



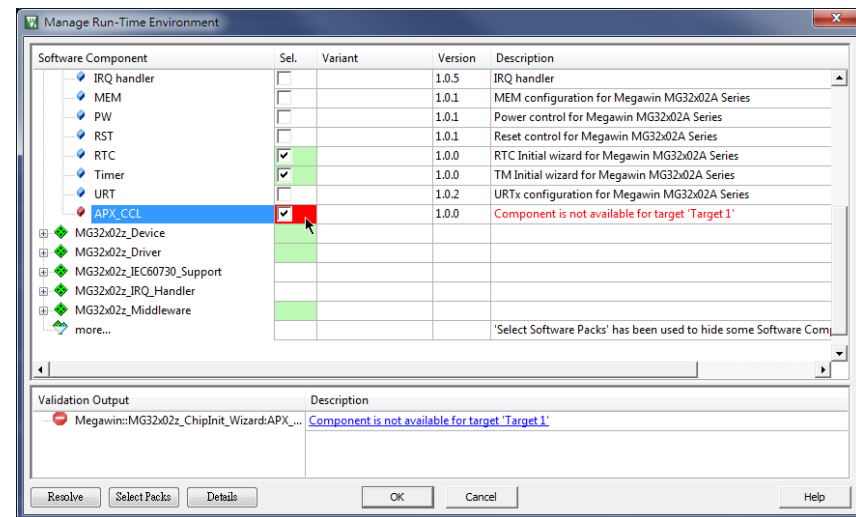
Demo-11 (*Warning message*)

- Confuse
version/Package/Chip ...
 - Update Device/Wizard/ ...



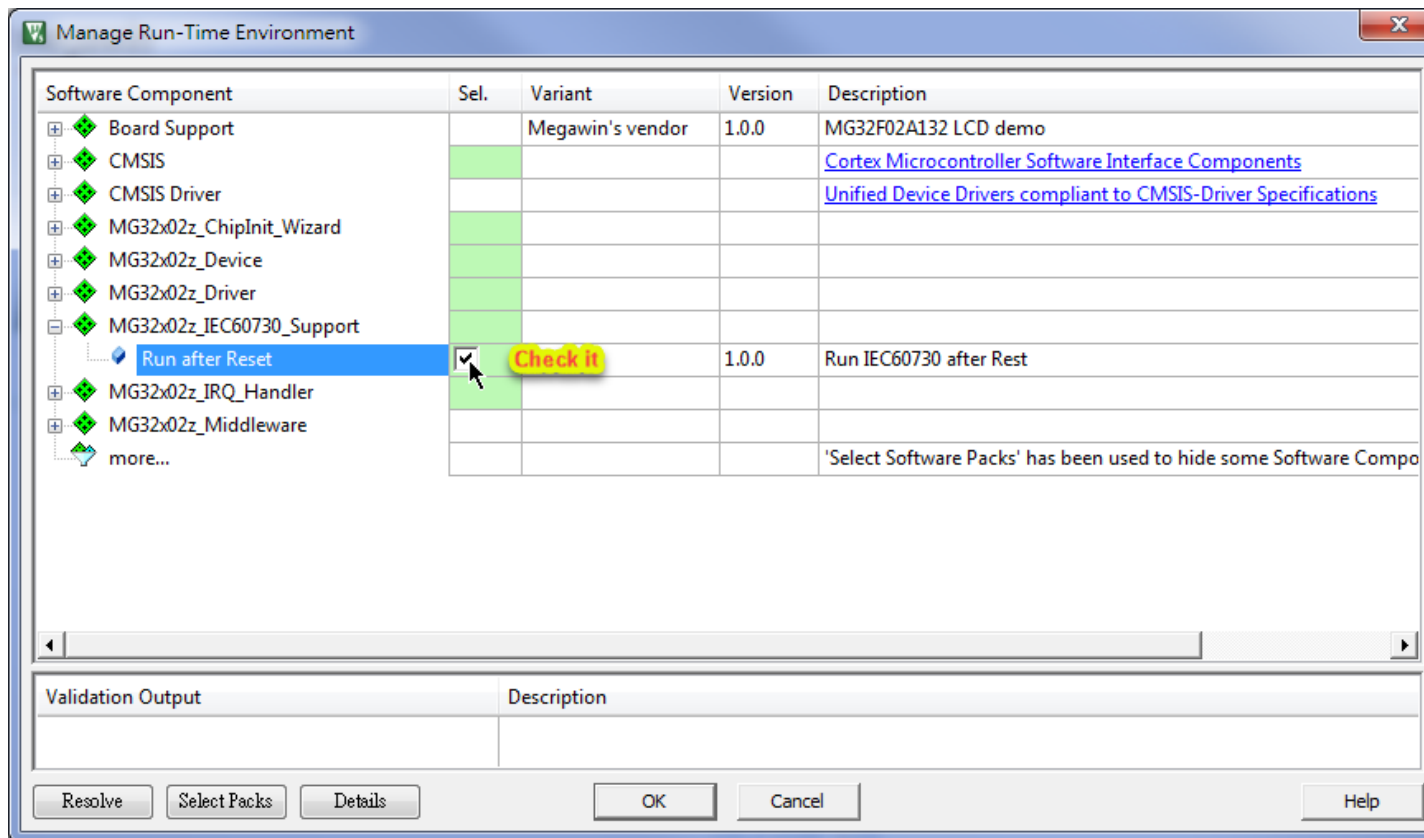
Demo-11 (*Peripheral issue*)

- This device does not have this peripheral
 - Cancel it

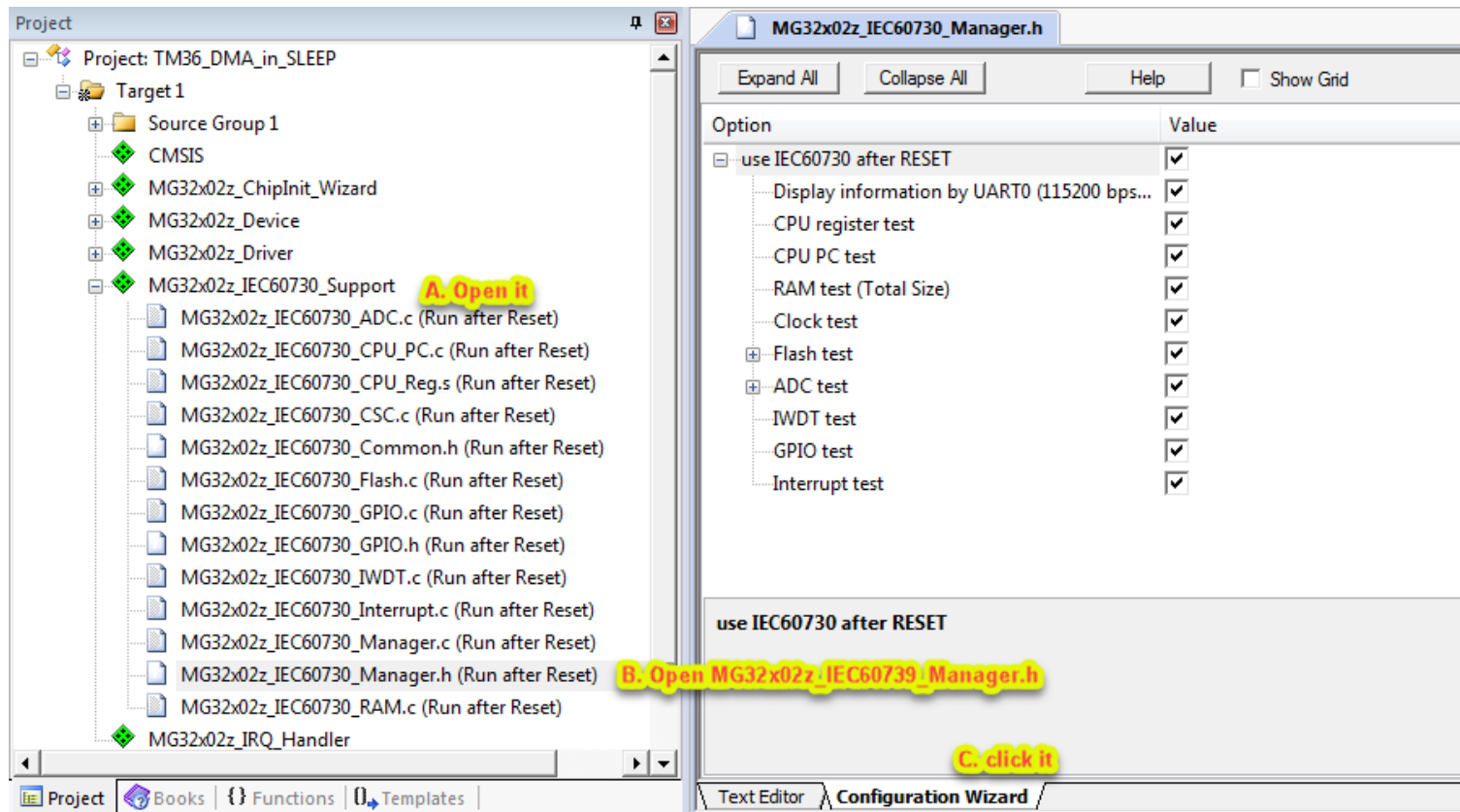


IEC60730

IEC60730 Initial



IEC60730 - Configuration



The screenshot shows the Megawin IDE interface. On the left, the 'Project' window displays the project structure for 'Project: TM36_DMA_in_SLEEP'. Under 'Target 1', there is a 'Source Group 1' containing several files. The file 'MG32x02z_IEC60730_Support' is highlighted with a yellow callout 'A. Open it'. Below it, a list of files is shown, including 'MG32x02z_IEC60730_ADC.c (Run after Reset)', 'MG32x02z_IEC60730_CPU_PC.c (Run after Reset)', 'MG32x02z_IEC60730_CPU_Reg.s (Run after Reset)', 'MG32x02z_IEC60730_CSC.c (Run after Reset)', 'MG32x02z_IEC60730_Common.h (Run after Reset)', 'MG32x02z_IEC60730_Flash.c (Run after Reset)', 'MG32x02z_IEC60730_GPIO.c (Run after Reset)', 'MG32x02z_IEC60730_GPIO.h (Run after Reset)', 'MG32x02z_IEC60730_IWDT.c (Run after Reset)', 'MG32x02z_IEC60730_Interrupt.c (Run after Reset)', 'MG32x02z_IEC60730_Manager.c (Run after Reset)', 'MG32x02z_IEC60730_Manager.h (Run after Reset)', 'MG32x02z_IEC60730_RAM.c (Run after Reset)', and 'MG32x02z_IRQ_Handler'. A yellow callout 'B. Open MG32x02z_IEC60730_Manager.h' points to the 'MG32x02z_IEC60730_Manager.h' file.

On the right, the 'MG32x02z_IEC60730_Manager.h' file is open in the 'Configuration Wizard' window. The window has tabs for 'Expand All', 'Collapse All', 'Help', and 'Show Grid'. Below these tabs is a table with 'Option' and 'Value' columns. The table lists various options, all of which are checked:

Option	Value
use IEC60730 after RESET	<input checked="" type="checkbox"/>
Display information by UART0 (115200 bps...)	<input checked="" type="checkbox"/>
CPU register test	<input checked="" type="checkbox"/>
CPU PC test	<input checked="" type="checkbox"/>
RAM test (Total Size)	<input checked="" type="checkbox"/>
Clock test	<input checked="" type="checkbox"/>
Flash test	<input checked="" type="checkbox"/>
ADC test	<input checked="" type="checkbox"/>
IWDT test	<input checked="" type="checkbox"/>
GPIO test	<input checked="" type="checkbox"/>
Interrupt test	<input checked="" type="checkbox"/>

Below the table, there is a section titled 'use IEC60730 after RESET'. A yellow callout 'C. click it' points to this section.

IEC60730

- *Run IEC60730 after reset*
- *Check item*
 - *CPU register, CPU PC, RAM with CRC, Flash with CRC (AP+IAP:Size), IWDT period, GPIO toggle, interrupt test, ADC performance*
- *Result:*
 - *PASS : running 'main' routine*
 - *FAIL : stop in the 'FailSafePOR' routine*

The End

Thanks !