

# GoldenBell Xilinx Spartan-6 EVB JTAG 로 최초 구동

<http://www.mangoboard.com/>

<http://cafe.naver.com/embeddedcrazyboys>

Crazy Embedded Laboratory

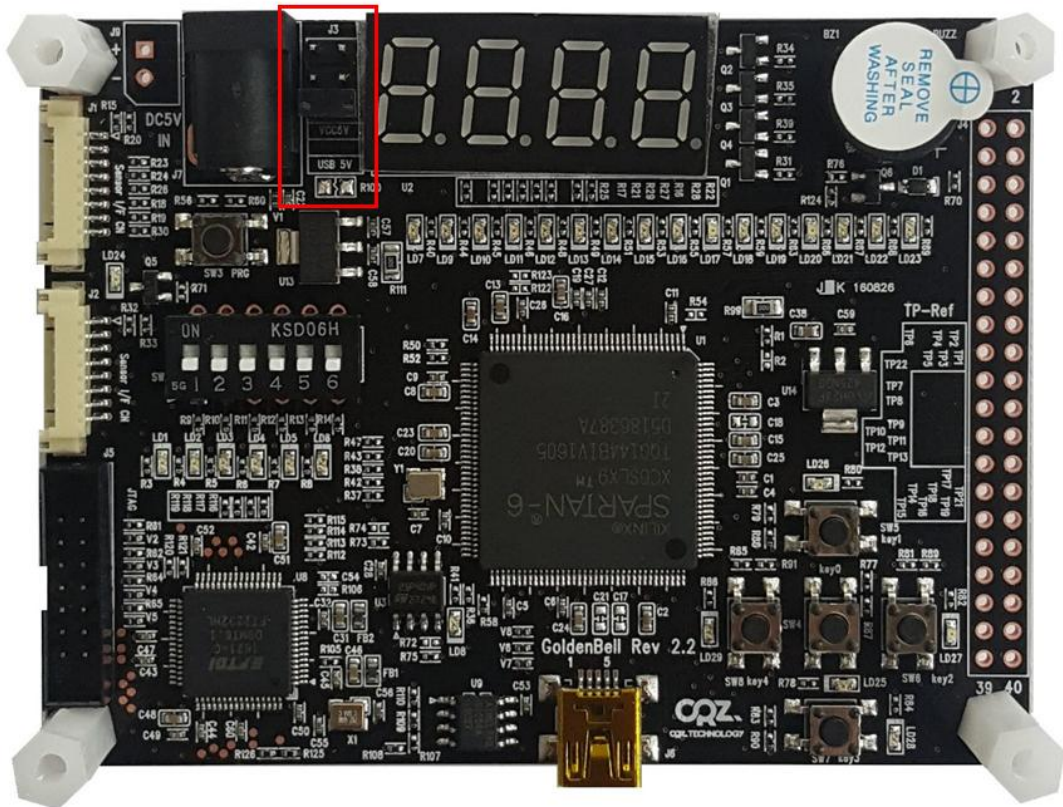
# Document History

Revision	Date	Change note
Init	2016-10-10	전종인

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# 1. GB1 Goldenbell Xilinx Spartan-6 EVB 보드 전원

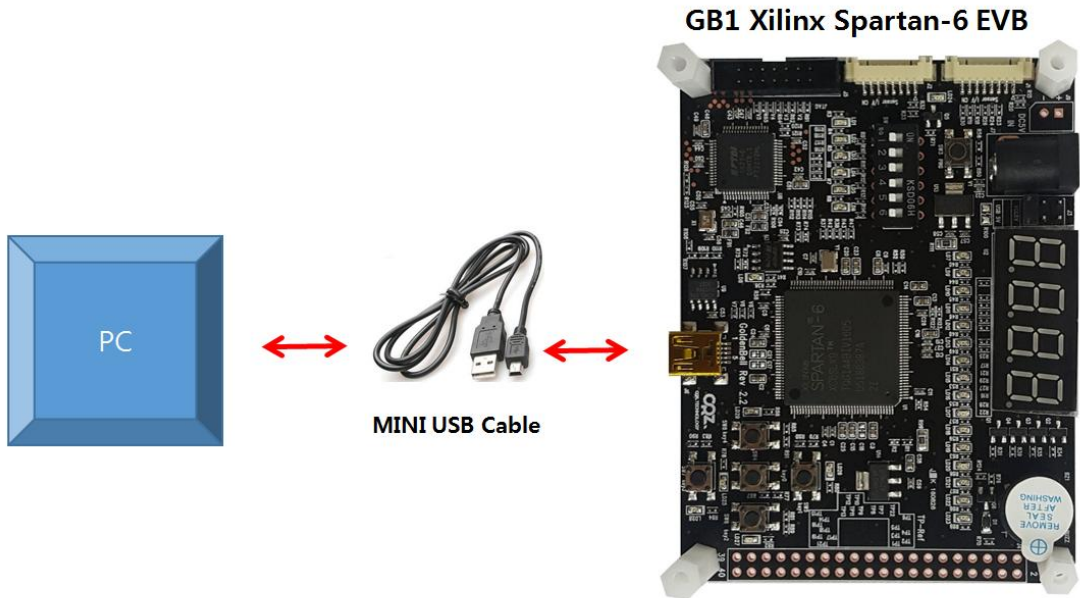
USB 5V와 DC 5V 선택 할 수 있는 점퍼로 선택합니다.



위의 그림은 USB 5V 선택 했습니다.

Mini USB device에 Mini USB cable을 장착합니다.

## 2. USB Cable 연결



GoldenBell 보드 USB device에 Mini USB cable 연결

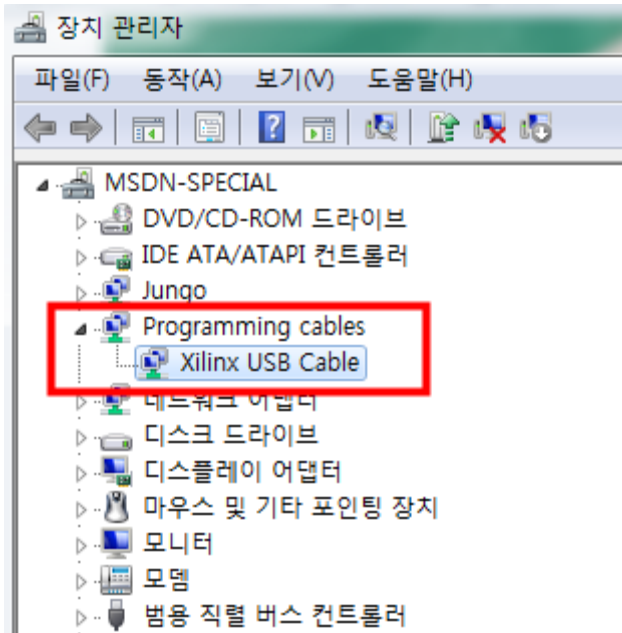
보드에 전원을 인가합니다.

드라이버를 설치할 해야 합니다.

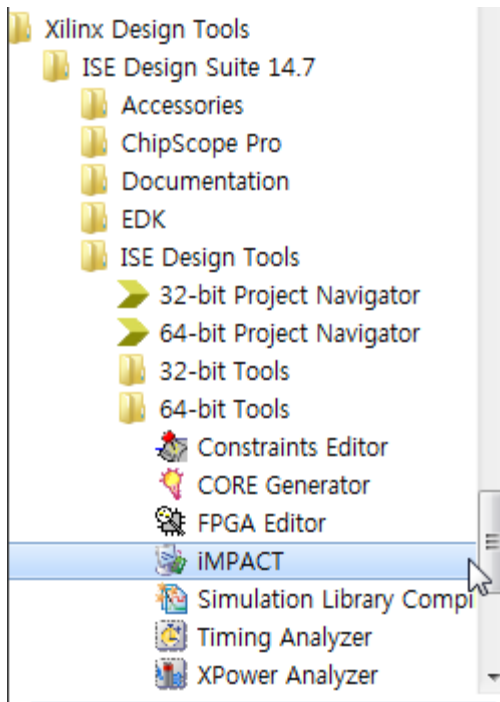
[http://www.xilinx.com/support/documentation/user\\_guides/ug344.pdf](http://www.xilinx.com/support/documentation/user_guides/ug344.pdf)

참조하세요.

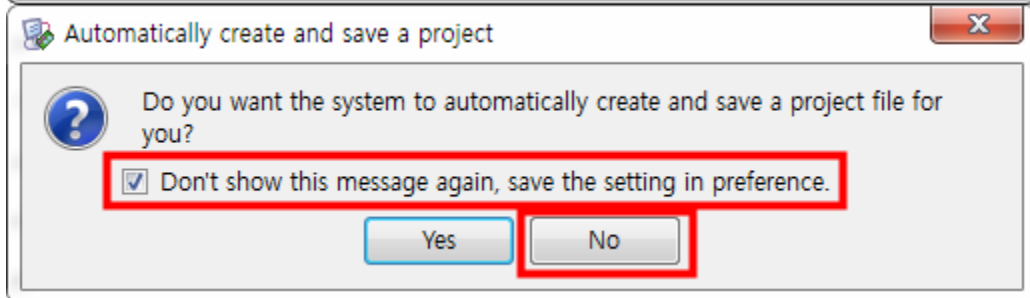
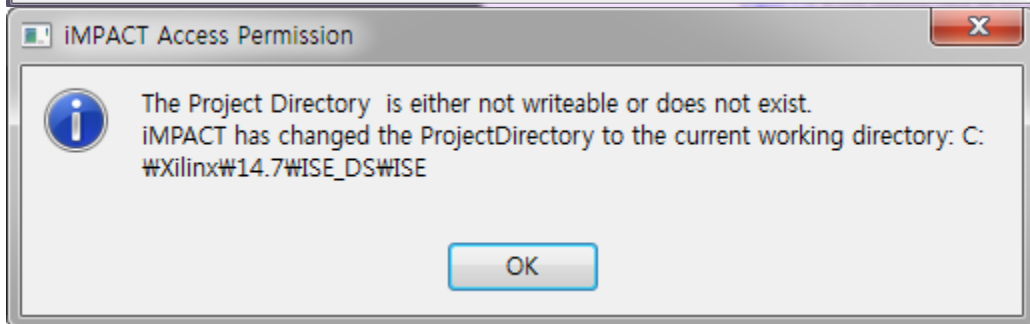
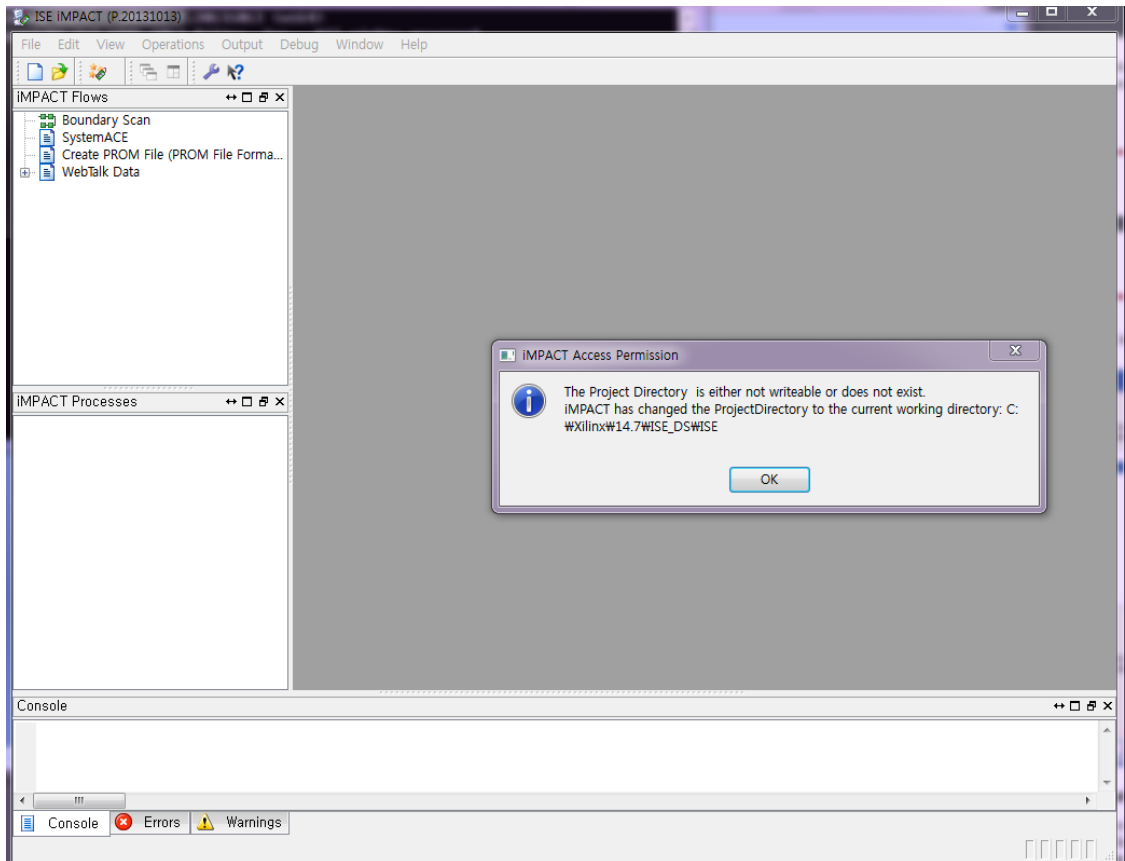
Window PC에 아래와 같이 인식이 됩니다.

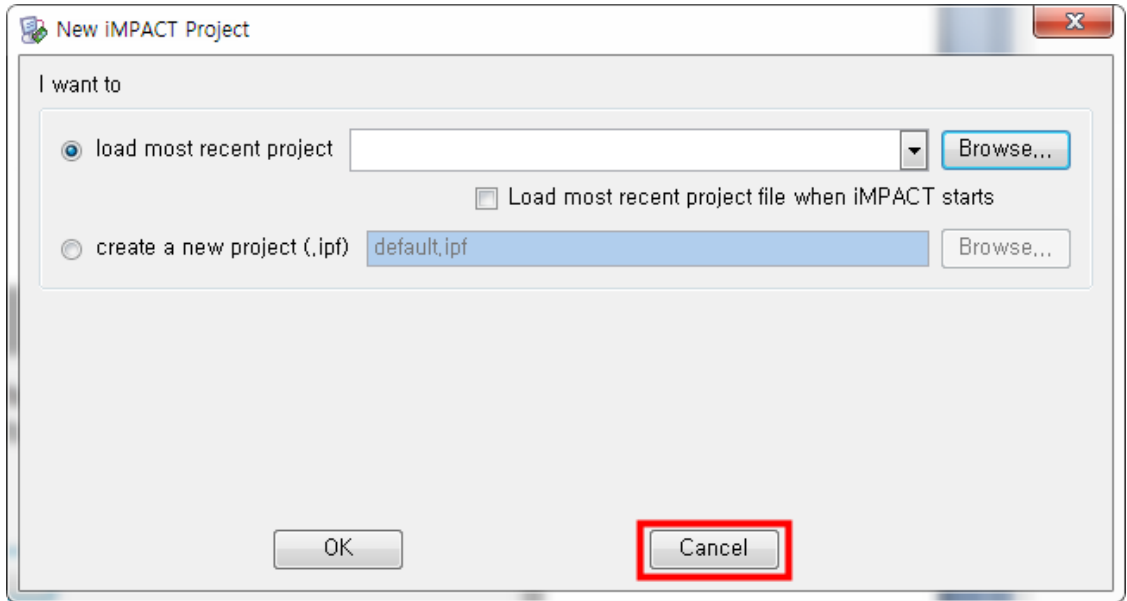


### 3. iMPACT 수행 및 JTAG 연결

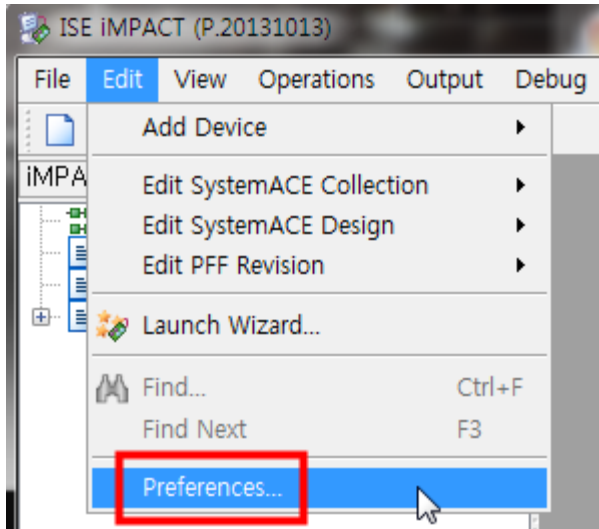


실행하면 아래와 같이 팝업창이 나옵니다.



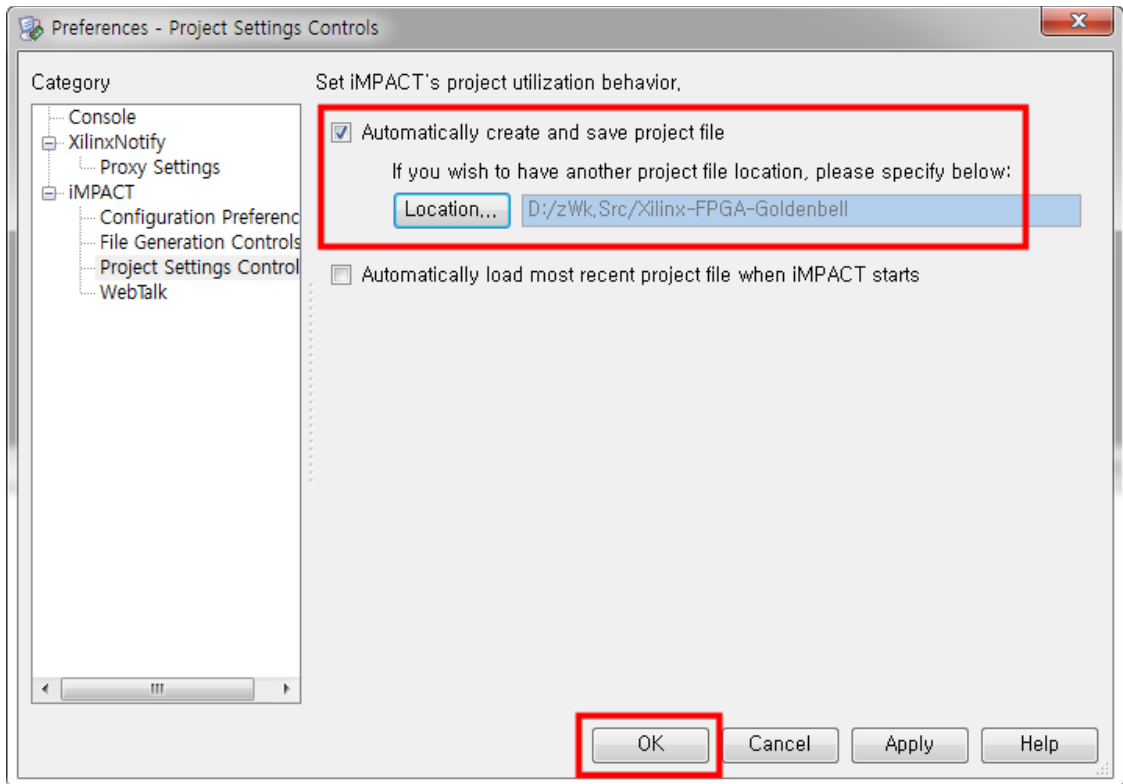


d:\CRZ\_보드\Mango-Board\Mango-GoldenBell\source\

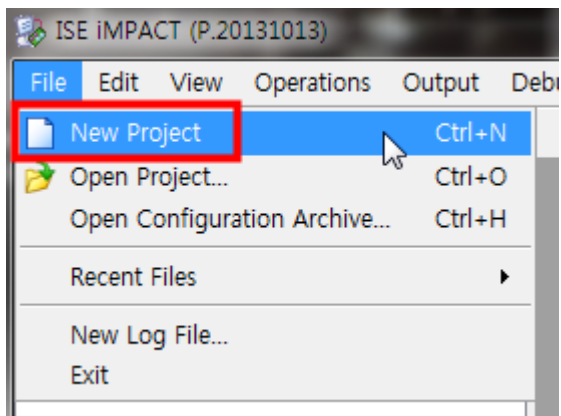


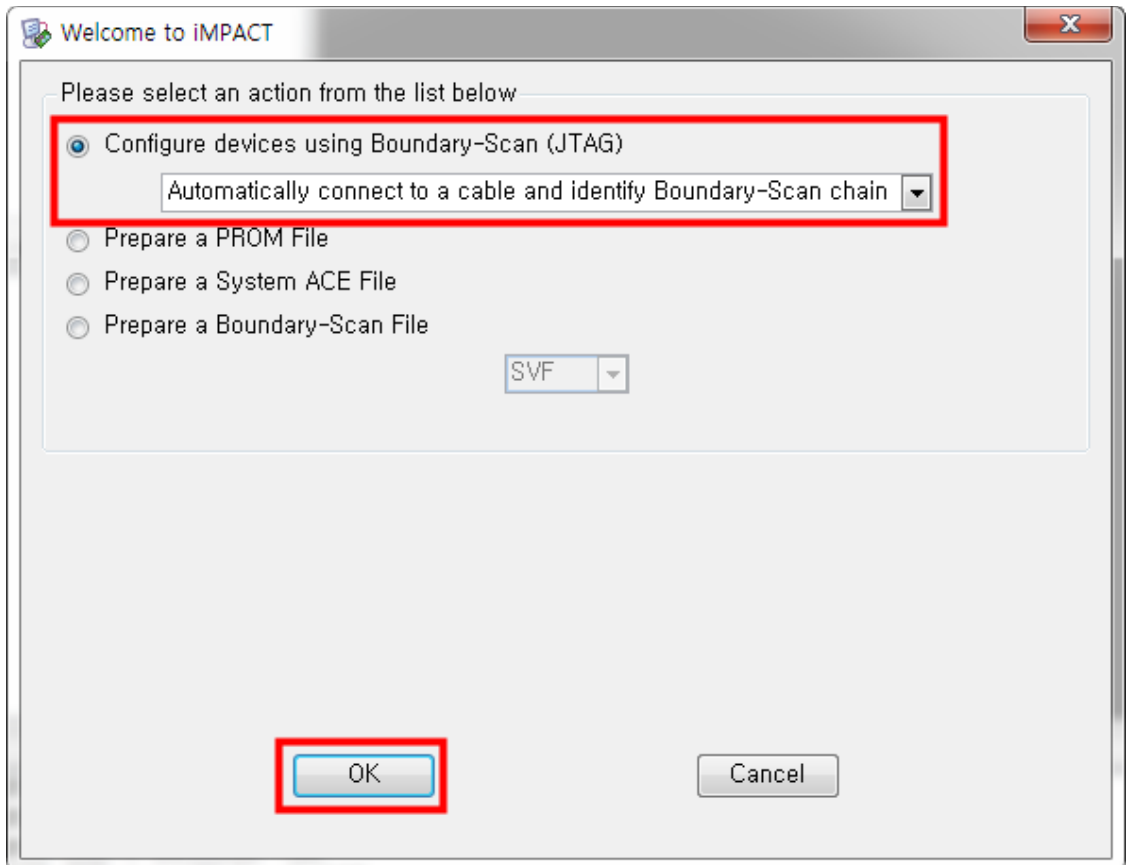
작업할 디렉토리를 설정합니다.



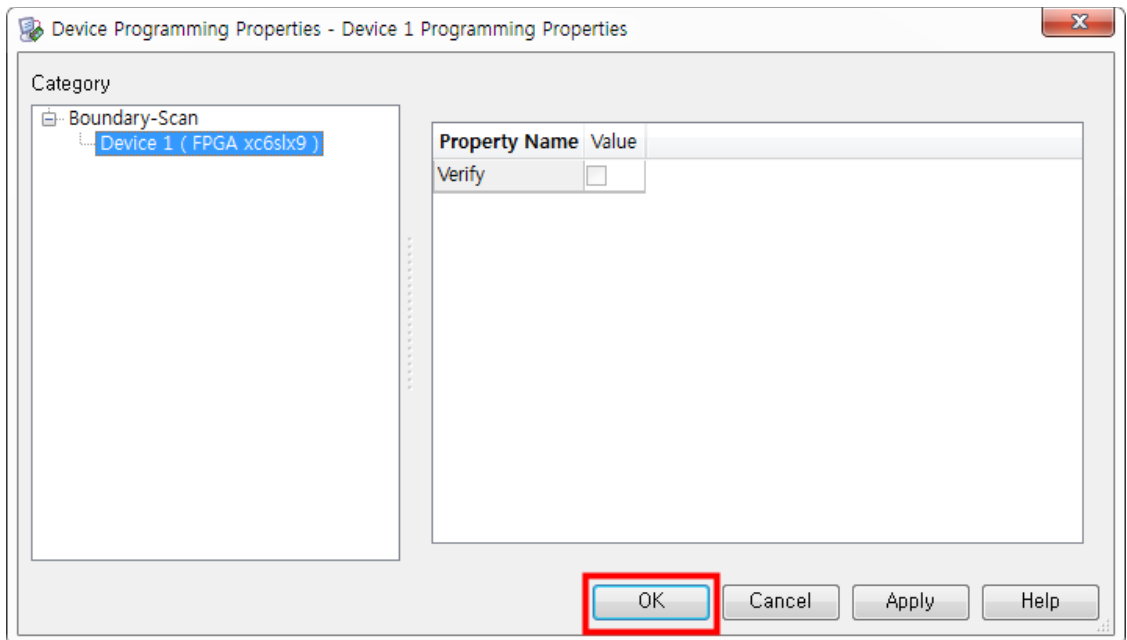


### 3.1. 프로젝트 구성





인식이 되면 아래와 같이 나옵니다.

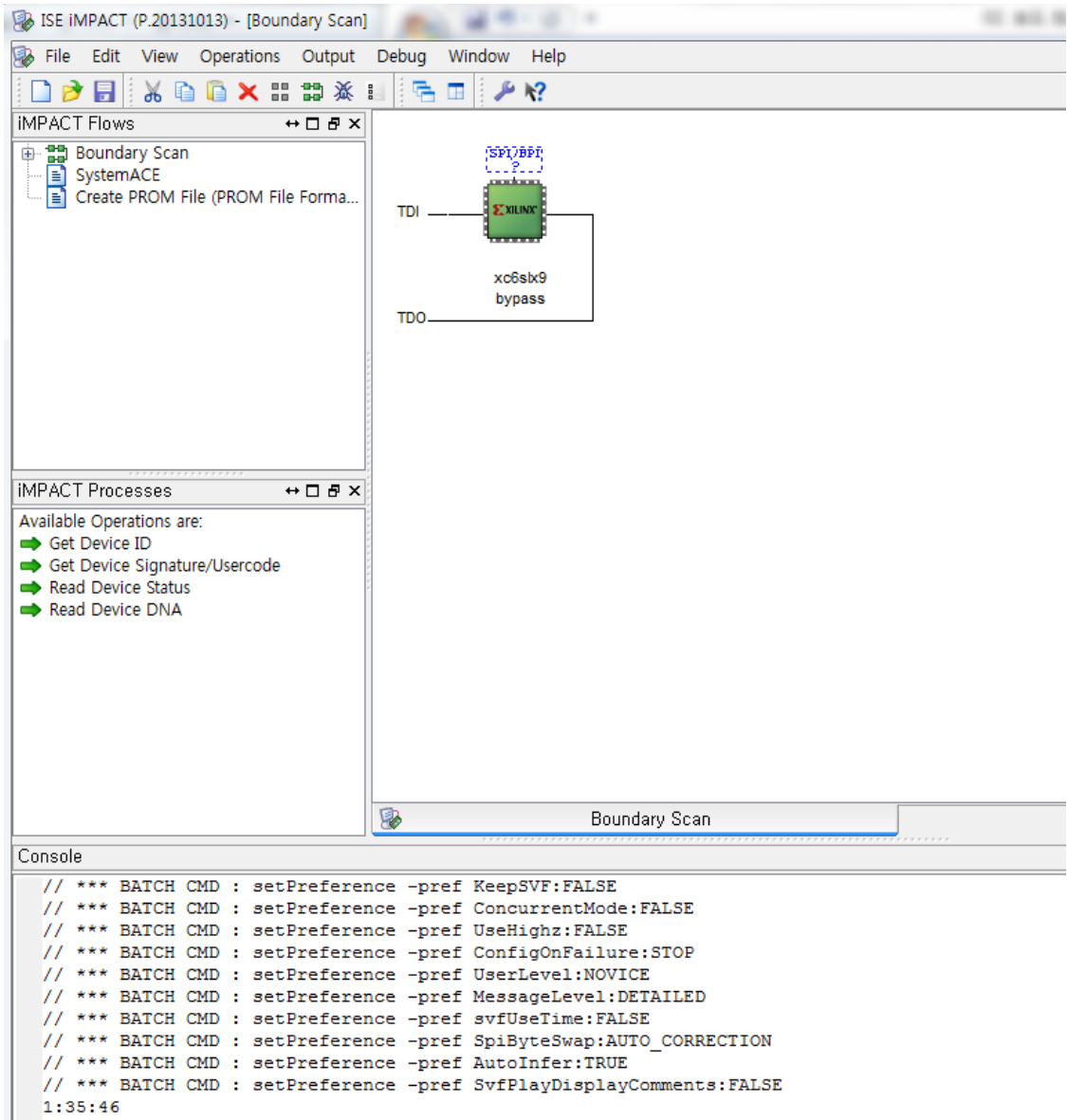


GoldenBell 보드는 XC6SLX9 입니다.

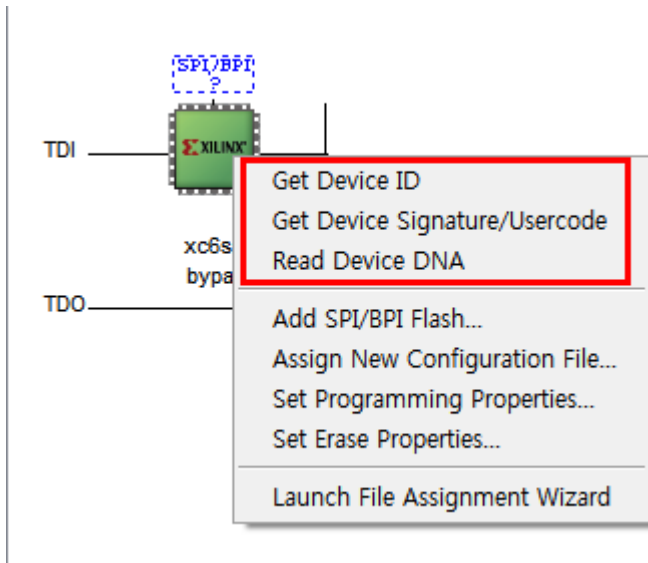
## Spartan-6 FPGA Feature Summary

Table 1: Spartan-6 FPGA Feature Summary by Device

Device	Logic Cells <sup>(1)</sup>	Configurable Logic Blocks (CLBs)				Block RAM Blocks		CMTs <sup>(5)</sup>	Memory Controller Blocks (Max) <sup>(6)</sup>	Endpoint Blocks for PCI Express	Maximum GTP Transceivers	Total I/O Banks	Max User I/O
		Slices <sup>(2)</sup>	Flip-Flops	Max Distributed RAM (Kb)	DSP48A1 Slices <sup>(3)</sup>	18 Kb <sup>(4)</sup>	Max (Kb)						
XC6SLX4	3,840	600	4,800	75	8	12	216	2	0	0	0	4	132
XC6SLX9	9,152	1,430	11,440	90	16	32	576	2	2	0	0	4	200
XC6SLX16	14,579	2,278	18,224	136	32	32	576	2	2	0	0	4	232
XC6SLX25	24,051	3,758	30,064	229	38	52	936	2	2	0	0	4	266



칩을 선택하고, 마우스 우측키를 누르면 아래와 같이 나옵니다.



Get Device ID, Get Device Signature/Usercode, Read Device DNA를 차례로 실행해 보았다.

#### Get Device ID

```
INFO:iMPACT - Current time: 2016-05-26 11:11:11 // *** BATCH CMD : ReadIdcode -p 1
Maximum TCK operating frequency for this device chain: 25000000.
Validating chain...
Boundary-scan chain validated successfully.
'1': IDCODE is '0010010000000000001000010010011'
'1': IDCODE is '24001093' (in hex).
'1': : Manufacturer's ID = Xilinx xc6slx9, Version : 2
```

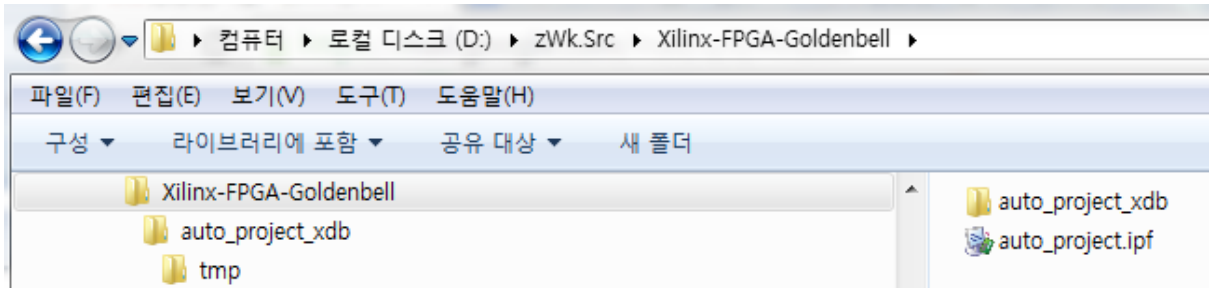
#### Get Device Signature/Usercode

```
INFO:iMPACT - Current time: 2016-05-26 11:11:11 // *** BATCH CMD : ReadUserCode -p 1
Maximum TCK operating frequency for this device chain: 25000000.
Validating chain...
Boundary-scan chain validated successfully.
'1': Usercode is 'ffffff'
```

#### Read Device DNA

```
INFO:iMPACT - Current time: 2016-05-26 11:11:11 // *** BATCH CMD : readdna -p 1
Maximum TCK operating frequency for this device chain: 25000000.
Validating chain...
Boundary-scan chain validated successfully.
```

'1': DNA = '100110111111001000001010101100100111100110100110101010101'



iMPACT을 종료해 보면 위 그림과 같이 D:\zWk.Src\Xilinx-FPGA-Goldenbell 폴더에 아래 폴더와 파일이 생성되어 있다.

**auto\_project\_xdb**

**auto\_project.ipf**