MicroAutoBox(MABX) User Manual

Intelligent Convergence
Solution Company

Make Different & Smart

HANCOM
한컴MDS

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Ⅱ. ControlDesk 프로젝트 생성
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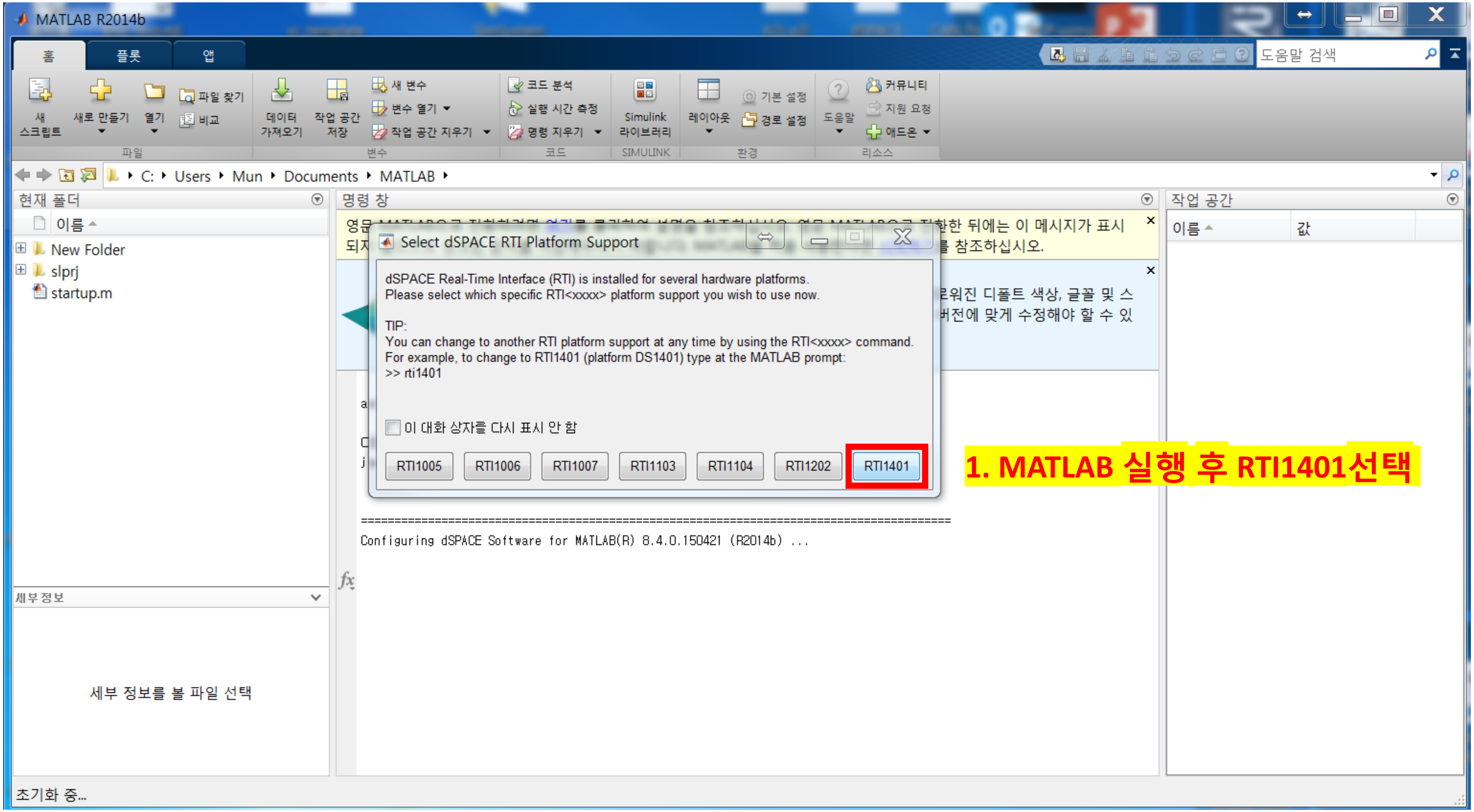
III. ControlDesk 기본 사용법

시뮬링크 모델 생성 및 빌드


MATLAB R2014b
홈
플롯
앱
도움말 검색
새 스크립트
새로 만들기
열기
파일 찾기
비교
파일
데이터 가져오기
작업 공간 저장
새 변수
변수 열기
작업 공간 지우기
변수
코드 분석
실행 시간 측정
명령 지우기
코드
Simulink 라이브러리
SIMULINK
레이아웃
기본 설정
경로 설정
환경
도움말
커뮤니티
지원 요청
애드온
리소스
C: ▸ Users ▸ Mun ▸ Documents ▸ MATLAB ▸
현재 폴더
이름
New Folder
slprj
startup.m
명령 창
작업 공간
이름
값
세부 정보
세부 정보를 볼 파일 선택
Select dSPACE RTI Platform Support
RTI1005
RTI1006
RTI1007
RTI1103
RTI1104
RTI1202
RTI1401
조기화 중...

dSPACE Real-Time Interface (RTI) is installed for several hardware platforms.
Please select which specific RTI<xxxx> platform support you wish to use now.

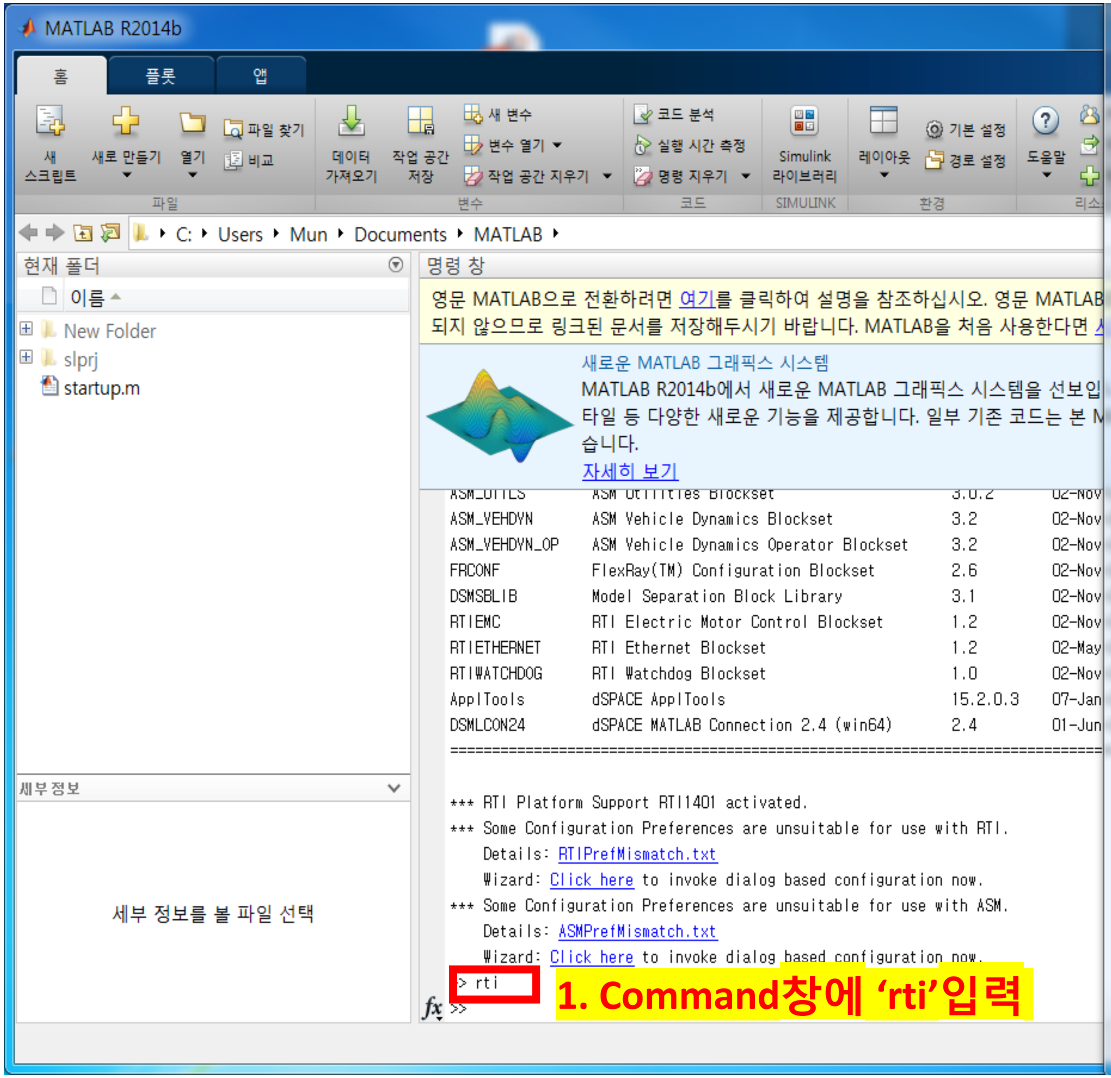
TIP:
You can change to another RTI platform support at any time by using the RTI<xxxx> command.
For example, to change to RTI1401 (platform DS1401) type at the MATLAB prompt:
>> rti1401

☐ 이 대화 상자를 다시 표시 안 함

```
================================================================================
Configuring dSPACE Software for MATLAB(R) 8.4.0.150421 (R2014b) ...
```

1. MATLAB 실행 후 RTI1401선택

시뮬링크 모델 생성 및 빌드


MATLAB R2014b
홈
플롯
앱
새 스크립트
새로 만들기
열기
파일 찾기
비교
데이터 가져오기
작업 공간 저장
새 변수
변수 열기
작업 공간 지우기
코드 분석
실행 시간 측정
명령 지우기
Simulink 라이브러리
레이아웃
기본 설정
경로 설정
도움말
파일
변수
코드
SIMULINK
환경
리소
C: ▸ Users ▸ Mun ▸ Documents ▸ MATLAB ▸
현재 폴더
이름
New Folder
slprj
startup.m
세부 정보
세부 정보를 볼 파일 선택
명령 창

영문 MATLAB으로 전환하려면 여기를 클릭하여 설명을 참조하십시오. 영문 MATLAB
되지 않으므로 링크된 문서를 저장해두시기 바랍니다. MATLAB을 처음 사용한다면 스

새로운 MATLAB 그래픽스 시스템

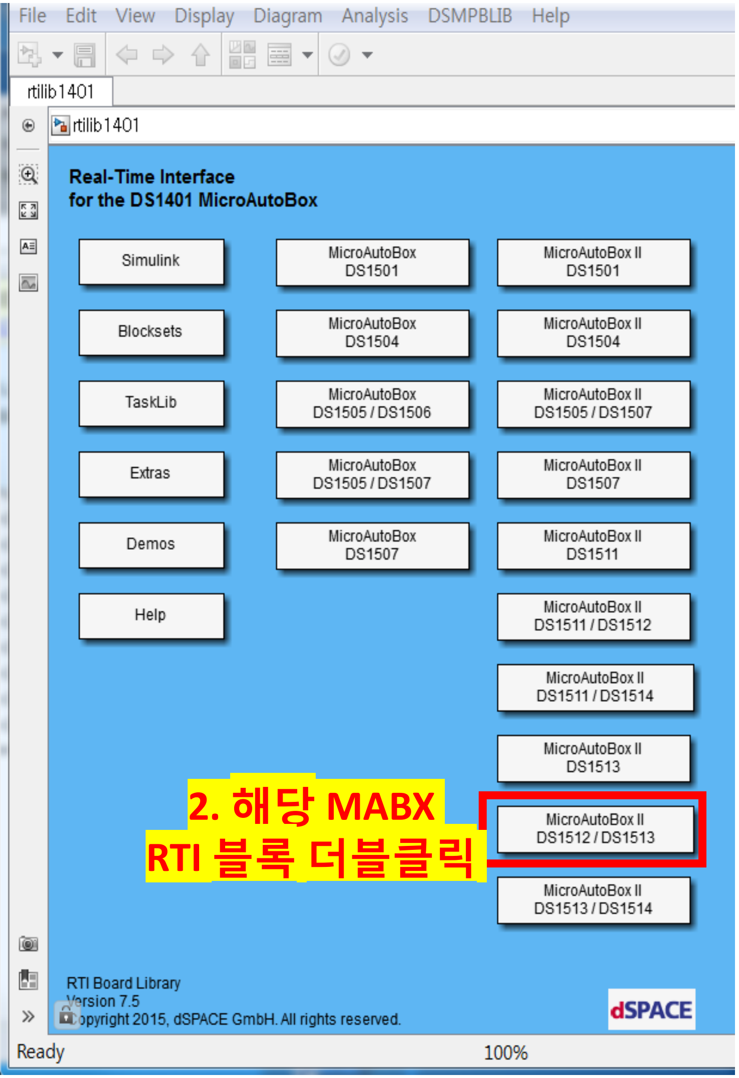
MATLAB R2014b에서 새로운 MATLAB 그래픽스 시스템을 선보입
타일 등 다양한 새로운 기능을 제공합니다. 일부 기존 코드는 본 M
습니다.

자세히 보기

```
ASM_UTILS      ASM Utilities Blockset                        3.0.2      02-Nov
ASM_VEHDYN     ASM Vehicle Dynamics Blockset                 3.2        02-Nov
ASM_VEHDYN_OP  ASM Vehicle Dynamics Operator Blockset        3.2        02-Nov
FRCONF         FlexRay(TM) Configuration Blockset            2.6        02-Nov
DSMSBLIB       Model Separation Block Library                3.1        02-Nov
RTIEMC         RTI Electric Motor Control Blockset           1.2        02-Nov
RTIETHERNET    RTI Ethernet Blockset                         1.2        02-May
RTIWATCHDOG    RTI Watchdog Blockset                         1.0        02-Nov
ApplTools      dSPACE ApplTools                              15.2.0.3   07-Jan
DSMLCON24      dSPACE MATLAB Connection 2.4 (win64)          2.4        01-Jun
=============================================================================


*** RTI Platform Support RTI1401 activated.
*** Some Configuration Preferences are unsuitable for use with RTI.
    Details: RTIPrefMismatch.txt
    Wizard: Click here to invoke dialog based configuration now.
*** Some Configuration Preferences are unsuitable for use with ASM.
    Details: ASMPrefMismatch.txt
    Wizard: Click here to invoke dialog based configuration now.
> rti
>>
```

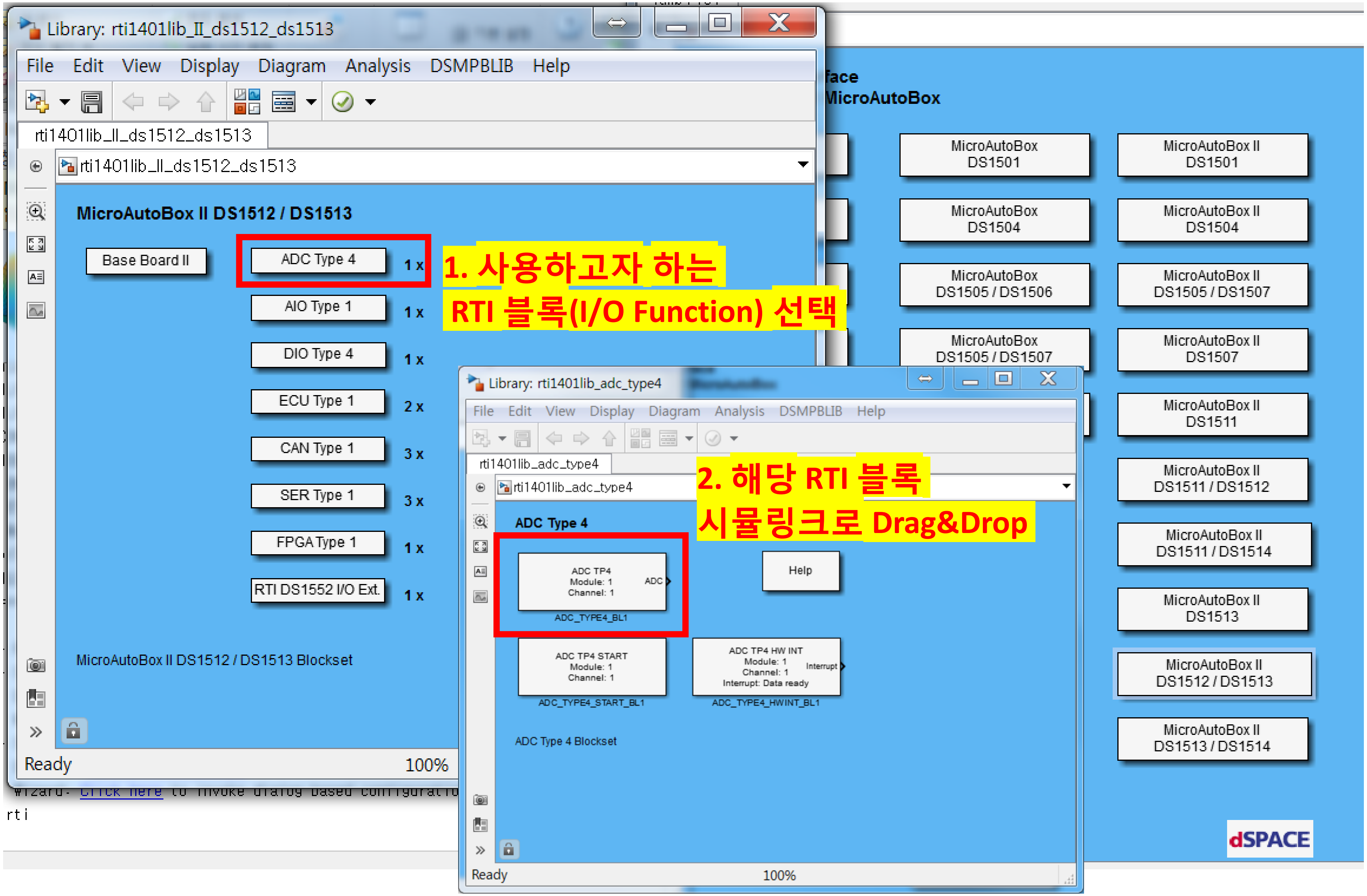
1. Command창에 'rti'입력


File
Edit
View
Display
Diagram
Analysis
DSMPBLIB
Help
rtilib1401
rtilib1401
Real-Time Interface
for the DS1401 MicroAutoBox
Simulink
Blocksets
TaskLib
Extras
Demos
Help
MicroAutoBox DS1501
MicroAutoBox DS1504
MicroAutoBox DS1505 / DS1506
MicroAutoBox DS1505 / DS1507
MicroAutoBox DS1507
MicroAutoBox II DS1501
MicroAutoBox II DS1504
MicroAutoBox II DS1505 / DS1507
MicroAutoBox II DS1507
MicroAutoBox II DS1511
MicroAutoBox II DS1511 / DS1512
MicroAutoBox II DS1511 / DS1514
MicroAutoBox II DS1513
MicroAutoBox II DS1512 / DS1513
MicroAutoBox II DS1513 / DS1514
dSPACE
Ready
100%

RTI Board Library
Version 7.5
Copyright 2015, dSPACE GmbH. All rights reserved.

2. 해당 MABX
RTI 블록 더블클릭

시뮬링크 모델 생성 및 빌드



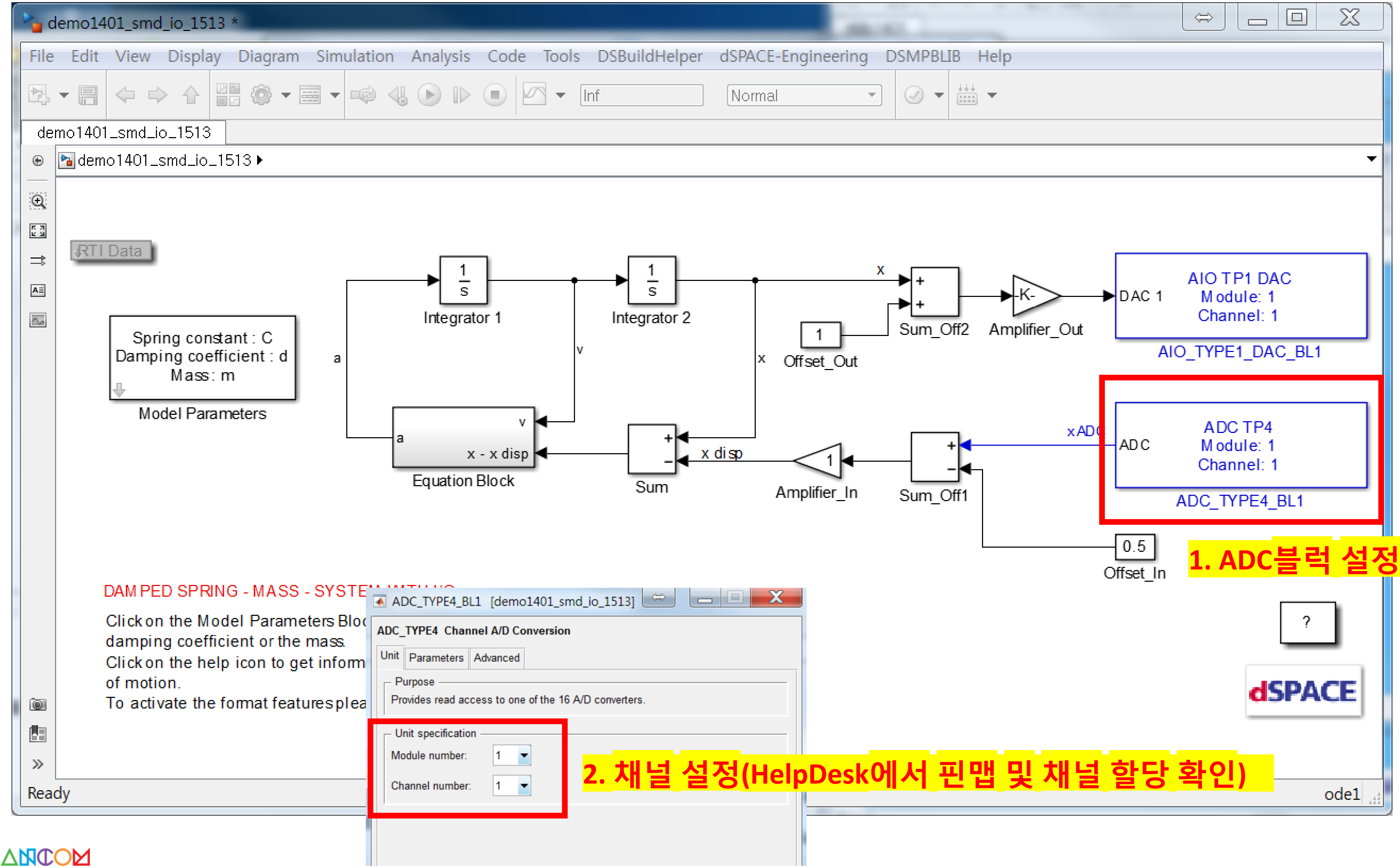
1. 사용하고자 하는 RTI 블록(I/O Function) 선택

2. 해당 RTI 블록 시뮬링크로 Drag&Drop

Library: rti1401lib_II_ds1512_ds1513
File Edit View Display Diagram Analysis DSMPBLIB Help
rti1401lib_II_ds1512_ds1513
MicroAutoBox II DS1512 / DS1513
Base Board II
ADC Type 4 1 x
AIO Type 1 1 x
DIO Type 4 1 x
ECU Type 1 2 x
CAN Type 1 3 x
SER Type 1 3 x
FPGA Type 1 1 x
RTI DS1552 I/O Ext. 1 x
MicroAutoBox II DS1512 / DS1513 Blockset
Ready 100%
MicroAutoBox
MicroAutoBox DS1501
MicroAutoBox II DS1501
MicroAutoBox DS1504
MicroAutoBox II DS1504
MicroAutoBox DS1505 / DS1506
MicroAutoBox II DS1505 / DS1507
MicroAutoBox DS1505 / DS1507
MicroAutoBox II DS1507
MicroAutoBox II DS1511
MicroAutoBox II DS1511 / DS1512
MicroAutoBox II DS1511 / DS1514
MicroAutoBox II DS1513
MicroAutoBox II DS1512 / DS1513
MicroAutoBox II DS1513 / DS1514
dSPACE
Library: rti1401lib_adc_type4
File Edit View Display Diagram Analysis DSMPBLIB Help
rti1401lib_adc_type4
ADC Type 4
ADC TP4 Module: 1 Channel: 1 ADC
ADC_TYPE4_BL1
Help
ADC TP4 START Module: 1 Channel: 1
ADC_TYPE4_START_BL1
ADC TP4 HW INT Module: 1 Channel: 1 Interrupt: Data ready Interrupt
ADC_TYPE4_HWINT_BL1
ADC Type 4 Blockset
Ready 100%

한컴MDS

시뮬링크 모델 생성 및 빌드



demo1401_smd_io_1513 *
File Edit View Display Diagram Simulation Analysis Code Tools DSBuildHelper dSPACE-Engineering DSMPBLIB Help
Inf
Normal
demo1401_smd_io_1513
RTI Data
Integrator 1
Integrator 2
a
v
x
Sum_Off2
Amplifier_Out
-K-
DAC 1
AIO TP1 DAC
Module: 1
Channel: 1
AIO_TYPE1_DAC_BL1
Offset_Out
Model Parameters
Equation Block
x - x disp
Sum
x disp
Amplifier_In
Sum_Off1
x ADC
ADC
ADC TP4
Module: 1
Channel: 1
ADC_TYPE4_BL1
0.5
Offset_In
?
dSPACE
Ready
ode1
ADC_TYPE4_BL1 [demo1401_smd_io_1513]
Unit
Parameters
Advanced

Spring constant : C
Damping coefficient : d
Mass : m

DAMPED SPRING - MASS - SYSTE

Click on the Model Parameters Bloc
damping coefficient or the mass.
Click on the help icon to get inform
of motion.
To activate the format features plea

ADC_TYPE4 Channel A/D Conversion

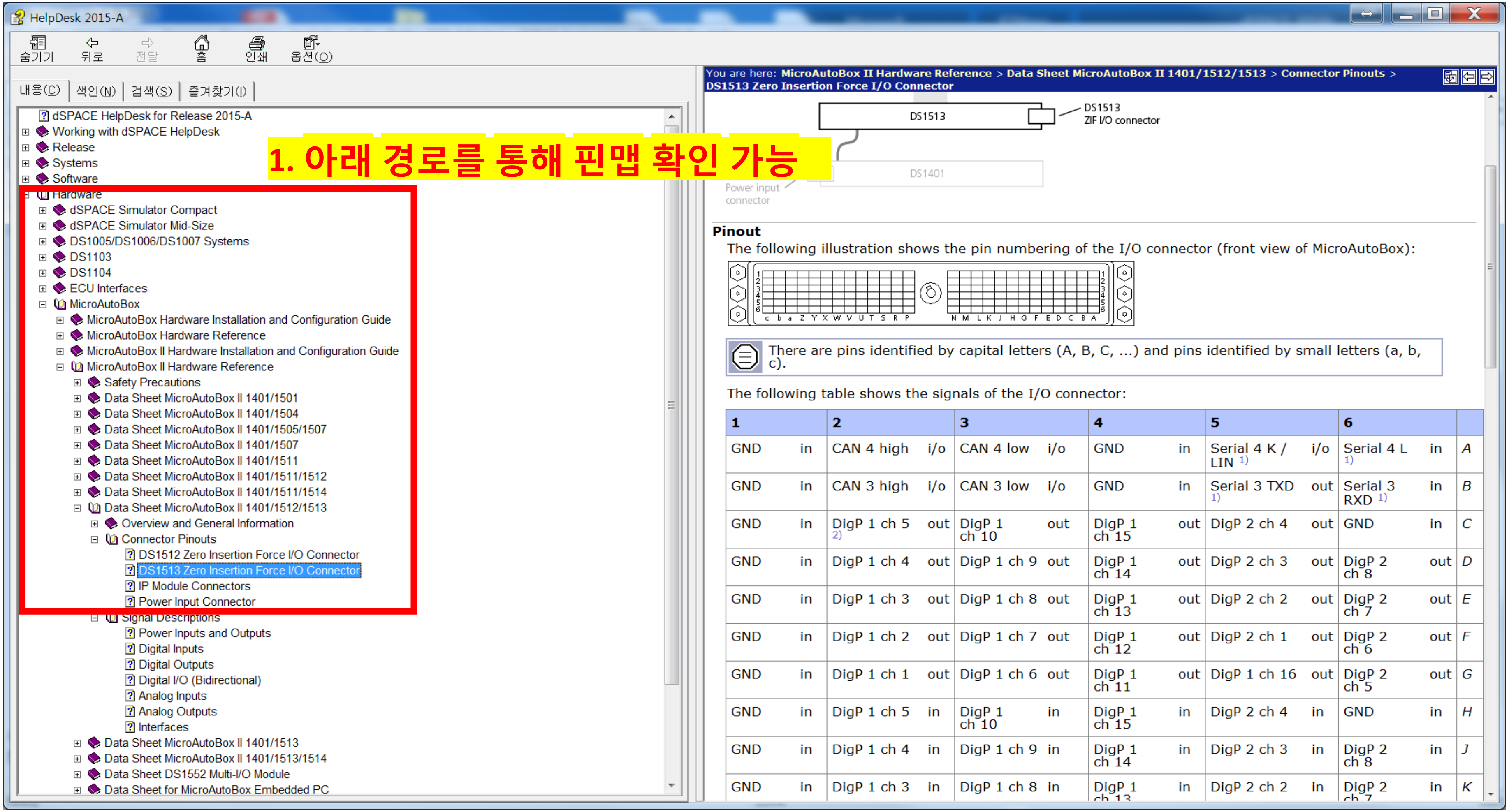
Purpose
Provides read access to one of the 16 A/D converters.

Unit specification
Module number: 1
Channel number: 1

1. ADC블럭 설정

2. 채널 설정(HelpDesk에서 핀맵 및 채널 할당 확인)

시뮬링크 모델 생성 및 빌드



1. 아래 경로를 통해 핀맵 확인 가능

- dSPACE HelpDesk for Release 2015-A
- Working with dSPACE HelpDesk
- Release
- Systems
- Software
- Hardware
  - dSPACE Simulator Compact
  - dSPACE Simulator Mid-Size
  - DS1005/DS1006/DS1007 Systems
  - DS1103
  - DS1104
  - ECU Interfaces
  - MicroAutoBox
    - MicroAutoBox Hardware Installation and Configuration Guide
    - MicroAutoBox Hardware Reference
    - MicroAutoBox II Hardware Installation and Configuration Guide
    - MicroAutoBox II Hardware Reference
      - Safety Precautions
      - Data Sheet MicroAutoBox II 1401/1501
      - Data Sheet MicroAutoBox II 1401/1504
      - Data Sheet MicroAutoBox II 1401/1505/1507
      - Data Sheet MicroAutoBox II 1401/1507
      - Data Sheet MicroAutoBox II 1401/1511
      - Data Sheet MicroAutoBox II 1401/1511/1512
      - Data Sheet MicroAutoBox II 1401/1511/1514
      - Data Sheet MicroAutoBox II 1401/1512/1513
        - Overview and General Information
        - Connector Pinouts
          - DS1512 Zero Insertion Force I/O Connector
          - DS1513 Zero Insertion Force I/O Connector
          - IP Module Connectors
          - Power Input Connector
        - Signal Descriptions
          - Power Inputs and Outputs
          - Digital Inputs
          - Digital Outputs
          - Digital I/O (Bidirectional)
          - Analog Inputs
          - Analog Outputs
          - Interfaces
      - Data Sheet MicroAutoBox II 1401/1513
      - Data Sheet MicroAutoBox II 1401/1513/1514
      - Data Sheet DS1552 Multi-I/O Module
      - Data Sheet for MicroAutoBox Embedded PC

You are here: **MicroAutoBox II Hardware Reference > Data Sheet MicroAutoBox II 1401/1512/1513 > Connector Pinouts > DS1513 Zero Insertion Force I/O Connector**

Pinout

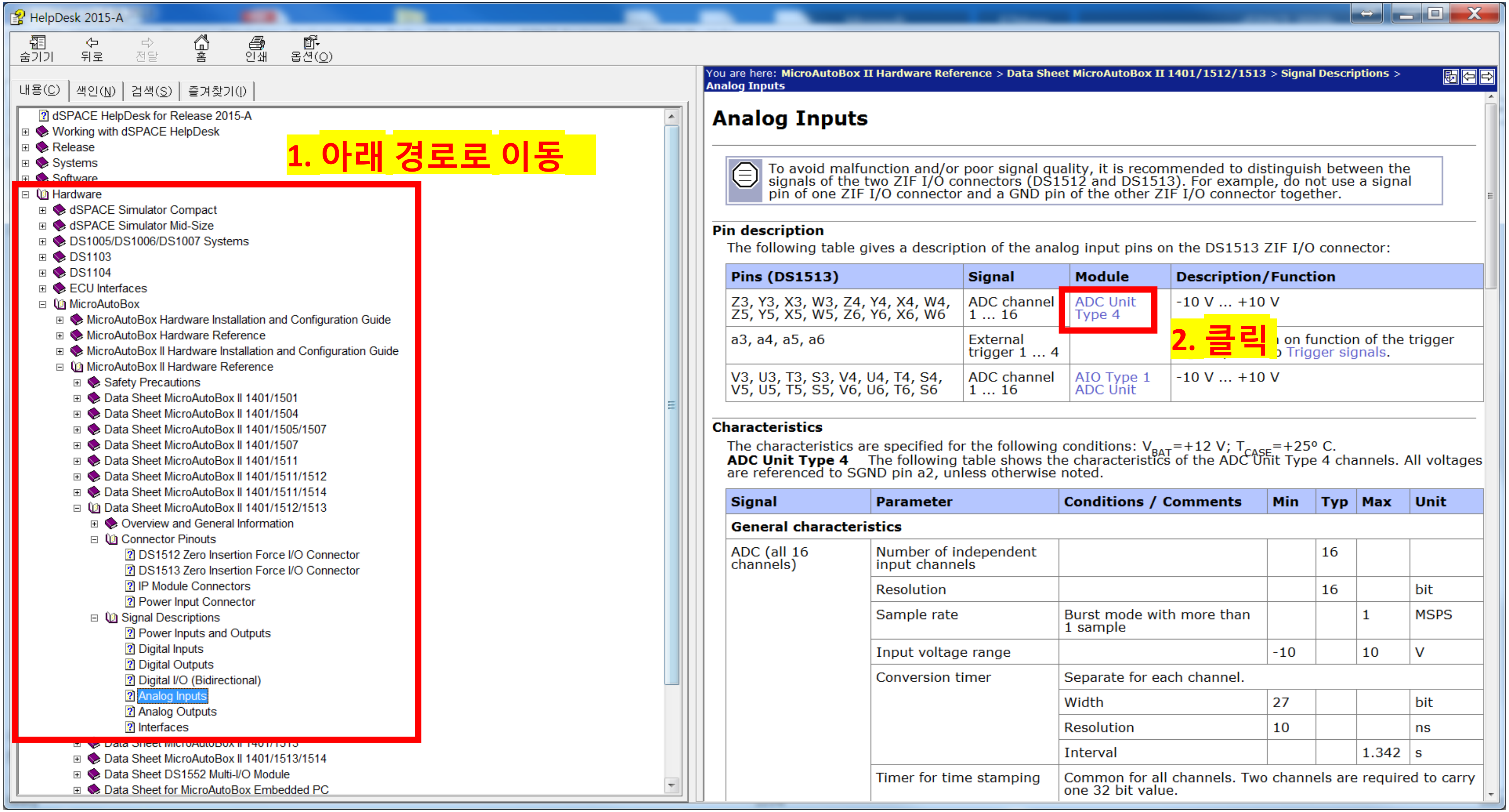
The following illustration shows the pin numbering of the I/O connector (front view of MicroAutoBox):

There are pins identified by capital letters (A, B, C, ...) and pins identified by small letters (a, b, c).

The following table shows the signals of the I/O connector:

1		**2**		**3**		**4**		**5**		**6**		
GND	in	CAN 4 high	i/o	CAN 4 low	i/o	GND	in	Serial 4 K / LIN 1)	i/o	Serial 4 L 1)	in	*A*
GND	in	CAN 3 high	i/o	CAN 3 low	i/o	GND	in	Serial 3 TXD 1)	out	Serial 3 RXD 1)	in	*B*
GND	in	DigP 1 ch 5 2)	out	DigP 1 ch 10	out	DigP 1 ch 15	out	DigP 2 ch 4	out	GND	in	*C*
GND	in	DigP 1 ch 4	out	DigP 1 ch 9	out	DigP 1 ch 14	out	DigP 2 ch 3	out	DigP 2 ch 8	out	*D*
GND	in	DigP 1 ch 3	out	DigP 1 ch 8	out	DigP 1 ch 13	out	DigP 2 ch 2	out	DigP 2 ch 7	out	*E*
GND	in	DigP 1 ch 2	out	DigP 1 ch 7	out	DigP 1 ch 12	out	DigP 2 ch 1	out	DigP 2 ch 6	out	*F*
GND	in	DigP 1 ch 1	out	DigP 1 ch 6	out	DigP 1 ch 11	out	DigP 1 ch 16	out	DigP 2 ch 5	out	*G*
GND	in	DigP 1 ch 5	in	DigP 1 ch 10	in	DigP 1 ch 15	in	DigP 2 ch 4	in	GND	in	*H*
GND	in	DigP 1 ch 4	in	DigP 1 ch 9	in	DigP 1 ch 14	in	DigP 2 ch 3	in	DigP 2 ch 8	in	*J*
GND	in	DigP 1 ch 3	in	DigP 1 ch 8	in	DigP 1 ch 13	in	DigP 2 ch 2	in	DigP 2 ch 7	in	*K*

시뮬링크 모델 생성 및 빌드



1. 아래 경로로 이동

- dSPACE HelpDesk for Release 2015-A
- Working with dSPACE HelpDesk
- Release
- Systems
- Software
- Hardware
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  - dSPACE Simulator Mid-Size
  - DS1005/DS1006/DS1007 Systems
  - DS1103
  - DS1104
  - ECU Interfaces
  - MicroAutoBox
    - MicroAutoBox Hardware Installation and Configuration Guide
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    - MicroAutoBox II Hardware Installation and Configuration Guide
    - MicroAutoBox II Hardware Reference
      - Safety Precautions
      - Data Sheet MicroAutoBox II 1401/1501
      - Data Sheet MicroAutoBox II 1401/1504
      - Data Sheet MicroAutoBox II 1401/1505/1507
      - Data Sheet MicroAutoBox II 1401/1507
      - Data Sheet MicroAutoBox II 1401/1511
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          - Analog Outputs
          - Interfaces
      - Data Sheet MicroAutoBox II 1401/1513
      - Data Sheet MicroAutoBox II 1401/1513/1514
      - Data Sheet DS1552 Multi-I/O Module
      - Data Sheet for MicroAutoBox Embedded PC

You are here: **MicroAutoBox II Hardware Reference > Data Sheet MicroAutoBox II 1401/1512/1513 > Signal Descriptions > Analog Inputs**

Analog Inputs

To avoid malfunction and/or poor signal quality, it is recommended to distinguish between the signals of the two ZIF I/O connectors (DS1512 and DS1513). For example, do not use a signal pin of one ZIF I/O connector and a GND pin of the other ZIF I/O connector together.

Pin description

The following table gives a description of the analog input pins on the DS1513 ZIF I/O connector:

Pins (DS1513)	Signal	Module	Description/Function
Z3, Y3, X3, W3, Z4, Y4, X4, W4, Z5, Y5, X5, W5, Z6, Y6, X6, W6	ADC channel 1 … 16	ADC Unit Type 4	-10 V … +10 V
a3, a4, a5, a6	External trigger 1 … 4		on function of the trigger Trigger signals.
V3, U3, T3, S3, V4, U4, T4, S4, V5, U5, T5, S5, V6, U6, T6, S6	ADC channel 1 … 16	AIO Type 1 ADC Unit	-10 V … +10 V

2. 클릭

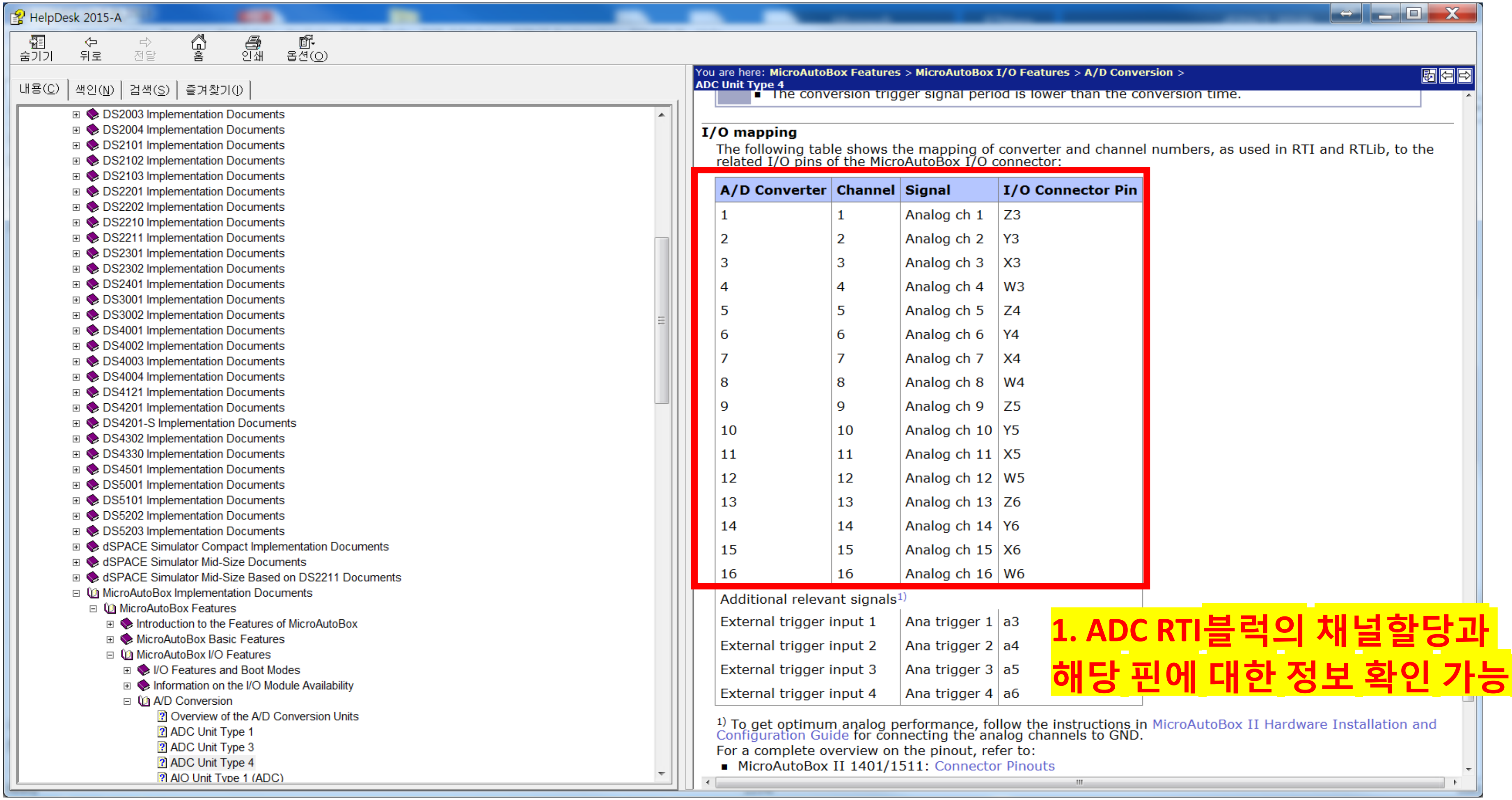
Characteristics

The characteristics are specified for the following conditions: V_{BAT}=+12 V; T_{CASE}=+25° C.

ADC Unit Type 4 The following table shows the characteristics of the ADC Unit Type 4 channels. All voltages are referenced to SGND pin a2, unless otherwise noted.

Signal	Parameter	Conditions / Comments	Min	Typ	Max	Unit
General characteristics						
ADC (all 16 channels)	Number of independent input channels			16		
	Resolution			16		bit
	Sample rate	Burst mode with more than 1 sample			1	MSPS
	Input voltage range		-10		10	V
	Conversion timer	Separate for each channel.				
		Width	27			bit
		Resolution	10			ns
		Interval			1.342	s
	Timer for time stamping	Common for all channels. Two channels are required to carry one 32 bit value.				

시뮬링크 모델 생성 및 빌드


HelpDesk 2015-A
숨기기
뒤로
전달
홈
인쇄
옵션(O)
내용(C)
색인(N)
검색(S)
즐겨찾기(I)
DS2003 Implementation Documents
DS2004 Implementation Documents
DS2101 Implementation Documents
DS2102 Implementation Documents
DS2103 Implementation Documents
DS2201 Implementation Documents
DS2202 Implementation Documents
DS2210 Implementation Documents
DS2211 Implementation Documents
DS2301 Implementation Documents
DS2302 Implementation Documents
DS2401 Implementation Documents
DS3001 Implementation Documents
DS3002 Implementation Documents
DS4001 Implementation Documents
DS4002 Implementation Documents
DS4003 Implementation Documents
DS4004 Implementation Documents
DS4121 Implementation Documents
DS4201 Implementation Documents
DS4201-S Implementation Documents
DS4302 Implementation Documents
DS4330 Implementation Documents
DS4501 Implementation Documents
DS5001 Implementation Documents
DS5101 Implementation Documents
DS5202 Implementation Documents
DS5203 Implementation Documents
dSPACE Simulator Compact Implementation Documents
dSPACE Simulator Mid-Size Documents
dSPACE Simulator Mid-Size Based on DS2211 Documents
MicroAutoBox Implementation Documents
MicroAutoBox Features
Introduction to the Features of MicroAutoBox
MicroAutoBox Basic Features
MicroAutoBox I/O Features
I/O Features and Boot Modes
Information on the I/O Module Availability
A/D Conversion
Overview of the A/D Conversion Units
ADC Unit Type 1
ADC Unit Type 3
ADC Unit Type 4
AIO Unit Type 1 (ADC)
You are here: MicroAutoBox Features > MicroAutoBox I/O Features > A/D Conversion > ADC Unit Type 4

- The conversion trigger signal period is lower than the conversion time.

I/O mapping

The following table shows the mapping of converter and channel numbers, as used in RTI and RTLib, to the related I/O pins of the MicroAutoBox I/O connector:

A/D Converter	Channel	Signal	I/O Connector Pin
1	1	Analog ch 1	Z3
2	2	Analog ch 2	Y3
3	3	Analog ch 3	X3
4	4	Analog ch 4	W3
5	5	Analog ch 5	Z4
6	6	Analog ch 6	Y4
7	7	Analog ch 7	X4
8	8	Analog ch 8	W4
9	9	Analog ch 9	Z5
10	10	Analog ch 10	Y5
11	11	Analog ch 11	X5
12	12	Analog ch 12	W5
13	13	Analog ch 13	Z6
14	14	Analog ch 14	Y6
15	15	Analog ch 15	X6
16	16	Analog ch 16	W6
Additional relevant signals[1]			
External trigger input 1		Ana trigger 1	a3
External trigger input 2		Ana trigger 2	a4
External trigger input 3		Ana trigger 3	a5
External trigger input 4		Ana trigger 4	a6

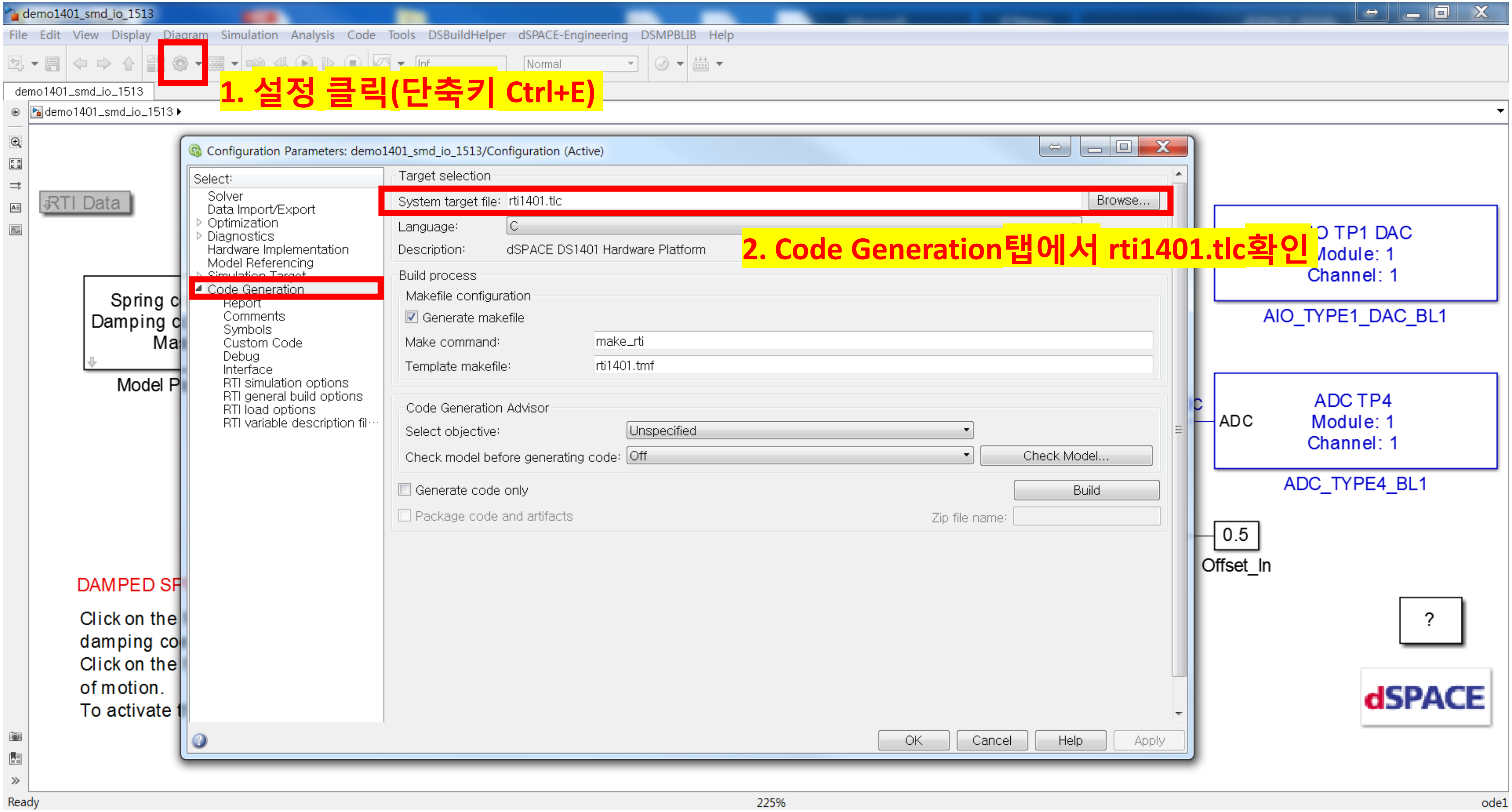
[1] To get optimum analog performance, follow the instructions in MicroAutoBox II Hardware Installation and Configuration Guide for connecting the analog channels to GND.

For a complete overview on the pinout, refer to:

- MicroAutoBox II 1401/1511: Connector Pinouts

1. ADC RTI블럭의 채널할당과 해당 핀에 대한 정보 확인 가능

시뮬링크 모델 생성 및 빌드


demo1401_smd_io_1513
File Edit View Display Diagram Simulation Analysis Code Tools DSBuildHelper dSPACE-Engineering DSMPBLIB Help
Inf
Normal
demo1401_smd_io_1513
Configuration Parameters: demo1401_smd_io_1513/Configuration (Active)
Select:
Solver
Data Import/Export
Optimization
Diagnostics
Hardware Implementation
Model Referencing
Simulation Target
Code Generation
Report
Comments
Symbols
Custom Code
Debug
Interface
RTI simulation options
RTI general build options
RTI load options
RTI variable description fil…
Target selection
Browse...
Build process
Makefile configuration
Code Generation Advisor
Check Model...
Build
Zip file name:
OK
Cancel
Help
Apply
RTI Data
Spring c
Damping c
Ma
Model P
DAMPED SP
Click on the
damping co
Click on the
of motion.
To activate t
O TP1 DAC
Module: 1
Channel: 1
AIO_TYPE1_DAC_BL1
ADC
ADC TP4
Module: 1
Channel: 1
ADC_TYPE4_BL1
0.5
Offset_In
?
dSPACE
Ready
225%
ode1

1. 설정 클릭(단축키 Ctrl+E)

2. Code Generation탭에서 rti1401.tlc확인

System target file: rti1401.tlc

Language: C

Description: dSPACE DS1401 Hardware Platform

☑ Generate makefile

Make command: make_rti

Template makefile: rti1401.tmf

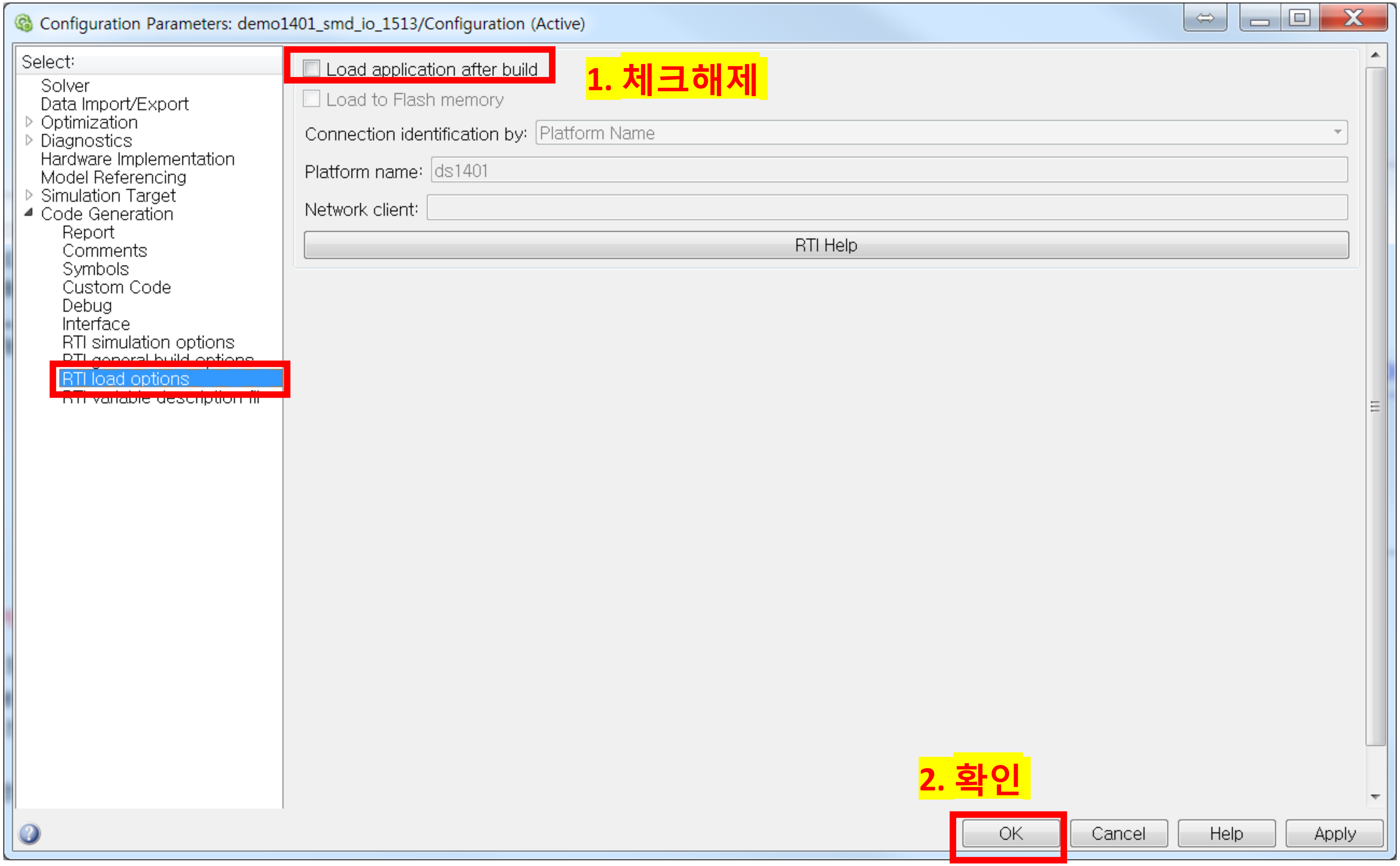
Select objective: Unspecified

Check model before generating code: Off

☐ Generate code only

☐ Package code and artifacts

시뮬링크 모델 생성 및 빌드



Configuration Parameters: demo1401_smd_io_1513/Configuration (Active)

☐ Load application after build

☐ Load to Flash memory

Connection identification by: Platform Name

Platform name: ds1401

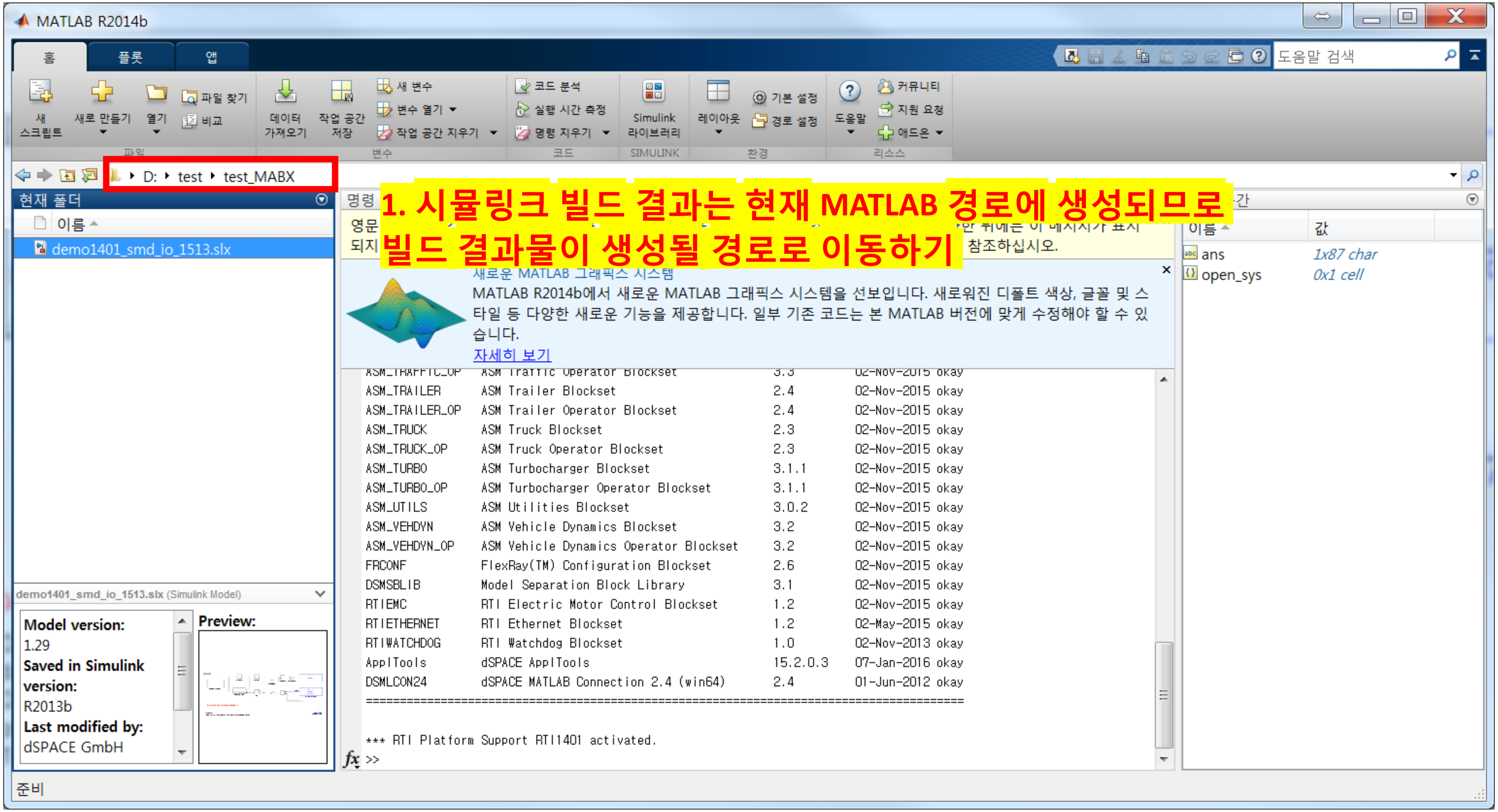
Network client:

1. 체크해제

2. 확인

Select:
Solver
Data Import/Export
Optimization
Diagnostics
Hardware Implementation
Model Referencing
Simulation Target
Code Generation
Report
Comments
Symbols
Custom Code
Debug
Interface
RTI simulation options
RTI general build options
RTI load options
RTI variable description fil
RTI Help
OK
Cancel
Help
Apply

시뮬링크 모델 생성 및 빌드


MATLAB R2014b
홈
플롯
앱
도움말 검색
새 스크립트
새로 만들기
열기
파일 찾기
비교
데이터 가져오기
작업 공간 저장
새 변수
변수 열기
작업 공간 지우기
코드 분석
실행 시간 측정
명령 지우기
Simulink 라이브러리
레이아웃
기본 설정
경로 설정
도움말
커뮤니티
지원 요청
애드온
파일
변수
코드
SIMULINK
환경
리소스
D: ▸ test ▸ test_MABX
현재 폴더
이름
demo1401_smd_io_1513.slx
demo1401_smd_io_1513.slx (Simulink Model)
Preview:
명령
이름
값
ans
1x87 char
open_sys
0x1 cell
준비

Model version: 1.29
Saved in Simulink version: R2013b
Last modified by: dSPACE GmbH

참조하십시오.

새로운 MATLAB 그래픽스 시스템

MATLAB R2014b에서 새로운 MATLAB 그래픽스 시스템을 선보입니다. 새로워진 디폴트 색상, 글꼴 및 스타일 등 다양한 새로운 기능을 제공합니다. 일부 기존 코드는 본 MATLAB 버전에 맞게 수정해야 할 수 있습니다.

자세히 보기

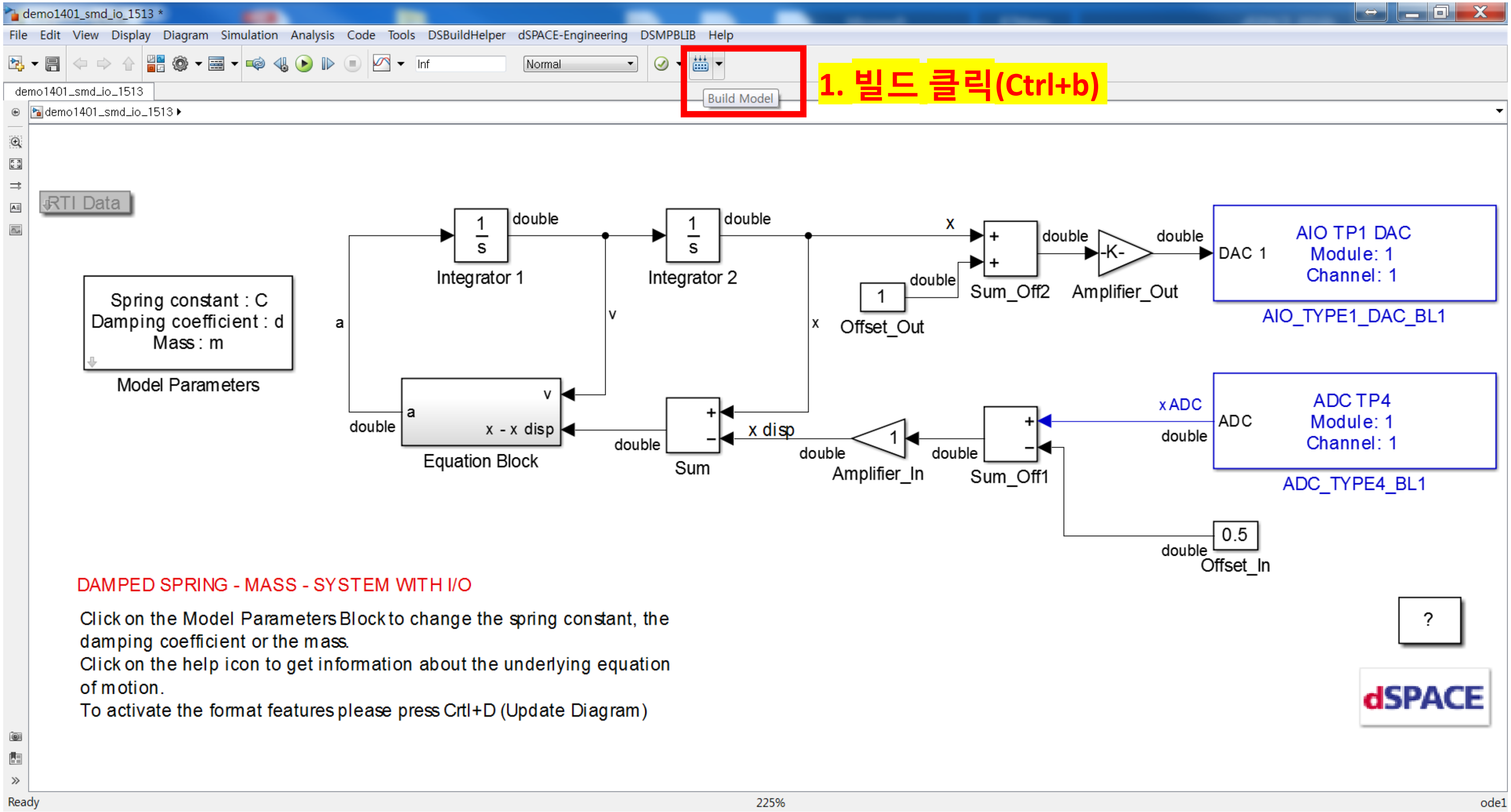
```
ASM_TRAILER      ASM Trailer Blockset                  2.4       02-Nov-2015 okay
ASM_TRAILER_OP   ASM Trailer Operator Blockset         2.4       02-Nov-2015 okay
ASM_TRUCK        ASM Truck Blockset                    2.3       02-Nov-2015 okay
ASM_TRUCK_OP     ASM Truck Operator Blockset           2.3       02-Nov-2015 okay
ASM_TURBO        ASM Turbocharger Blockset             3.1.1     02-Nov-2015 okay
ASM_TURBO_OP     ASM Turbocharger Operator Blockset    3.1.1     02-Nov-2015 okay
ASM_UTILS        ASM Utilities Blockset                3.0.2     02-Nov-2015 okay
ASM_VEHDYN       ASM Vehicle Dynamics Blockset         3.2       02-Nov-2015 okay
ASM_VEHDYN_OP    ASM Vehicle Dynamics Operator Blockset 3.2      02-Nov-2015 okay
FRCONF           FlexRay(TM) Configuration Blockset    2.6       02-Nov-2015 okay
DSMSBLIB         Model Separation Block Library        3.1       02-Nov-2015 okay
RTIEMC           RTI Electric Motor Control Blockset   1.2       02-Nov-2015 okay
RTIETHERNET      RTI Ethernet Blockset                 1.2       02-May-2015 okay
RTIWATCHDOG      RTI Watchdog Blockset                 1.0       02-Nov-2013 okay
ApplTools        dSPACE ApplTools                      15.2.0.3  07-Jan-2016 okay
DSMLCON24        dSPACE MATLAB Connection 2.4 (win64)  2.4       01-Jun-2012 okay
=====================================================================================

*** RTI Platform Support RTI1401 activated.
>>
```

1. 시뮬링크 빌드 결과는 현재 MATLAB 경로에 생성되므로 빌드 결과물이 생성될 경로로 이동하기

HANCOM 한컴MDS

시뮬링크 모델 생성 및 빌드

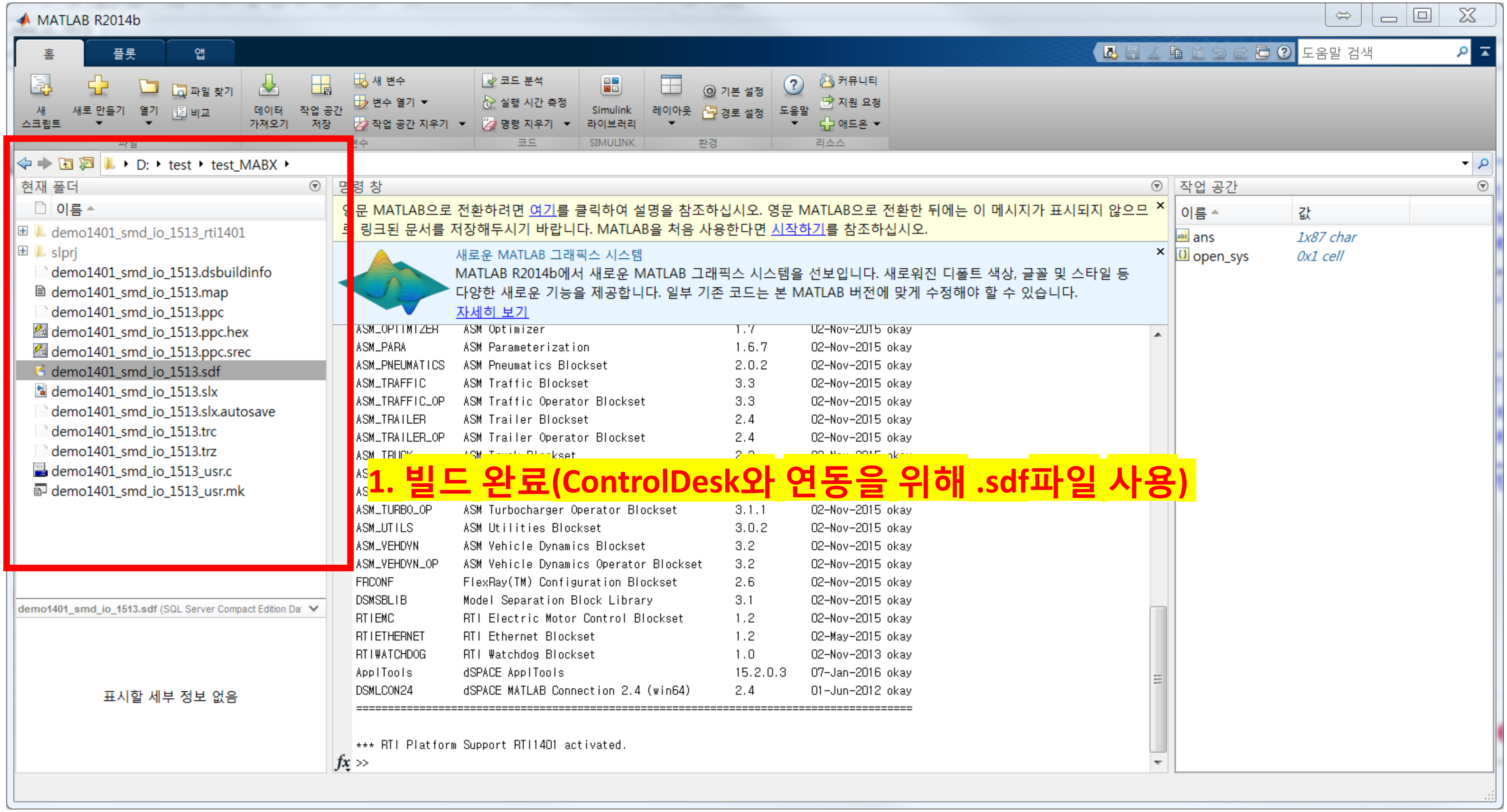

demo1401_smd_io_1513 *
File Edit View Display Diagram Simulation Analysis Code Tools DSBuildHelper dSPACE-Engineering DSMPBLIB Help
Inf
Normal
Build Model
demo1401_smd_io_1513
RTI Data
Spring constant : C
Damping coefficient : d
Mass : m
Model Parameters
1/s
Integrator 1
Integrator 2
double
a
v
x
Equation Block
x - x disp
Sum
x disp
Amplifier_In
Sum_Off1
Sum_Off2
Offset_Out
Amplifier_Out
-K-
DAC 1
AIO TP1 DAC
Module: 1
Channel: 1
AIO_TYPE1_DAC_BL1
x ADC
ADC
ADC TP4
Module: 1
Channel: 1
ADC_TYPE4_BL1
0.5
Offset_In
?
dSPACE
Ready
225%
ode1

1. 빌드 클릭(Ctrl+b)

DAMPED SPRING - MASS - SYSTEM WITH I/O

Click on the Model Parameters Block to change the spring constant, the damping coefficient or the mass.
Click on the help icon to get information about the underlying equation of motion.
To activate the format features please press Crtl+D (Update Diagram)

시뮬링크 모델 생성 및 빌드



현재 폴더:

- demo1401_smd_io_1513_rti1401
- slprj
- demo1401_smd_io_1513.dsbuildinfo
- demo1401_smd_io_1513.map
- demo1401_smd_io_1513.ppc
- demo1401_smd_io_1513.ppc.hex
- demo1401_smd_io_1513.ppc.srec
- demo1401_smd_io_1513.sdf
- demo1401_smd_io_1513.slx
- demo1401_smd_io_1513.slx.autosave
- demo1401_smd_io_1513.trc
- demo1401_smd_io_1513.trz
- demo1401_smd_io_1513_usr.c
- demo1401_smd_io_1513_usr.mk

demo1401_smd_io_1513.sdf (SQL Server Compact Edition Da

표시할 세부 정보 없음

한글 MATLAB으로 전환하려면 여기를 클릭하여 설명을 참조하십시오. 영문 MATLAB으로 전환한 뒤에는 이 메시지가 표시되지 않으므로 링크된 문서를 저장해두시기 바랍니다. MATLAB을 처음 사용한다면 시작하기를 참조하십시오.

새로운 MATLAB 그래픽스 시스템

MATLAB R2014b에서 새로운 MATLAB 그래픽스 시스템을 선보입니다. 새로워진 디폴트 색상, 글꼴 및 스타일 등 다양한 새로운 기능을 제공합니다. 일부 기존 코드는 본 MATLAB 버전에 맞게 수정해야 할 수 있습니다.

자세히 보기

```
ASM_OPTIMIZER    ASM Optimizer                          1.7        02-Nov-2015 okay
ASM_PARA         ASM Parameterization                   1.6.7      02-Nov-2015 okay
ASM_PNEUMATICS   ASM Pneumatics Blockset                2.0.2      02-Nov-2015 okay
ASM_TRAFFIC      ASM Traffic Blockset                   3.3        02-Nov-2015 okay
ASM_TRAFFIC_OP   ASM Traffic Operator Blockset          3.3        02-Nov-2015 okay
ASM_TRAILER      ASM Trailer Blockset                   2.4        02-Nov-2015 okay
ASM_TRAILER_OP   ASM Trailer Operator Blockset          2.4        02-Nov-2015 okay
ASM_TRUCK        ASM Truck Blockset                     2.2        02-Nov-2015 okay
AS
AS
ASM_TURBO_OP     ASM Turbocharger Operator Blockset     3.1.1      02-Nov-2015 okay
ASM_UTILS        ASM Utilities Blockset                 3.0.2      02-Nov-2015 okay
ASM_VEHDYN       ASM Vehicle Dynamics Blockset          3.2        02-Nov-2015 okay
ASM_VEHDYN_OP    ASM Vehicle Dynamics Operator Blockset 3.2        02-Nov-2015 okay
FRCONF           FlexRay(TM) Configuration Blockset     2.6        02-Nov-2015 okay
DSMSBLIB         Model Separation Block Library         3.1        02-Nov-2015 okay
RTIEMC           RTI Electric Motor Control Blockset    1.2        02-Nov-2015 okay
RTIETHERNET      RTI Ethernet Blockset                  1.2        02-May-2015 okay
RTIWATCHDOG      RTI Watchdog Blockset                  1.0        02-Nov-2013 okay
ApplTools        dSPACE ApplTools                       15.2.0.3   07-Jan-2016 okay
DSMLCON24        dSPACE MATLAB Connection 2.4 (win64)   2.4        01-Jun-2012 okay
==========================================================================================

*** RTI Platform Support RTI1401 activated.
>>
```

이름	값
ans	1x87 char
open_sys	0x1 cell

1. 빌드 완료(ControlDesk와 연동을 위해 .sdf파일 사용)

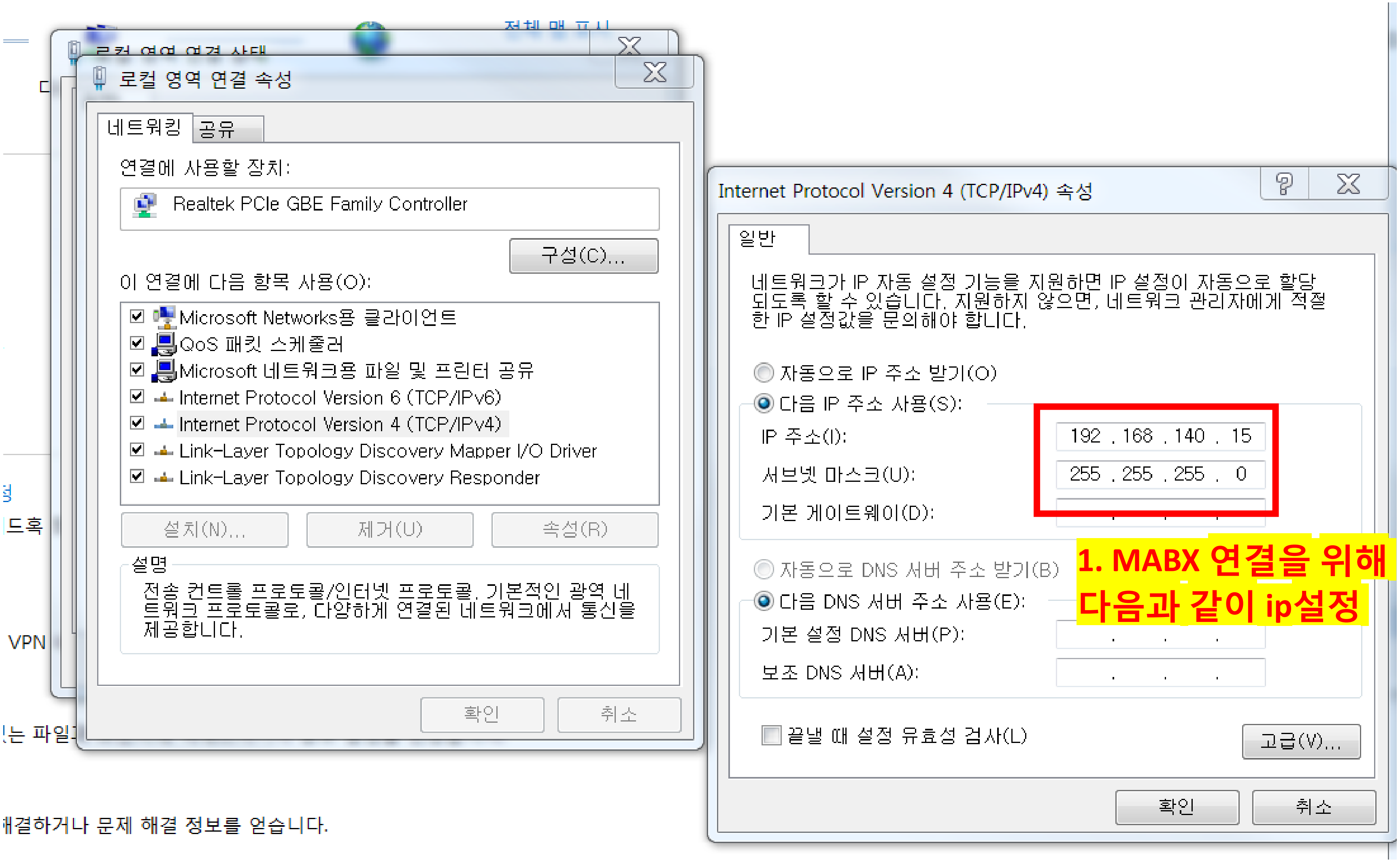
CONTENTS

Ⅰ. 시뮬링크 모델 생성 및 빌드

Ⅱ. ControlDesk 프로젝트 생성

Ⅲ. ControlDesk 기본 사용법

ControlDesk 프로젝트 생성



로컬 영역 연결 속성

연결에 사용할 장치:

Realtek PCIe GBE Family Controller

이 연결에 다음 항목 사용(O):

- ☑ Microsoft Networks용 클라이언트
- ☑ QoS 패킷 스케줄러
- ☑ Microsoft 네트워크용 파일 및 프린터 공유
- ☑ Internet Protocol Version 6 (TCP/IPv6)
- ☑ Internet Protocol Version 4 (TCP/IPv4)
- ☑ Link-Layer Topology Discovery Mapper I/O Driver
- ☑ Link-Layer Topology Discovery Responder

설명

전송 컨트롤 프로토콜/인터넷 프로토콜. 기본적인 광역 네트워크 프로토콜로, 다양하게 연결된 네트워크에서 통신을 제공합니다.

Internet Protocol Version 4 (TCP/IPv4) 속성

네트워크가 IP 자동 설정 기능을 지원하면 IP 설정이 자동으로 할당되도록 할 수 있습니다. 지원하지 않으면, 네트워크 관리자에게 적절한 IP 설정값을 문의해야 합니다.

○ 자동으로 IP 주소 받기(O)

● 다음 IP 주소 사용(S):

IP 주소(I): 192 . 168 . 140 . 15

서브넷 마스크(U): 255 . 255 . 255 . 0

기본 게이트웨이(D): . . .

○ 자동으로 DNS 서버 주소 받기(B)

● 다음 DNS 서버 주소 사용(E):

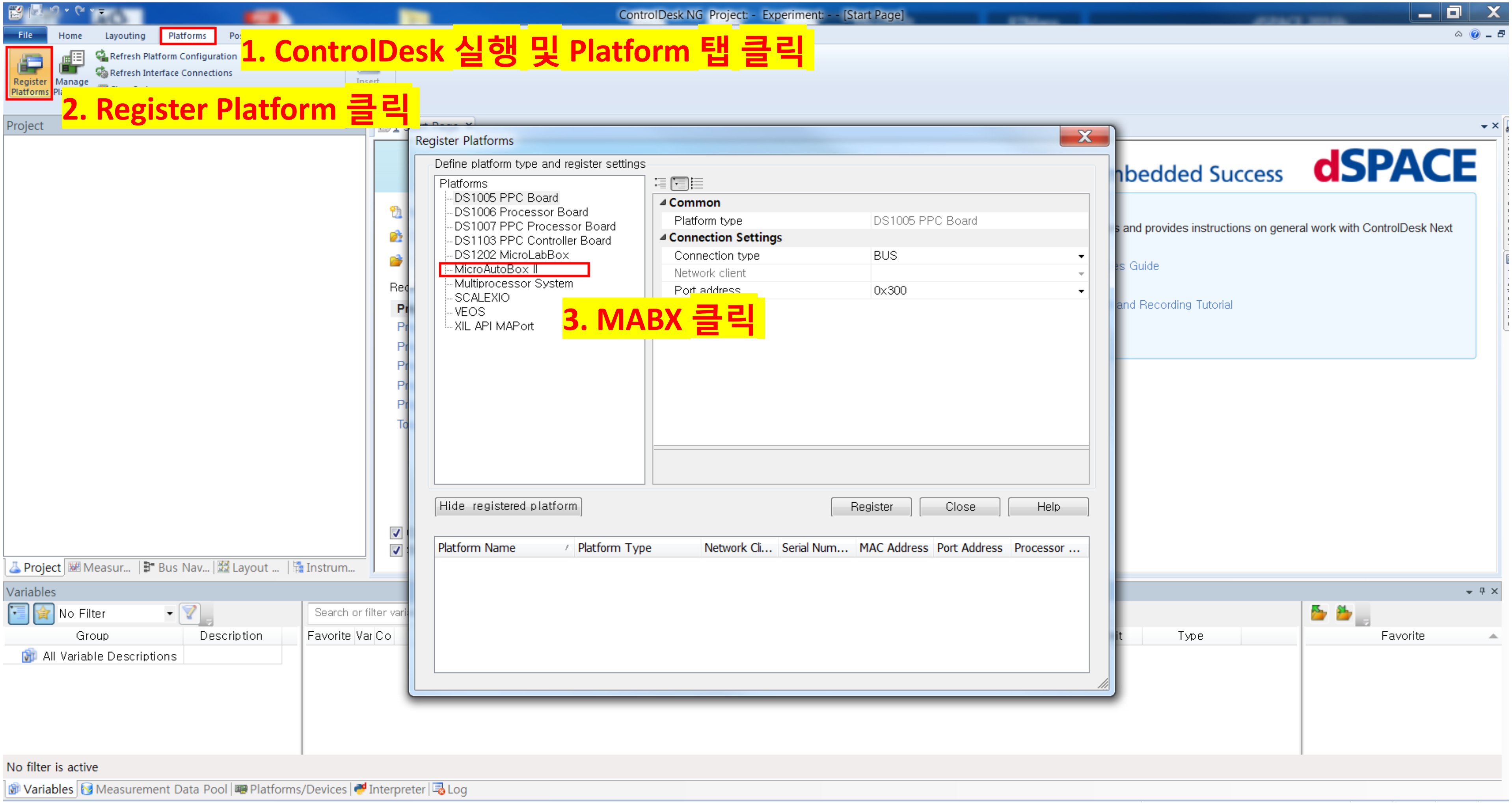
기본 설정 DNS 서버(P): . . .

보조 DNS 서버(A): . . .

☐ 끝낼 때 설정 유효성 검사(L)

1. MABX 연결을 위해 다음과 같이 ip설정

ControlDesk 프로젝트 생성


ControlDesk NG Project: - Experiment: - - [Start Page]
File
Home
Layouting
Platforms
Register Platforms
Manage Platforms
Refresh Platform Configuration
Refresh Interface Connections
Project
Register Platforms
Define platform type and register settings
Platforms
DS1005 PPC Board
DS1006 Processor Board
DS1007 PPC Processor Board
DS1103 PPC Controller Board
DS1202 MicroLabBox
MicroAutoBox II
Multiprocessor System
SCALEXIO
VEOS
XIL API MAPort
Hide registered platform
Register
Close
Help
Platform Name
Platform Type
Network Cli...
Serial Num...
MAC Address
Port Address
Processor ...
dSPACE
Variables
No Filter
Group
Description
All Variable Descriptions
No filter is active
Variables
Measurement Data Pool
Platforms/Devices
Interpreter
Log

1. ControlDesk 실행 및 Platform 탭 클릭

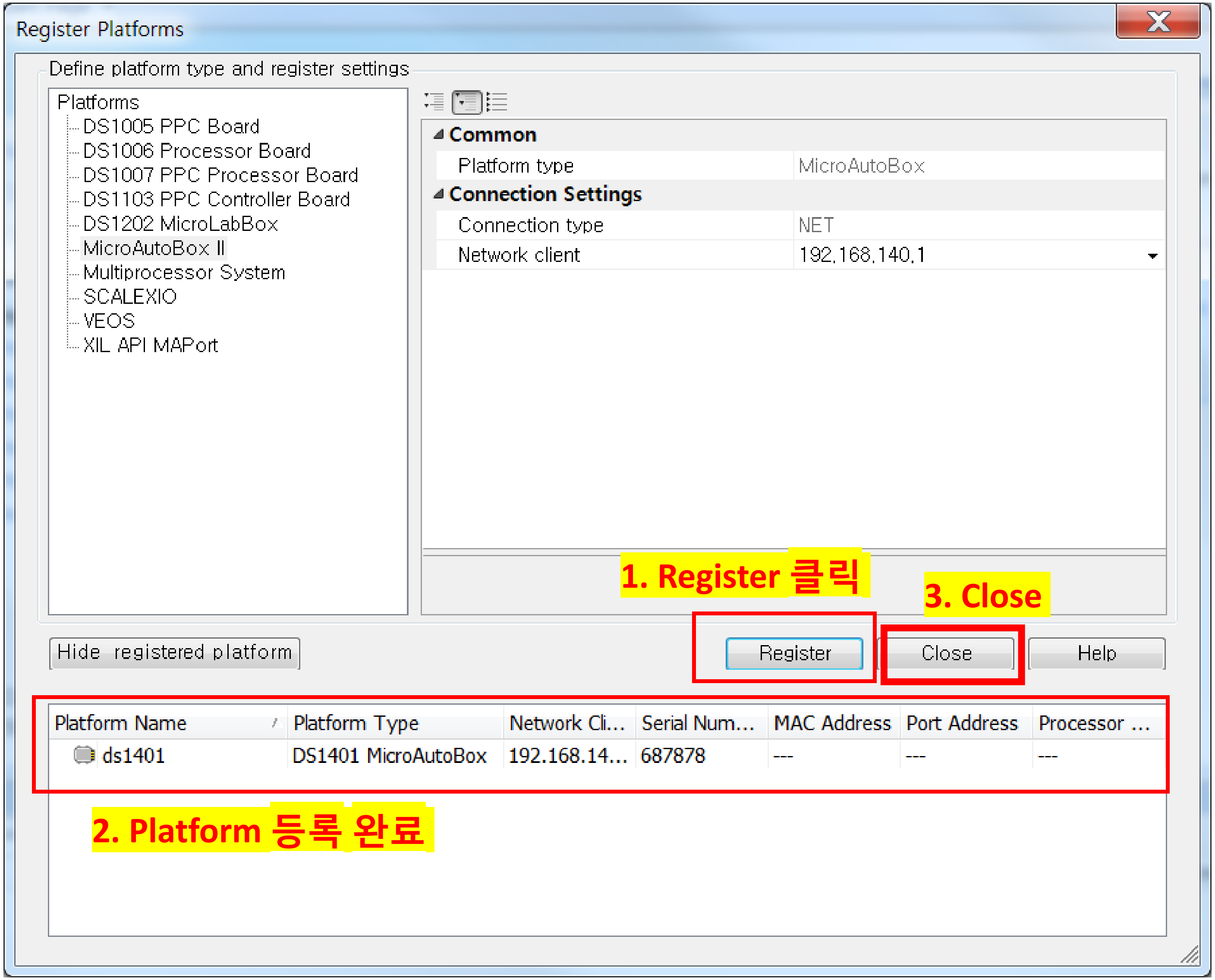
2. Register Platform 클릭

3. MABX 클릭

Common
Platform type: DS1005 PPC Board

Connection Settings
Connection type: BUS
Network client:
Port address: 0x300

ControlDesk 프로젝트 생성


Register Platforms
Hide registered platform
Register
Close
Help

Define platform type and register settings

- Platforms
  - DS1005 PPC Board
  - DS1006 Processor Board
  - DS1007 PPC Processor Board
  - DS1103 PPC Controller Board
  - DS1202 MicroLabBox
  - MicroAutoBox II
  - Multiprocessor System
  - SCALEXIO
  - VEOS
  - XIL API MAPort

Common

Platform type	MicroAutoBox

Connection Settings

Connection type	NET
Network client	192.168.140.1

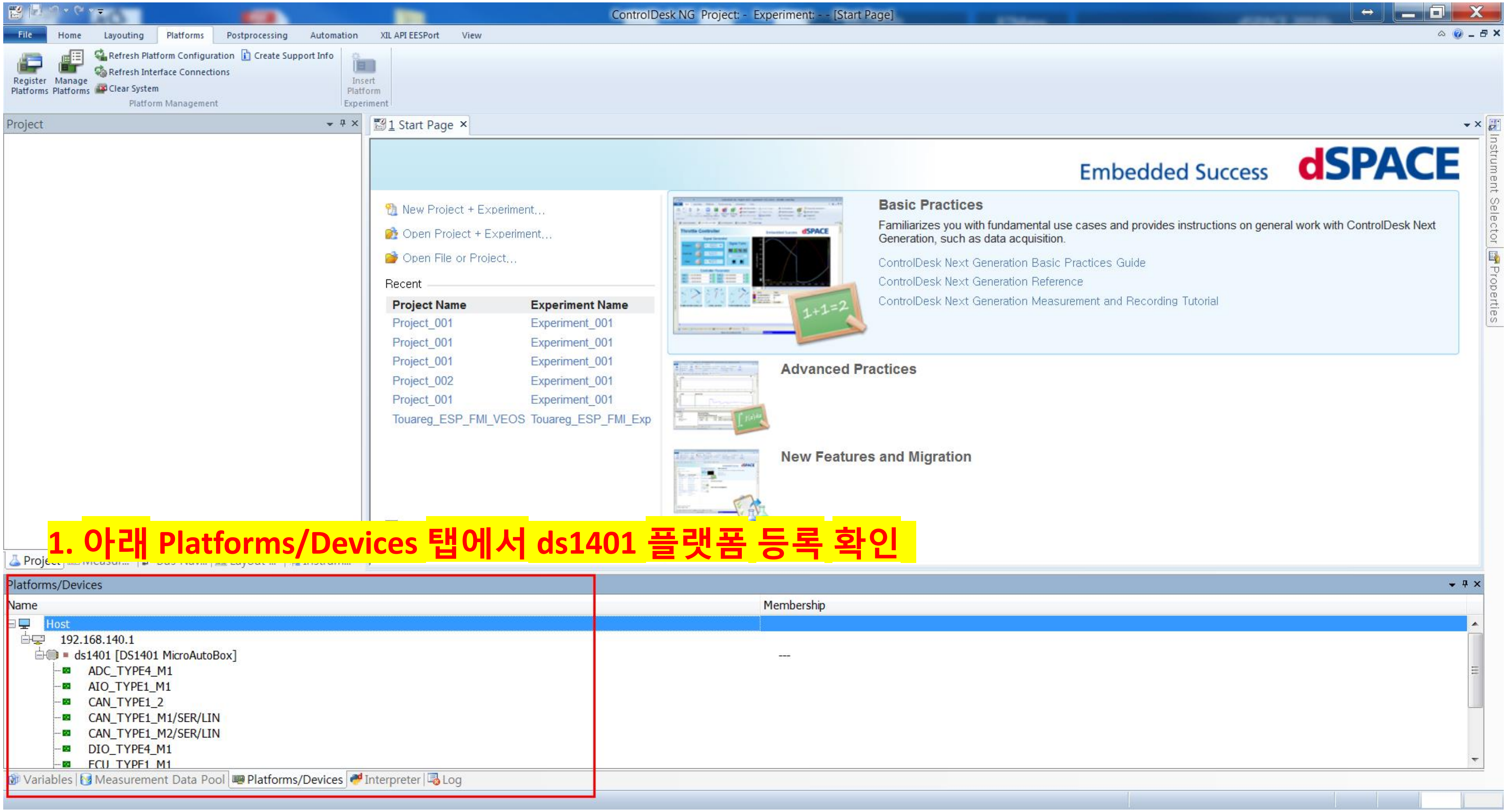
Platform Name	Platform Type	Network Cli...	Serial Num...	MAC Address	Port Address	Processor ...
ds1401	DS1401 MicroAutoBox	192.168.14...	687878	---	---	---

1. Register 클릭

2. Platform 등록 완료

3. Close

ControlDesk 프로젝트 생성


ControlDesk NG Project: - Experiment: - - [Start Page]
File
Home
Layouting
Platforms
Postprocessing
Automation
XIL API EESPort
View
Register Platforms
Manage Platforms
Refresh Platform Configuration
Refresh Interface Connections
Clear System
Create Support Info
Platform Management
Insert Platform
Experiment
Project
1 Start Page
Embedded Success
dSPACE
New Project + Experiment...
Open Project + Experiment...
Open File or Project...
Recent
Advanced Practices
New Features and Migration
Instrument Selector
Properties
Variables
Measurement Data Pool
Platforms/Devices
Interpreter
Log

Project Name	Experiment Name
Project_001	Experiment_001
Project_001	Experiment_001
Project_001	Experiment_001
Project_002	Experiment_001
Project_001	Experiment_001
Touareg_ESP_FMI_VEOS	Touareg_ESP_FMI_Exp

Basic Practices

Familiarizes you with fundamental use cases and provides instructions on general work with ControlDesk Next Generation, such as data acquisition.

ControlDesk Next Generation Basic Practices Guide

ControlDesk Next Generation Reference

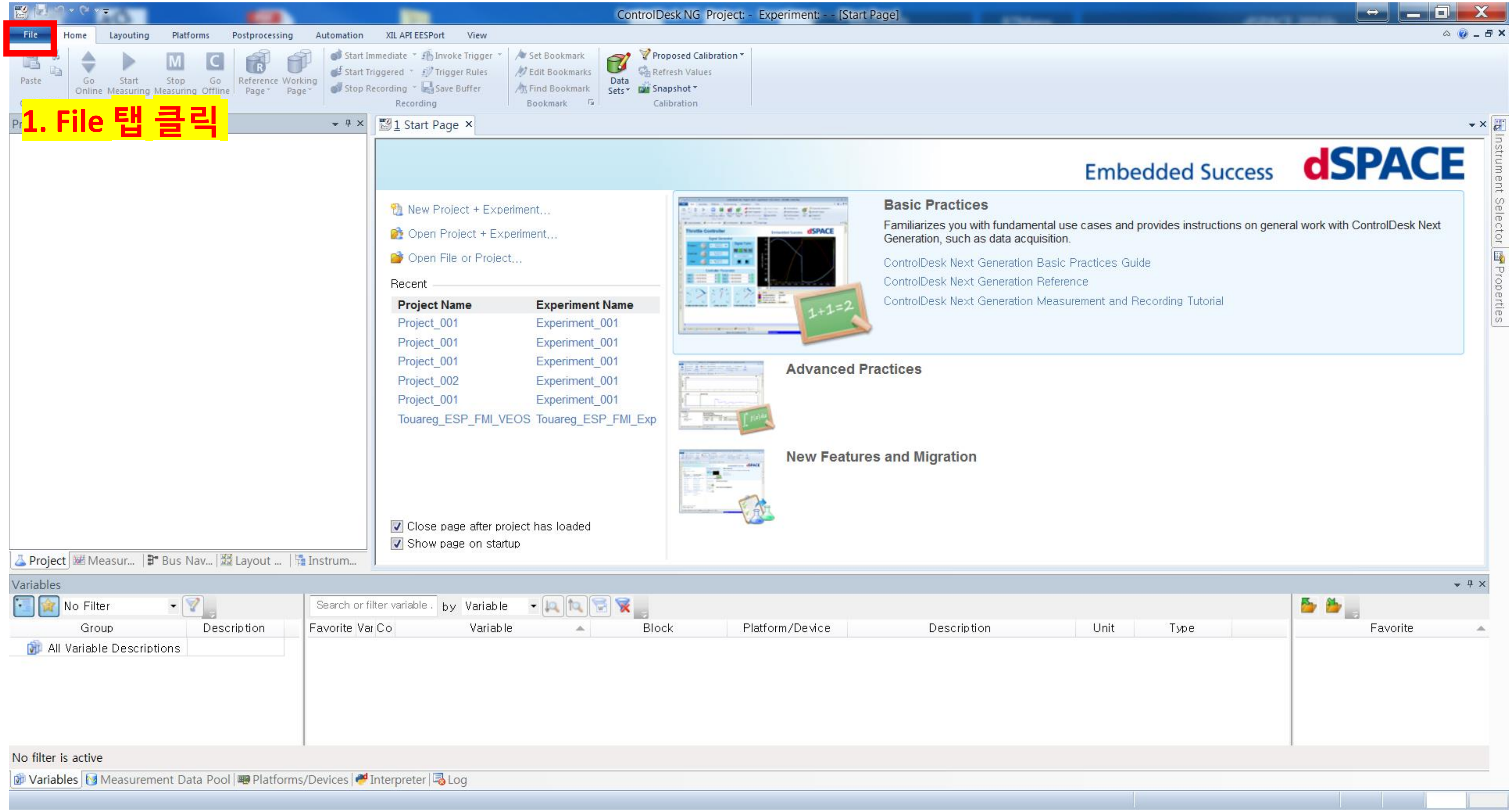
ControlDesk Next Generation Measurement and Recording Tutorial

1. 아래 Platforms/Devices 탭에서 ds1401 플랫폼 등록 확인

Platforms/Devices

Name	Membership
Host	
192.168.140.1	
ds1401 [DS1401 MicroAutoBox]	---
ADC_TYPE4_M1	
AIO_TYPE1_M1	
CAN_TYPE1_2	
CAN_TYPE1_M1/SER/LIN	
CAN_TYPE1_M2/SER/LIN	
DIO_TYPE4_M1	
ECU_TYPE1_M1	

ControlDesk 프로젝트 생성



1. File 탭 클릭

ControlDesk NG Project: - Experiment: - - [Start Page]
File
Home
Layouting
Platforms
Postprocessing
Automation
XIL API EESPort
View
Paste
Go Online
Start Measuring
Stop Measuring
Go Offline
Reference Page
Working Page
Start Immediate
Start Triggered
Stop Recording
Invoke Trigger
Trigger Rules
Save Buffer
Recording
Set Bookmark
Edit Bookmarks
Find Bookmark
Bookmark
Data Sets
Proposed Calibration
Refresh Values
Snapshot
Calibration
1 Start Page
Embedded Success
dSPACE
New Project + Experiment...
Open Project + Experiment...
Open File or Project...
Recent
Instrument Selector
Properties
Project
Measur...
Bus Nav...
Layout ...
Instrum...
Variables
No Filter
Search or filter variable
by
Variable
Group
Description
All Variable Descriptions
Favorite
Var
Co
Variable
Block
Platform/Device
Description
Unit
Type
Favorite
No filter is active
Variables
Measurement Data Pool
Platforms/Devices
Interpreter
Log

Project Name	Experiment Name
Project_001	Experiment_001
Project_001	Experiment_001
Project_001	Experiment_001
Project_002	Experiment_001
Project_001	Experiment_001
Touareg_ESP_FMI_VEOS	Touareg_ESP_FMI_Exp

☑ Close page after project has loaded

☑ Show page on startup

Basic Practices

Familiarizes you with fundamental use cases and provides instructions on general work with ControlDesk Next Generation, such as data acquisition.

ControlDesk Next Generation Basic Practices Guide

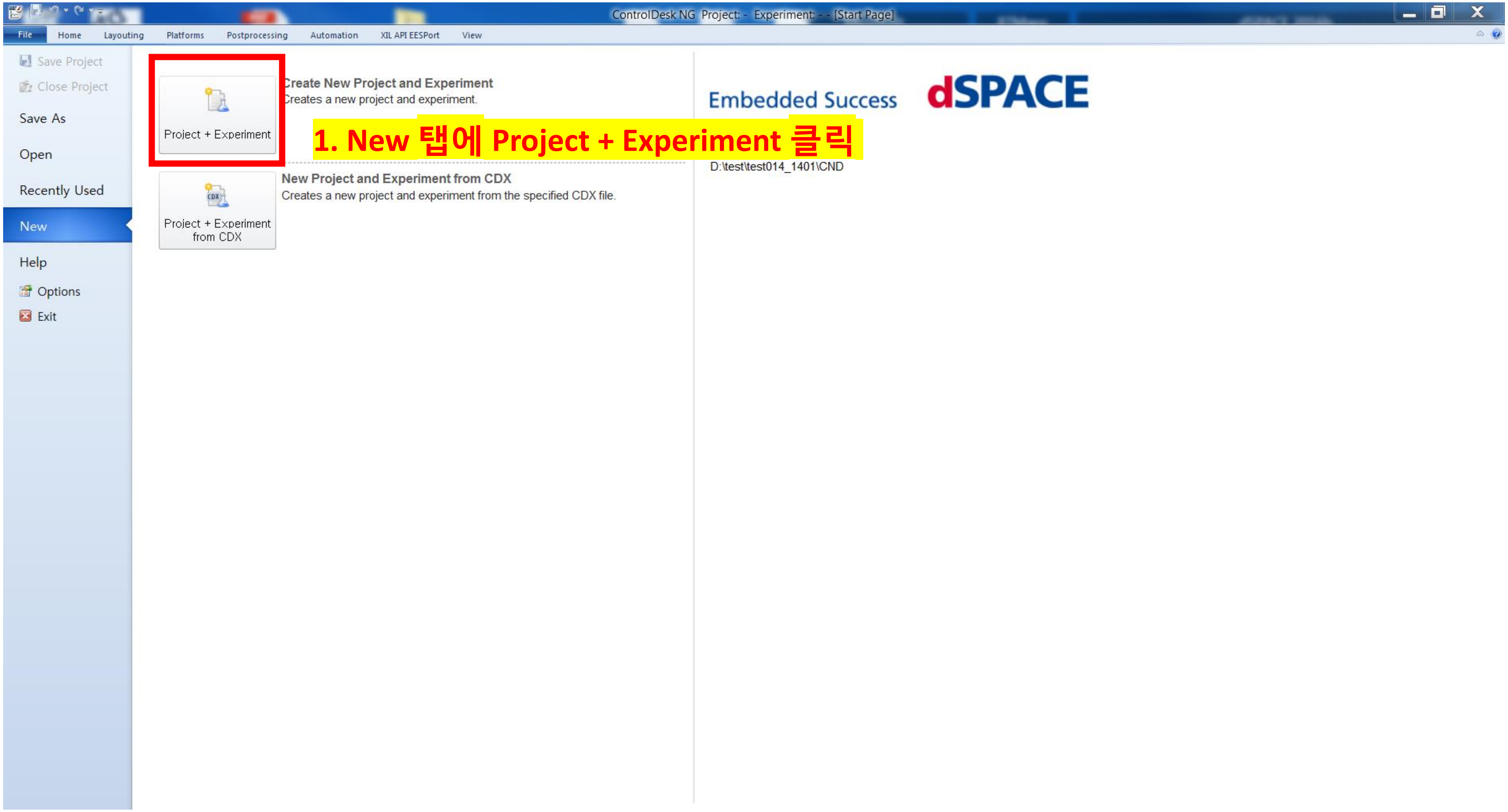
ControlDesk Next Generation Reference

ControlDesk Next Generation Measurement and Recording Tutorial

Advanced Practices

New Features and Migration

ControlDesk 프로젝트 생성



ControlDesk NG Project: - Experiment: - - [Start Page]
File
Home
Layouting
Platforms
Postprocessing
Automation
XIL API EESPort
View
Save Project
Close Project
Save As
Open
Recently Used
New
Help
Options
Exit
Project + Experiment
Project + Experiment from CDX
Embedded Success
dSPACE

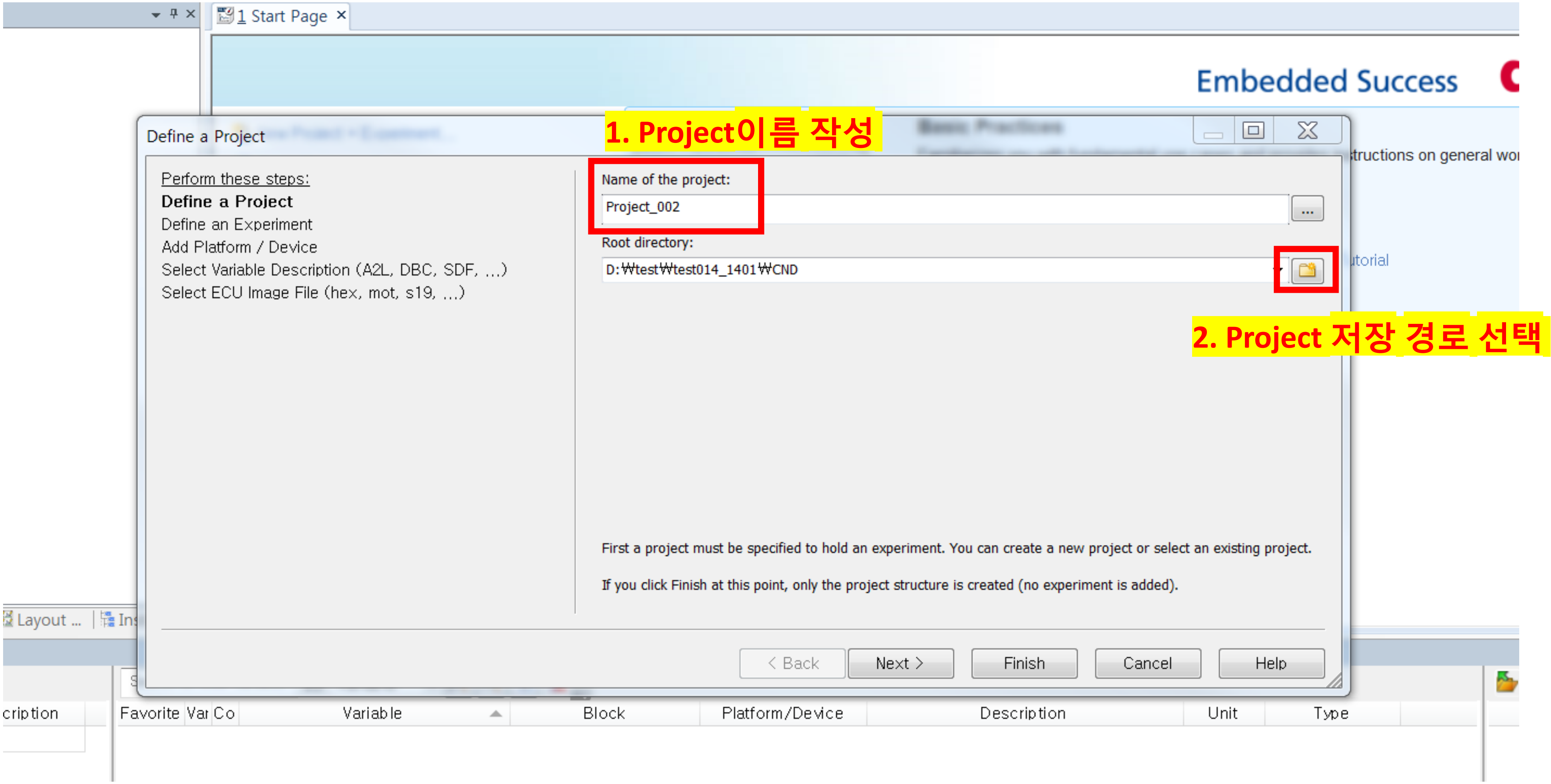
Create New Project and Experiment
Creates a new project and experiment.

1. New 탭에 Project + Experiment 클릭

New Project and Experiment from CDX
Creates a new project and experiment from the specified CDX file.

D:\test\test014_1401\CND

ControlDesk 프로젝트 생성



Define a Project

Perform these steps:

Define a Project

Define an Experiment

Add Platform / Device

Select Variable Description (A2L, DBC, SDF, ...)

Select ECU Image File (hex, mot, s19, ...)

Name of the project: Project_002

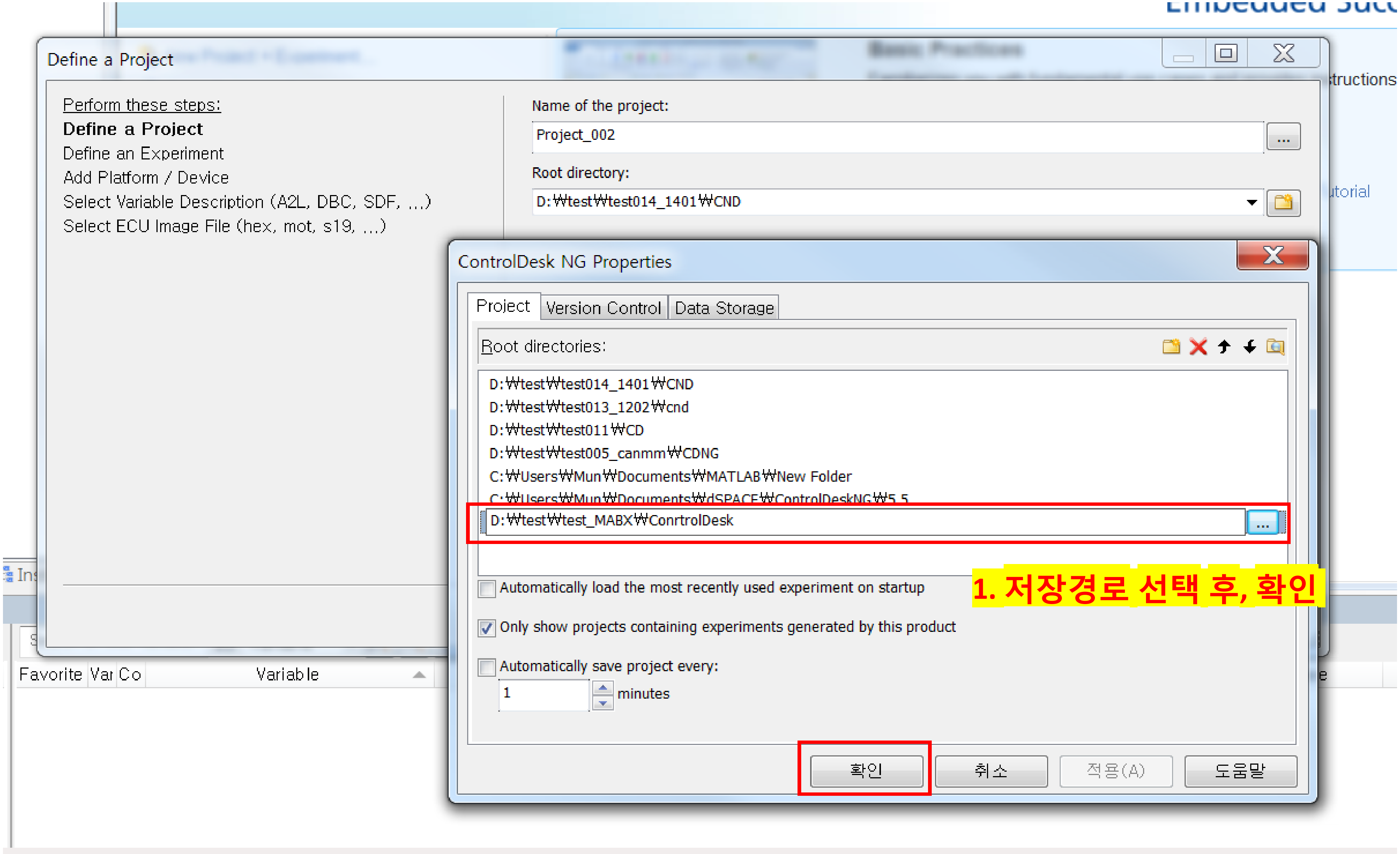
Root directory: D:₩test₩test014_1401₩CND

First a project must be specified to hold an experiment. You can create a new project or select an existing project.

If you click Finish at this point, only the project structure is created (no experiment is added).

1 Start Page
Embedded Success
1. Project이름 작성
2. Project 저장 경로 선택
< Back
Next >
Finish
Cancel
Help
Layout ...
Favorite
Variable
Block
Platform/Device
Description
Unit
Type

ControlDesk 프로젝트 생성



Define a Project

Perform these steps:
Define a Project
Define an Experiment
Add Platform / Device
Select Variable Description (A2L, DBC, SDF, ...)
Select ECU Image File (hex, mot, s19, ...)

Name of the project: Project_002

Root directory: D:₩test₩test014_1401₩CND

ControlDesk NG Properties

Project | Version Control | Data Storage

Root directories:

D:₩test₩test014_1401₩CND
D:₩test₩test013_1202₩cnd
D:₩test₩test011₩CD
D:₩test₩test005_canmm₩CDNG
C:₩Users₩Mun₩Documents₩MATLAB₩New Folder
C:₩Users₩Mun₩Documents₩dSPACE₩ControlDeskNG₩5.5
D:₩test₩test_MABX₩ConrtrolDesk

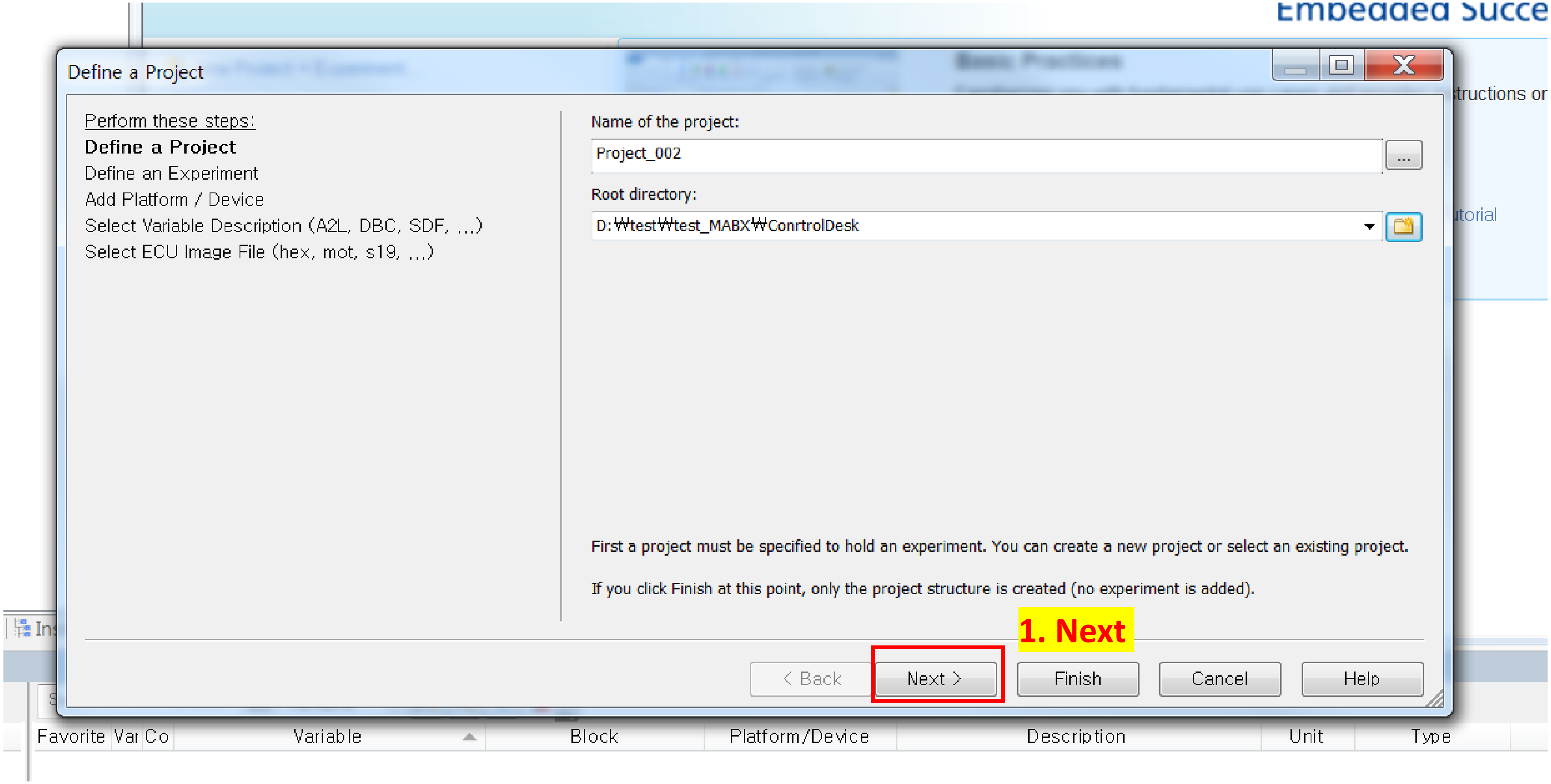
☐ Automatically load the most recently used experiment on startup

☑ Only show projects containing experiments generated by this product

☐ Automatically save project every: 1 minutes

1. 저장경로 선택 후, 확인

ControlDesk 프로젝트 생성



Perform these steps:

Define a Project

Define an Experiment

Add Platform / Device

Select Variable Description (A2L, DBC, SDF, ...)

Select ECU Image File (hex, mot, s19, ...)

Name of the project: Project_002

Root directory: D:₩test₩test_MABX₩ConrtrolDesk

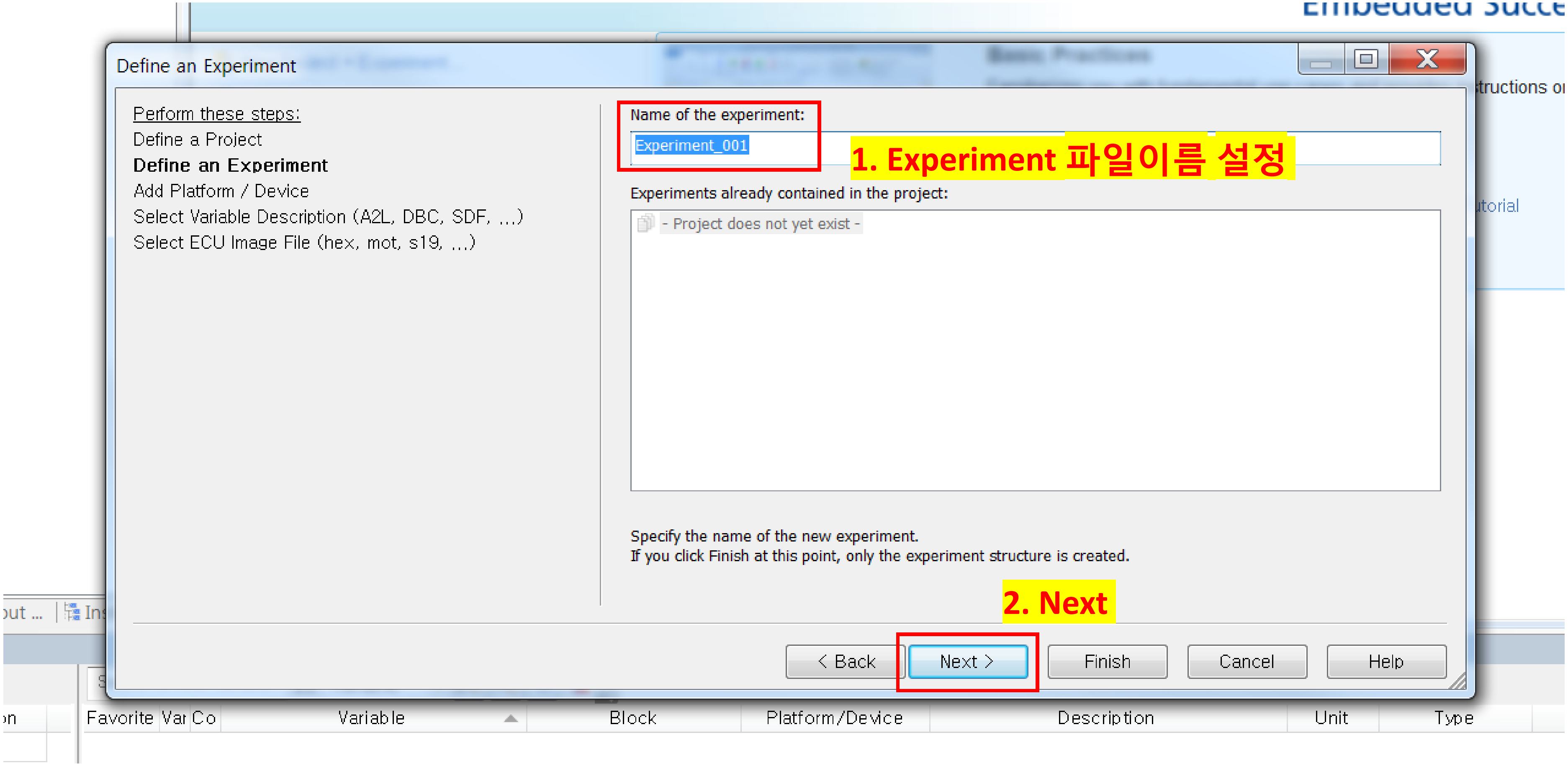
First a project must be specified to hold an experiment. You can create a new project or select an existing project.

If you click Finish at this point, only the project structure is created (no experiment is added).

1. Next

Define a Project
< Back
Next >
Finish
Cancel
Help
Favorite
Var
Co
Variable
Block
Platform/Device
Description
Unit
Type

ControlDesk 프로젝트 생성



Define an Experiment

Perform these steps:
Define a Project
Define an Experiment
Add Platform / Device
Select Variable Description (A2L, DBC, SDF, ...)
Select ECU Image File (hex, mot, s19, ...)

Name of the experiment: Experiment_001

Experiments already contained in the project:
- Project does not yet exist -

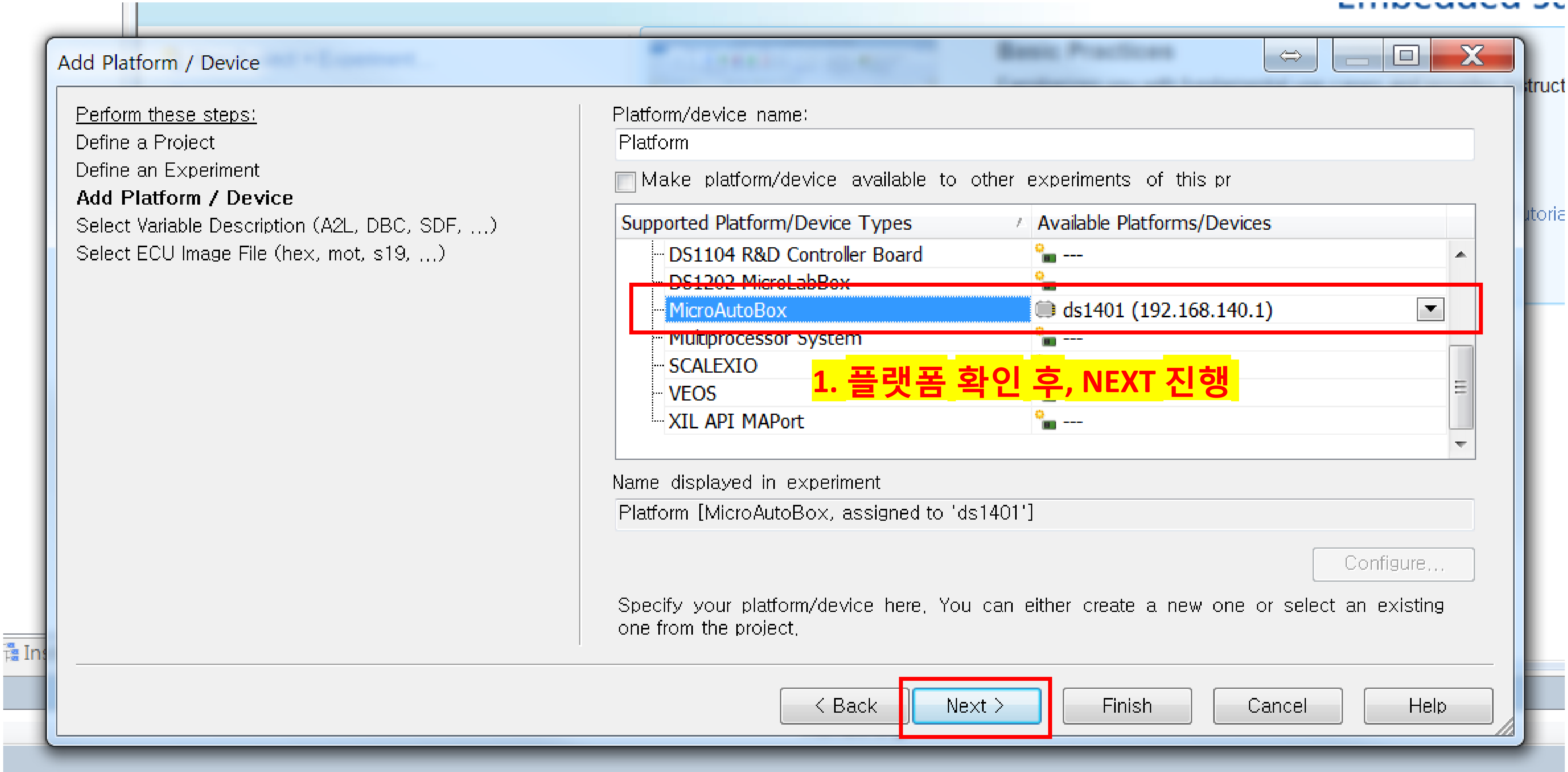
Specify the name of the new experiment.
If you click Finish at this point, only the experiment structure is created.

1. Experiment 파일이름 설정

2. Next

< Back
Next >
Finish
Cancel
Help
Favorite Var Co
Variable
Block
Platform/Device
Description
Unit
Type

ControlDesk 프로젝트 생성



Perform these steps:

- Define a Project
- Define an Experiment
- **Add Platform / Device**
- Select Variable Description (A2L, DBC, SDF, ...)
- Select ECU Image File (hex, mot, s19, ...)

Platform/device name: Platform

☐ Make platform/device available to other experiments of this pr

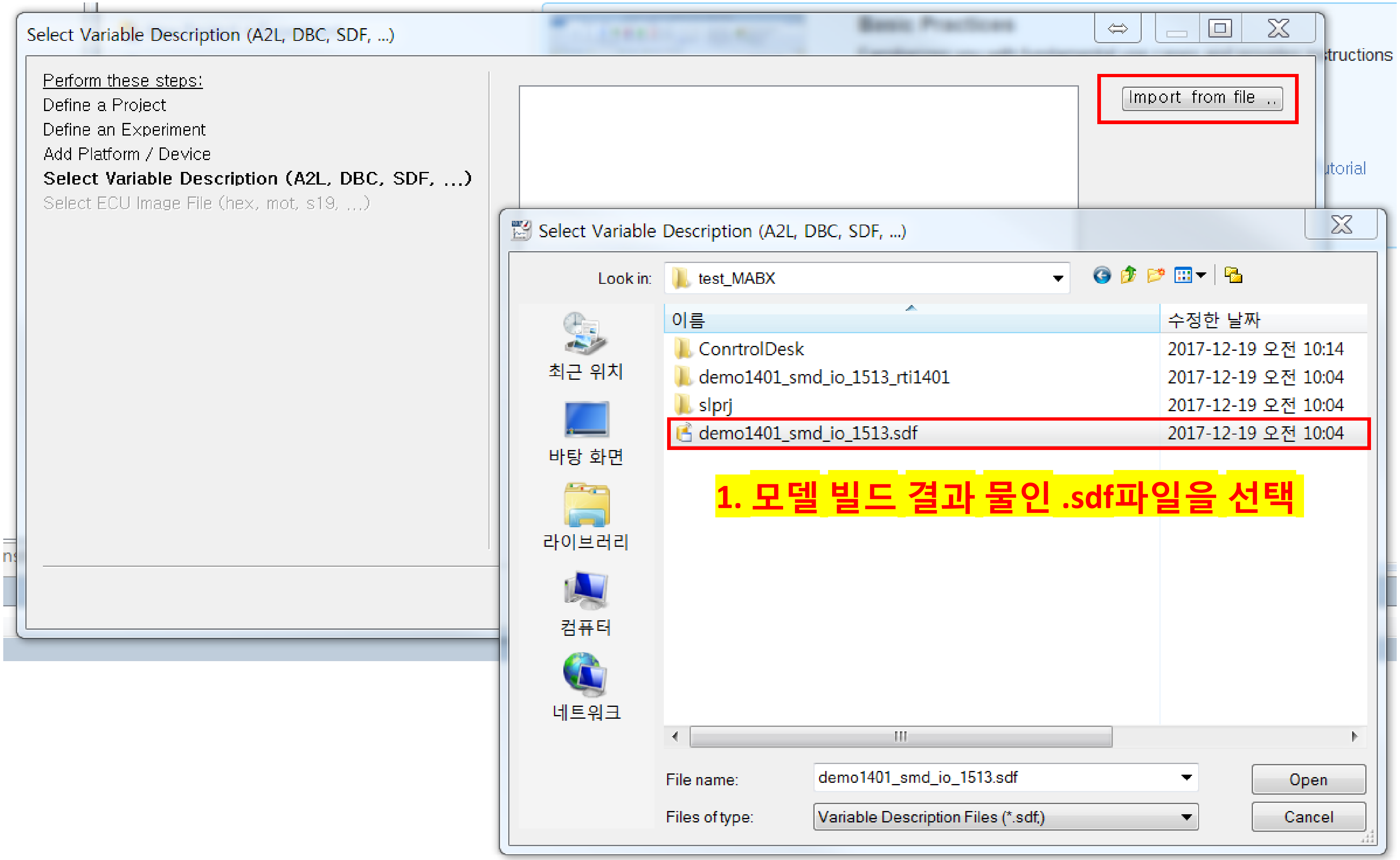
Supported Platform/Device Types	Available Platforms/Devices
DS1104 R&D Controller Board	---
DS1202 MicroLabBox	
MicroAutoBox	ds1401 (192.168.140.1)
Multiprocessor System	---
SCALEXIO	
VEOS	
XIL API MAPort	---

Name displayed in experiment: Platform [MicroAutoBox, assigned to 'ds1401']

Specify your platform/device here. You can either create a new one or select an existing one from the project.

1. 플랫폼 확인 후, NEXT 진행

ControlDesk 프로젝트 생성


Select Variable Description (A2L, DBC, SDF, ...)
Perform these steps:
Define a Project
Define an Experiment
Add Platform / Device
Select Variable Description (A2L, DBC, SDF, ...)
Select ECU Image File (hex, mot, s19, ...)
Import from file ..
Select Variable Description (A2L, DBC, SDF, ...)
최근 위치
바탕 화면
라이브러리
컴퓨터
네트워크
Open
Cancel

Look in: test_MABX

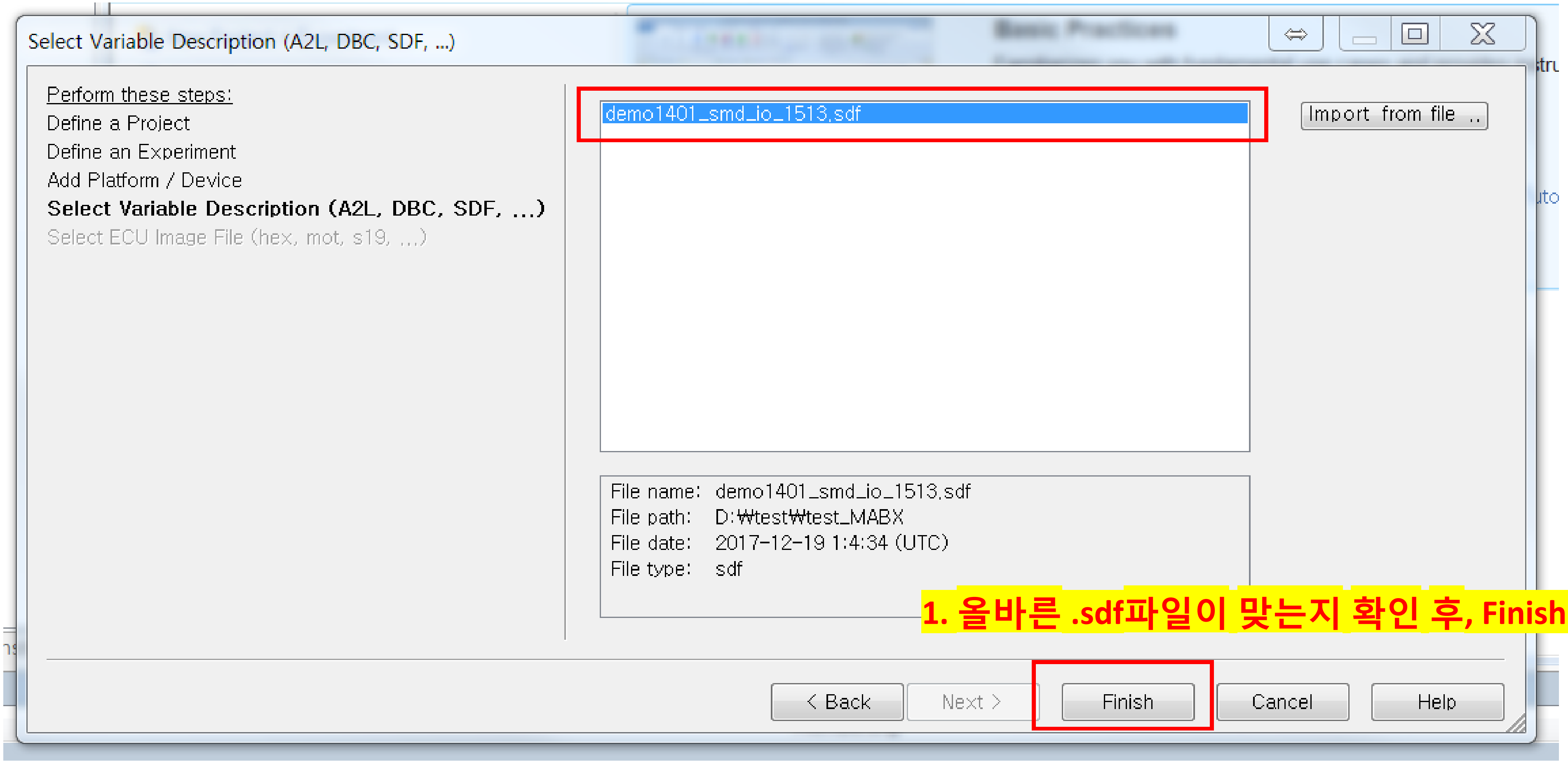
이름	수정한 날짜
ConrtrolDesk	2017-12-19 오전 10:14
demo1401_smd_io_1513_rti1401	2017-12-19 오전 10:04
slprj	2017-12-19 오전 10:04
demo1401_smd_io_1513.sdf	2017-12-19 오전 10:04

File name: demo1401_smd_io_1513.sdf

Files of type: Variable Description Files (*.sdf)

1. 모델 빌드 결과 물인 .sdf파일을 선택

ControlDesk 프로젝트 생성



Select Variable Description (A2L, DBC, SDF, ...)

Perform these steps:
Define a Project
Define an Experiment
Add Platform / Device
Select Variable Description (A2L, DBC, SDF, ...)
Select ECU Image File (hex, mot, s19, ...)

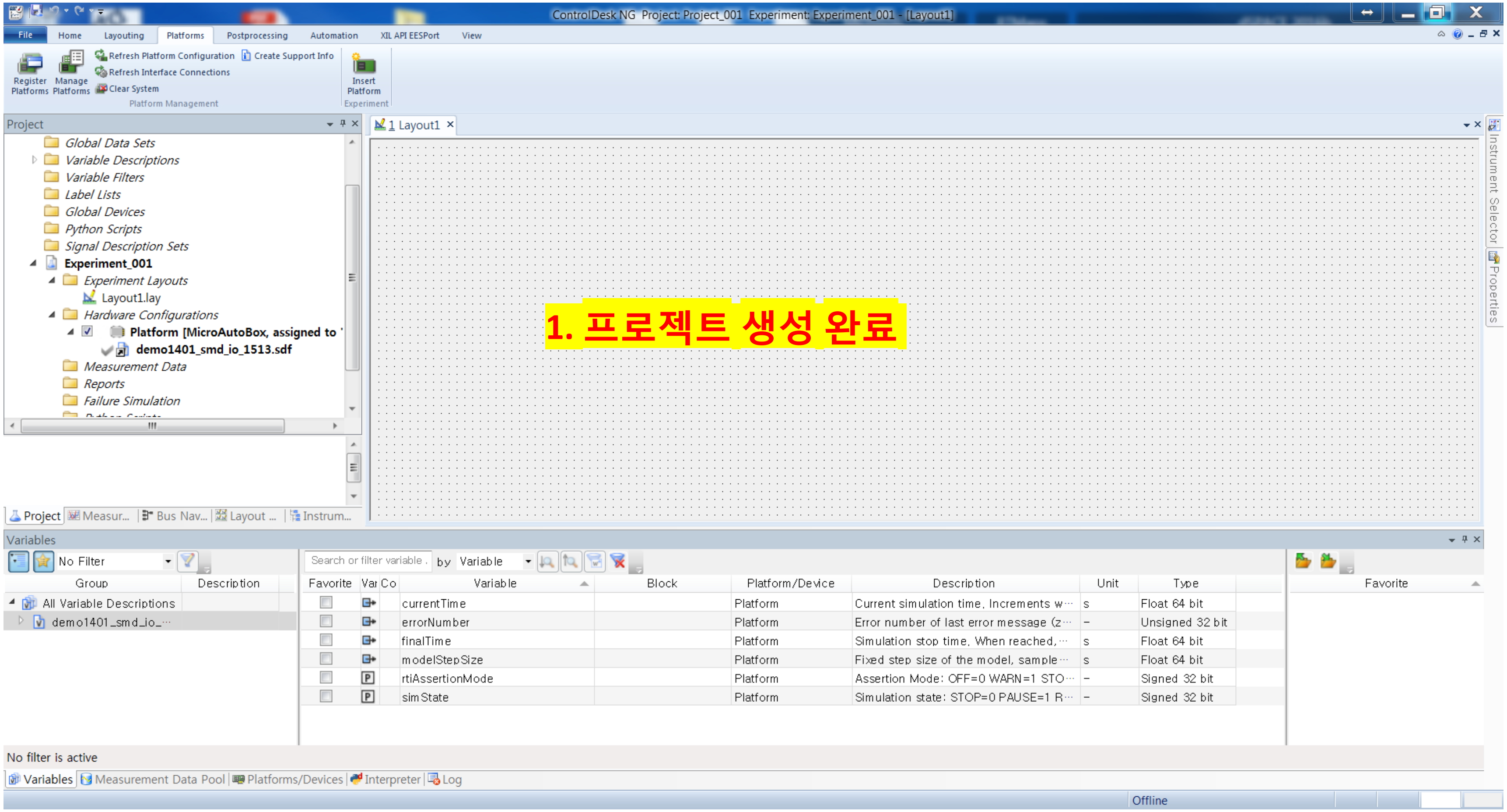
demo1401_smd_io_1513.sdf

File name: demo1401_smd_io_1513.sdf
File path: D:₩test₩test_MABX
File date: 2017-12-19 1:4:34 (UTC)
File type: sdf

Import from file ..
< Back
Next >
Finish
Cancel
Help

1. 올바른 .sdf파일이 맞는지 확인 후, Finish

ControlDesk 프로젝트 생성


ControlDesk NG Project: Project_001 Experiment: Experiment_001 - [Layout1]
File
Home
Layouting
Platforms
Postprocessing
Automation
XIL API EESPort
View
Register Platforms
Manage Platforms
Refresh Platform Configuration
Refresh Interface Connections
Clear System
Create Support Info
Platform Management
Insert Platform
Experiment
Project
Global Data Sets
Variable Descriptions
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Label Lists
Global Devices
Python Scripts
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Experiment_001
Experiment Layouts
Layout1.lay
Hardware Configurations
Platform [MicroAutoBox, assigned to '
demo1401_smd_io_1513.sdf
Measurement Data
Reports
Failure Simulation
1 Layout1
Instrument Selector
Properties
Project
Measur...
Bus Nav...
Layout ...
Instrum...
Variables
No Filter
Group
Description
All Variable Descriptions
demo1401_smd_io_...
Search or filter variable .
by
Variable
Favorite
No filter is active
Variables
Measurement Data Pool
Platforms/Devices
Interpreter
Log
Offline

1. 프로젝트 생성 완료

Favorite	Var	Co	Variable	Block	Platform/Device	Description	Unit	Type
☐			currentTime		Platform	Current simulation time. Increments w···	s	Float 64 bit
☐			errorNumber		Platform	Error number of last error message (z···	–	Unsigned 32 bit
☐			finalTime		Platform	Simulation stop time. When reached,···	s	Float 64 bit
☐			modelStepSize		Platform	Fixed step size of the model, sample···	s	Float 64 bit
☐	P		rtiAssertionMode		Platform	Assertion Mode: OFF=0 WARN=1 STO···	–	Signed 32 bit
☐	P		simState		Platform	Simulation state: STOP=0 PAUSE=1 R···	–	Signed 32 bit

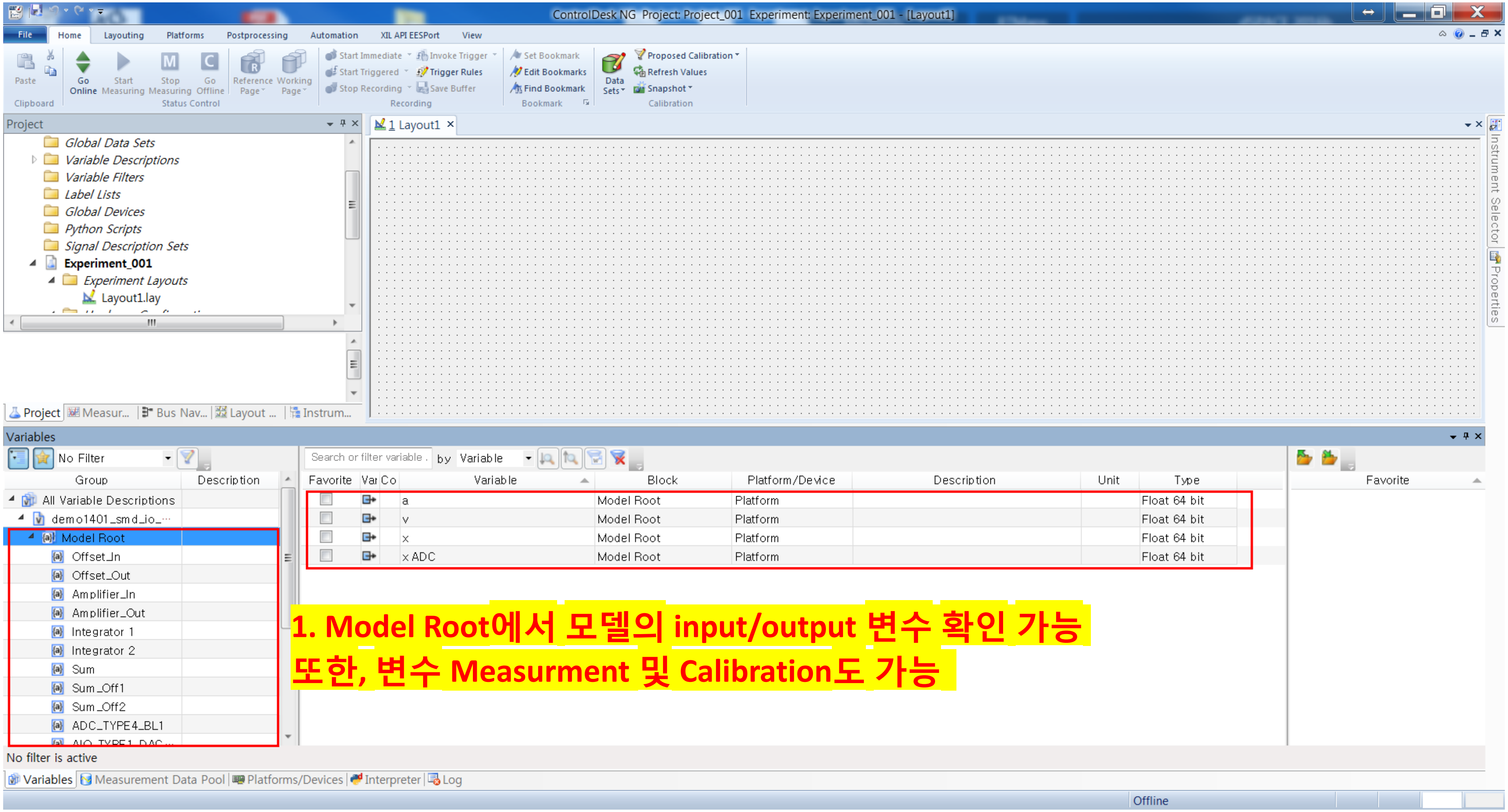
CONTENTS

Ⅰ. 시뮬링크 모델 생성 및 빌드

Ⅱ. ControlDesk 프로젝트 생성

Ⅲ. ControlDesk 기본 사용법

ControlDesk 기본 사용법


ControlDesk NG Project: Project_001 Experiment: Experiment_001 - [Layout1]
File
Home
Layouting
Platforms
Postprocessing
Automation
XIL API EESPort
View
Paste
Clipboard
Go Online
Start Measuring
Stop Measuring
Go Offline
Status Control
Reference Page
Working Page
Start Immediate
Start Triggered
Stop Recording
Invoke Trigger
Trigger Rules
Save Buffer
Recording
Set Bookmark
Edit Bookmarks
Find Bookmark
Bookmark
Data Sets
Proposed Calibration
Refresh Values
Snapshot
Calibration
Project
Global Data Sets
Variable Descriptions
Variable Filters
Label Lists
Global Devices
Python Scripts
Signal Description Sets
Experiment_001
Experiment Layouts
Layout1.lay
1 Layout1
Project
Measur...
Bus Nav...
Layout ...
Instrum...
Instrument Selector
Properties
Variables
No Filter
Search or filter variable .
by
Variable
No filter is active
Variables
Measurement Data Pool
Platforms/Devices
Interpreter
Log
Offline

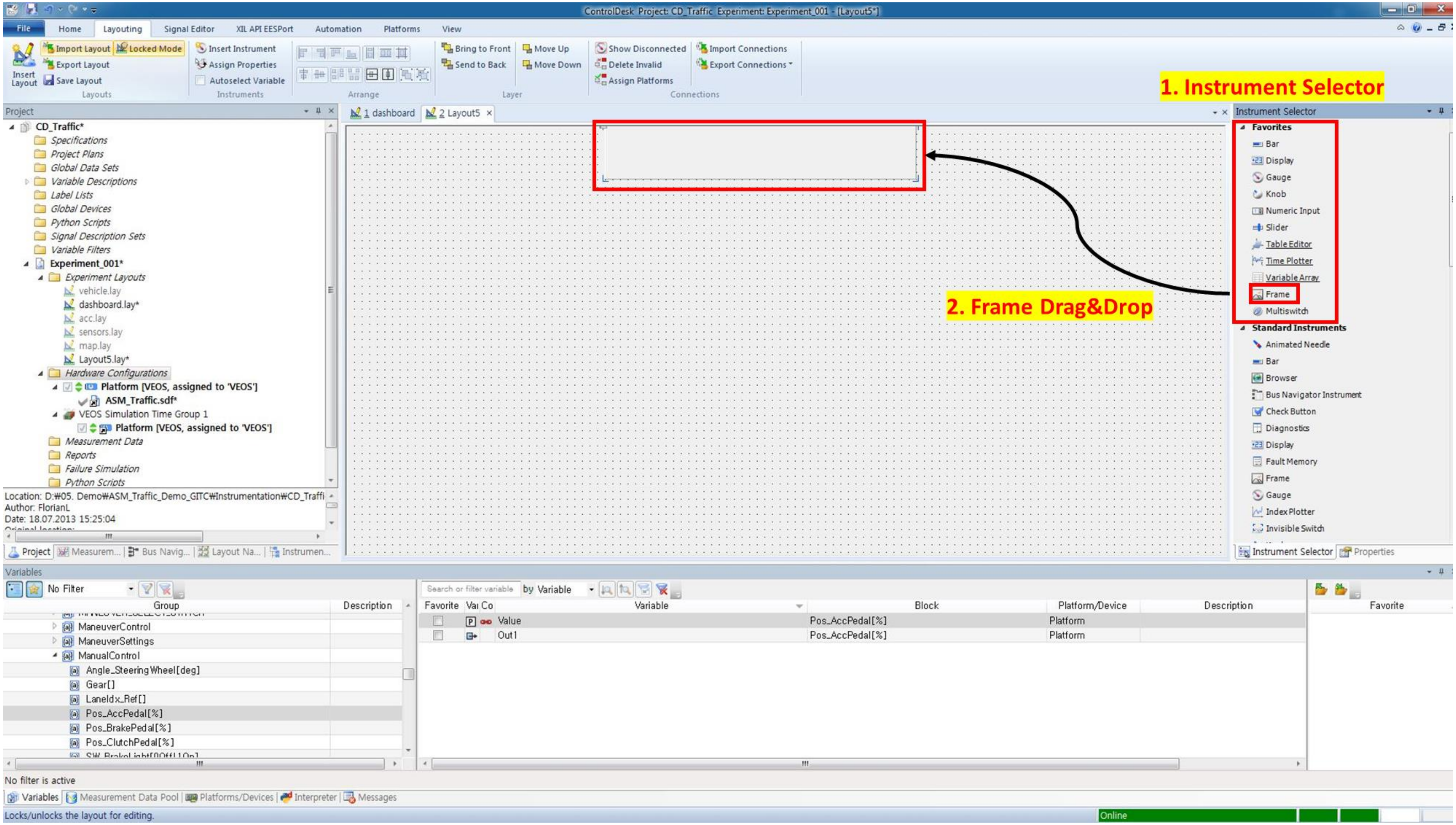
Group	Description
All Variable Descriptions	
demo1401_smd_io_···	
Model Root	
Offset_In	
Offset_Out	
Amplifier_In	
Amplifier_Out	
Integrator 1	
Integrator 2	
Sum	
Sum_Off1	
Sum_Off2	
ADC_TYPE4_BL1	
AIO_TYPE1_DAC...	

Favorite	Var	Co	Variable	Block	Platform/Device	Description	Unit	Type
☐			a	Model Root	Platform			Float 64 bit
☐			v	Model Root	Platform			Float 64 bit
☐			x	Model Root	Platform			Float 64 bit
☐			x ADC	Model Root	Platform			Float 64 bit

Favorite

1. Model Root에서 모델의 input/output 변수 확인 가능
또한, 변수 Measurment 및 Calibration도 가능

ControlDesk 기본 사용법


ControlDesk Project: CD_Traffic Experiment: Experiment_001 - [Layout5*]
File
Home
Layouting
Signal Editor
XIL API EESPort
Automation
Platforms
View
Import Layout
Locked Mode
Export Layout
Save Layout
Insert Layout
Layouts
Insert Instrument
Assign Properties
Autoselect Variable
Instruments
Arrange
Bring to Front
Send to Back
Move Up
Move Down
Layer
Show Disconnected
Delete Invalid
Assign Platforms
Import Connections
Export Connections
Connections
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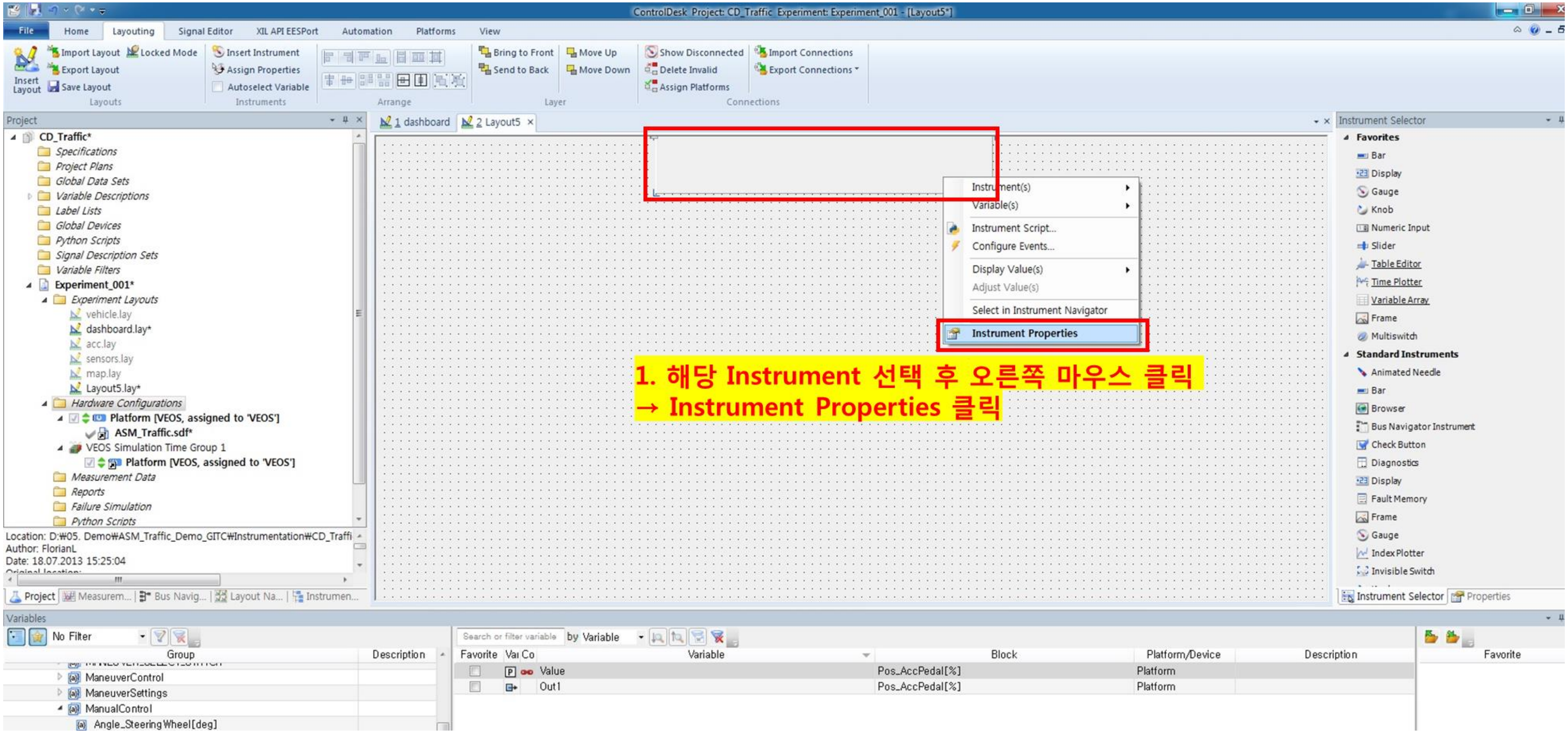
1 dashboard
2 Layout5
Instrument Selector
Favorites
Bar
Display
Gauge
Knob
Numeric Input
Slider
Table Editor
Time Plotter
Variable Array
Frame
Multiswitch
Standard Instruments
Animated Needle
Bar
Browser
Bus Navigator Instrument
Check Button
Diagnostics
Display
Fault Memory
Frame
Gauge
Index Plotter
Invisible Switch
Properties
Variables
No Filter
Online

1. Instrument Selector

2. Frame Drag&Drop

ControlDesk 기본 사용법


ControlDesk Project: CD_Traffic Experiment: Experiment_001 - [Layout5*]
File
Home
Layouting
Signal Editor
XIL API EESPort
Automation
Platforms
View
Insert Layout
Import Layout
Export Layout
Save Layout
Locked Mode
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Insert Instrument
Assign Properties
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Arrange
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Send to Back
Move Up
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Layer
Show Disconnected
Delete Invalid
Assign Platforms
Import Connections
Export Connections
Connections
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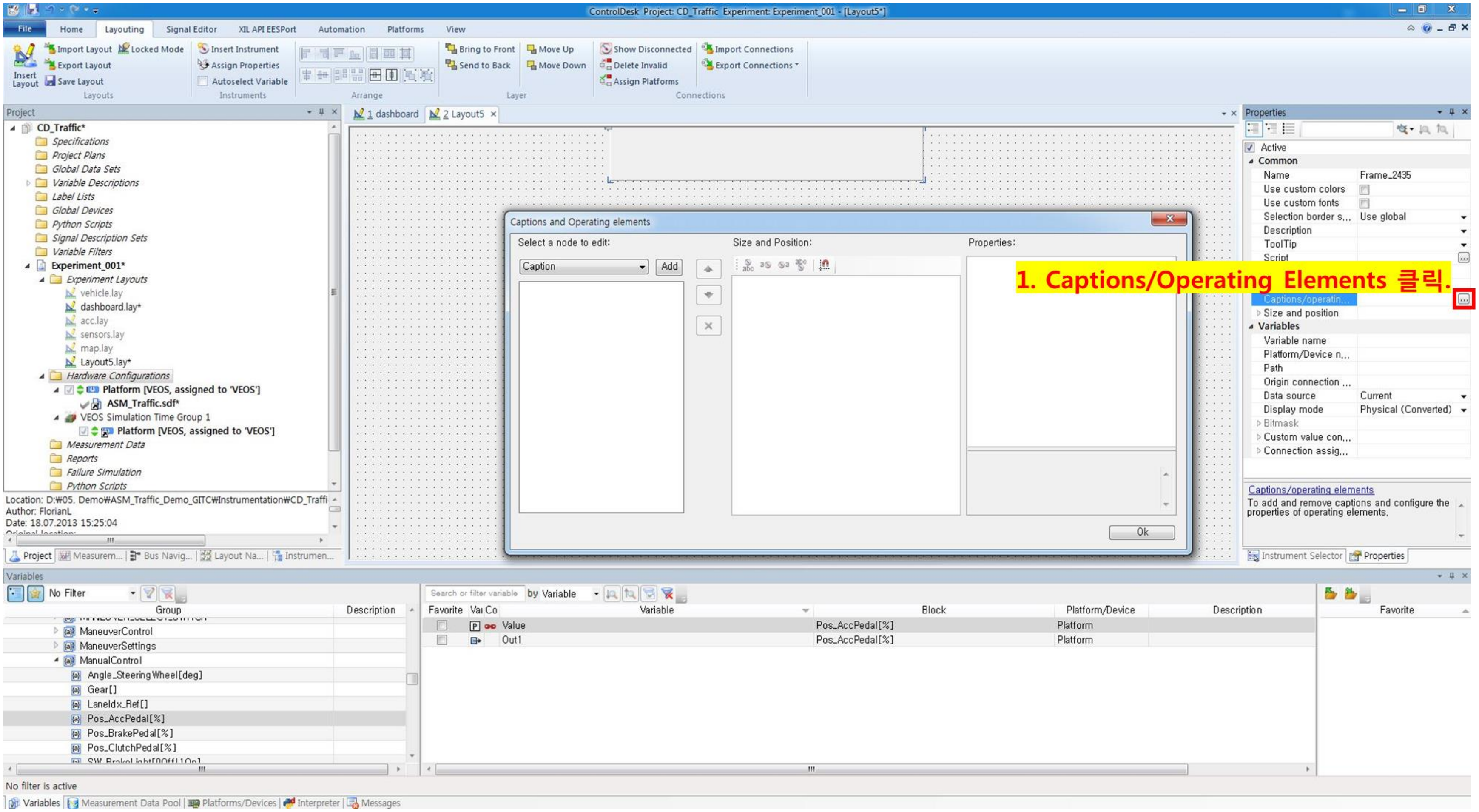
2 Layout5
Instrument(s)
Variable(s)
Instrument Script...
Configure Events...
Display Value(s)
Adjust Value(s)
Select in Instrument Navigator
Instrument Properties
Instrument Selector
Favorites
Standard Instruments
Variables
No Filter
Search or filter variable
by Variable

1. 해당 Instrument 선택 후 오른쪽 마우스 클릭
→ Instrument Properties 클릭

ControlDesk 기본 사용법



1. Captions/Operating Elements 클릭.

ControlDesk Project: CD_Traffic Experiment: Experiment_001 - [Layout5*]

Captions and Operating elements

Select a node to edit: Caption

Name: Frame_2435

Selection border s...: Use global

Data source: Current

Display mode: Physical (Converted)

Captions/operating elements

To add and remove captions and configure the properties of operating elements.

Location: D:₩05. Demo₩ASM_Traffic_Demo_GITC₩Instrumentation₩CD_Traffi

Author: FlorianL

Date: 18.07.2013 15:25:04

Favorite	Va Co	Variable	Block	Platform/Device	Description
☐	P	Value	Pos_AccPedal[%]	Platform	
☐		Out1	Pos_AccPedal[%]	Platform	

No filter is active

File
Home
Layouting
Signal Editor
XIL API EESPort
Automation
Platforms
View
Insert Layout
Import Layout
Export Layout
Save Layout
Locked Mode
Layouts
Insert Instrument
Assign Properties
Autoselect Variable
Instruments
Arrange
Bring to Front
Send to Back
Move Up
Move Down
Layer
Show Disconnected
Delete Invalid
Assign Platforms
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CD_Traffic*
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Project Plans
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Label Lists
Global Devices
Python Scripts
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dashboard.lay*
acc.lay
sensors.lay
map.lay
Layout5.lay*
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Failure Simulation
Python Scripts
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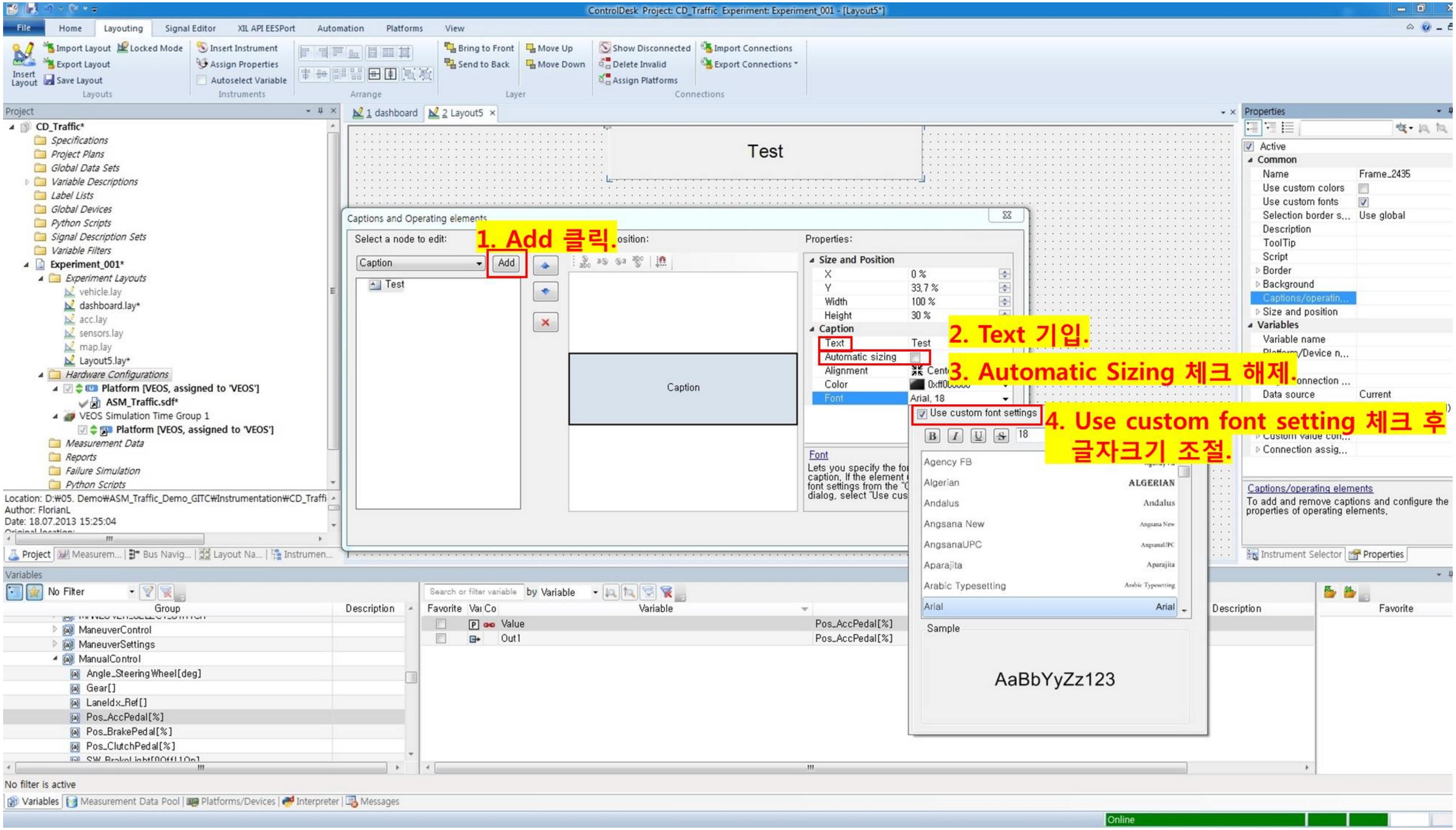
Properties:
Add
Ok
Properties
Active
Common
Name
Use custom colors
Use custom fonts
Selection border s...
Description
ToolTip
Script
Captions/operatin...
Size and position
Variables
Variable name
Platform/Device n...
Path
Origin connection ...
Data source
Display mode
Bitmask
Custom value con...
Connection assig...
Instrument Selector
Properties
Project
Measurem...
Bus Navig...
Layout Na...
Instrumen...
Variables
No Filter
Group
Description
ManeuverControl
ManeuverSettings
ManualControl
Angle_SteeringWheel[deg]
Gear[]
LaneIdx_Ref[]
Pos_AccPedal[%]
Pos_BrakePedal[%]
Pos_ClutchPedal[%]
Search or filter variable
by Variable
Favorite
Variables
Measurement Data Pool
Platforms/Devices
Interpreter
Messages

ControlDesk 기본 사용법


ControlDesk Project: CD_Traffic Experiment: Experiment_001 - [Layout5*]
File
Home
Layouting
Signal Editor
XIL API EESPort
Automation
Platforms
View
Import Layout
Locked Mode
Export Layout
Save Layout
Insert Layout
Layouts
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Layer
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vehicle.lay
dashboard.lay*
acc.lay
sensors.lay
map.lay
Layout5.lay*
Hardware Configurations
Platform [VEOS, assigned to 'VEOS']
ASM_Traffic.sdf*
VEOS Simulation Time Group 1
Platform [VEOS, assigned to 'VEOS']
Measurement Data
Reports
Failure Simulation
Python Scripts
1 dashboard
2 Layout5
Test
Captions and Operating elements
Select a node to edit:
Caption
Add
Test
Caption
Properties:
Size and Position
X
0 %
Y
33,7 %
Width
100 %
Height
30 %
Caption
Text
Test
Automatic sizing
Alignment
Color
0xff000000
Font
Arial, 18
Use custom font settings
18
Agency FB
Algerian
Andalus
Angsana New
AngsanaUPC
Aparajita
Arabic Typesetting
Arial
Sample
AaBbYyZz123
Properties
Active
Common
Name
Frame_2435
Use custom colors
Use custom fonts
Selection border s...
Use global
Description
ToolTip
Script
Border
Background
Captions/operatin...
Size and position
Variables
Variable name
Data source
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Connection assig...
Instrument Selector
Properties
Variables
No Filter
Group
Description
ManeuverControl
ManeuverSettings
ManualControl
Angle_SteeringWheel[deg]
Gear[]
LaneIdx_Ref[]
Pos_AccPedal[%]
Pos_BrakePedal[%]
Pos_ClutchPedal[%]
Search or filter variable
by Variable
Favorite
Variable
Value
Out1
Pos_AccPedal[%]
Pos_AccPedal[%]
No filter is active
Variables
Measurement Data Pool
Platforms/Devices
Interpreter
Messages
Online

Location: D:\05. Demo\ASM_Traffic_Demo_GITC\Instrumentation\CD_Traffi
Author: FlorianL
Date: 18.07.2013 15:25:04

Font
Lets you specify the fo caption. If the element font settings from the "C dialog, select "Use cus

Captions/operating elements
To add and remove captions and configure the properties of operating elements.

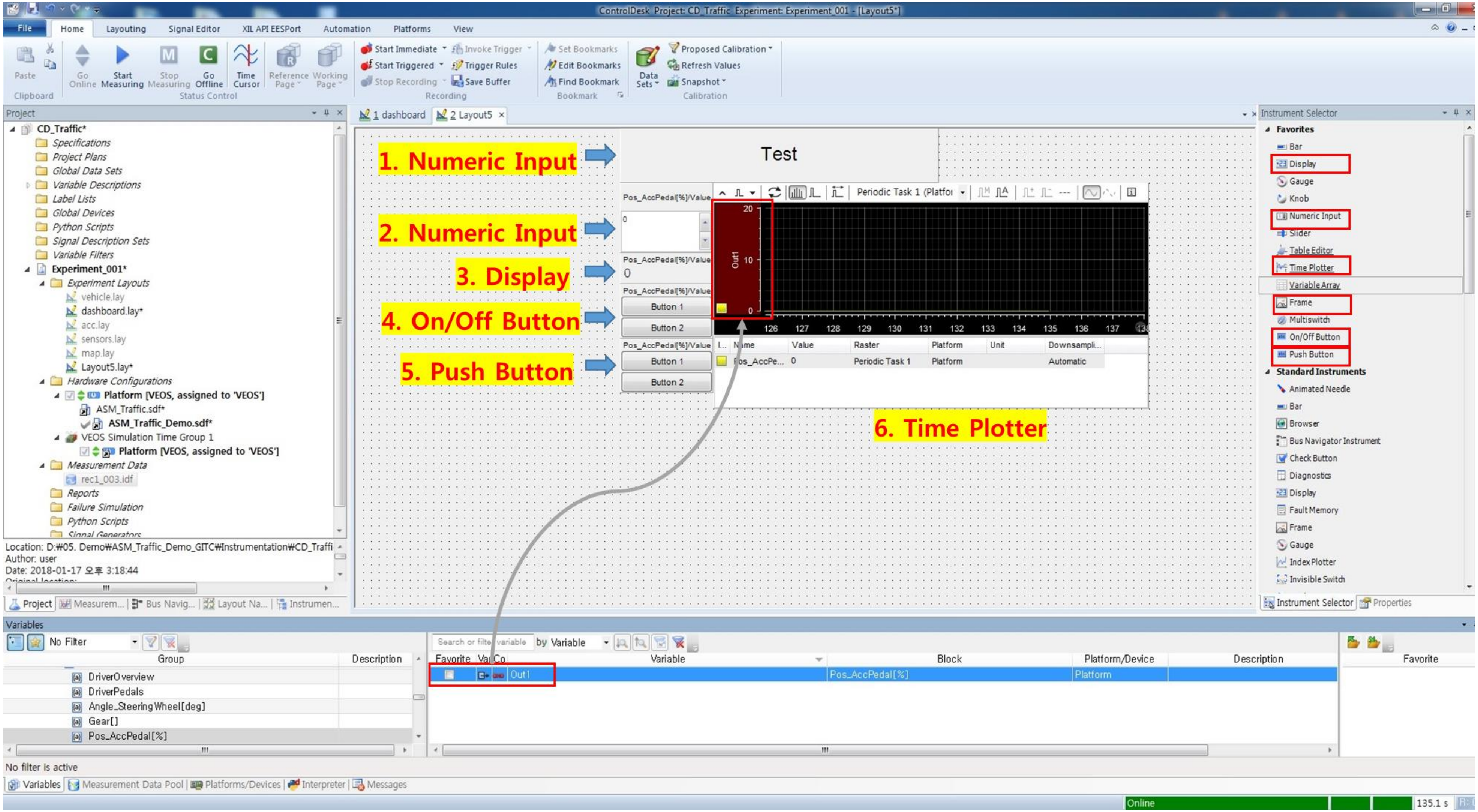
1. Add 클릭.

2. Text 기입.

3. Automatic Sizing 체크 해제.

4. Use custom font setting 체크 후 글자크기 조절.

ControlDesk 기본 사용법


ControlDesk Project: CD_Traffic Experiment: Experiment_001 - [Layout5*]
File
Home
Layouting
Signal Editor
XIL API EESPort
Automation
Platforms
View
Paste
Clipboard
Go Online
Start Measuring
Stop Measuring
Go Offline
Time Cursor
Reference Page
Working Page
Status Control
Start Immediate
Start Triggered
Stop Recording
Invoke Trigger
Trigger Rules
Save Buffer
Recording
Set Bookmarks
Edit Bookmarks
Find Bookmark
Bookmark
Data Sets
Proposed Calibration
Refresh Values
Snapshot
Calibration
Project
CD_Traffic*
Specifications
Project Plans
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Variable Descriptions
Label Lists
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Python Scripts
Signal Description Sets
Variable Filters
Experiment_001*
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dashboard.lay*
acc.lay
sensors.lay
map.lay
Layout5.lay*
Hardware Configurations
Platform [VEOS, assigned to 'VEOS']
ASM_Traffic.sdf*
ASM_Traffic_Demo.sdf*
VEOS Simulation Time Group 1
Platform [VEOS, assigned to 'VEOS']
Measurement Data
rec1_003.idf
Reports
Failure Simulation
Python Scripts
Signal Generators
Location: D:₩05. Demo₩ASM_Traffic_Demo_GITC₩Instrumentation₩CD_Traffi
Author: user
Date: 2018-01-17 오후 3:18:44
Project
Measurem...
Bus Navig...
Layout Na...
Instrumen...
1 dashboard
2 Layout5
Test
Pos_AccPedal[%]/Value
0
Pos_AccPedal[%]/Value
0
Pos_AccPedal[%]/Value
Button 1
Button 2
Pos_AccPedal[%]/Value
Button 1
Button 2
Periodic Task 1 (Platfor
20
10
0
Out1
126
127
128
129
130
131
132
133
134
135
136
137
Name
Value
Raster
Platform
Unit
Downsampli...
Pos_AccPe...
0
Periodic Task 1
Platform
Automatic
Instrument Selector
Favorites
Bar
Display
Gauge
Knob
Numeric Input
Slider
Table Editor
Time Plotter
Variable Array
Frame
Multiswitch
On/Off Button
Push Button
Standard Instruments
Animated Needle
Bar
Browser
Bus Navigator Instrument
Check Button
Diagnostics
Display
Fault Memory
Frame
Gauge
Index Plotter
Invisible Switch
Instrument Selector
Properties
Variables
No Filter
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Description
DriverOverview
DriverPedals
Angle_SteeringWheel[deg]
Gear[]
Pos_AccPedal[%]
Search or filter variable
by Variable
Favorite
Var
Co
Variable
Block
Platform/Device
Description
Favorite
Out1
Pos_AccPedal[%]
Platform
No filter is active
Variables
Measurement Data Pool
Platforms/Devices
Interpreter
Messages
Online
135.1 s

1. Numeric Input

2. Numeric Input

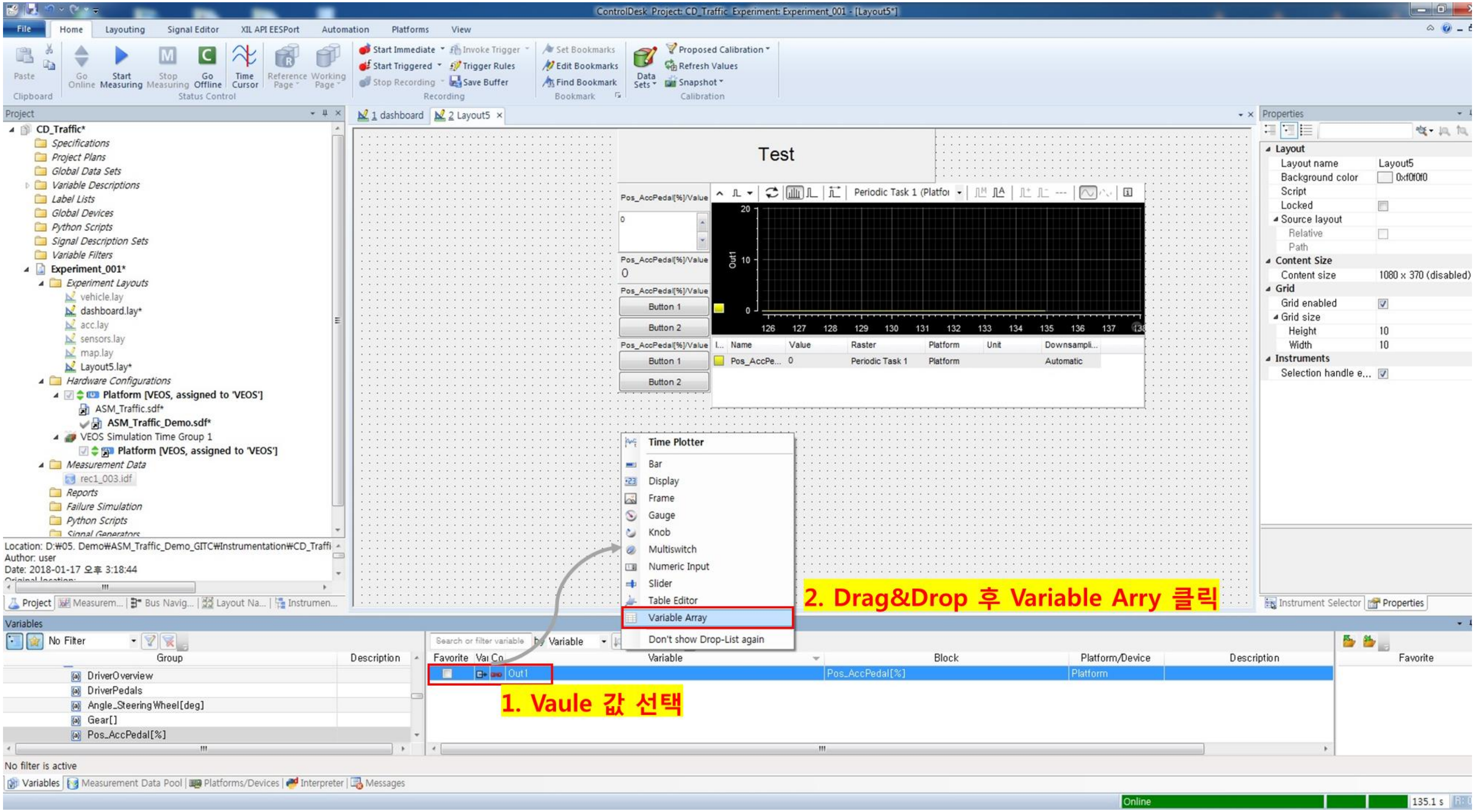
3. Display

4. On/Off Button

5. Push Button

6. Time Plotter

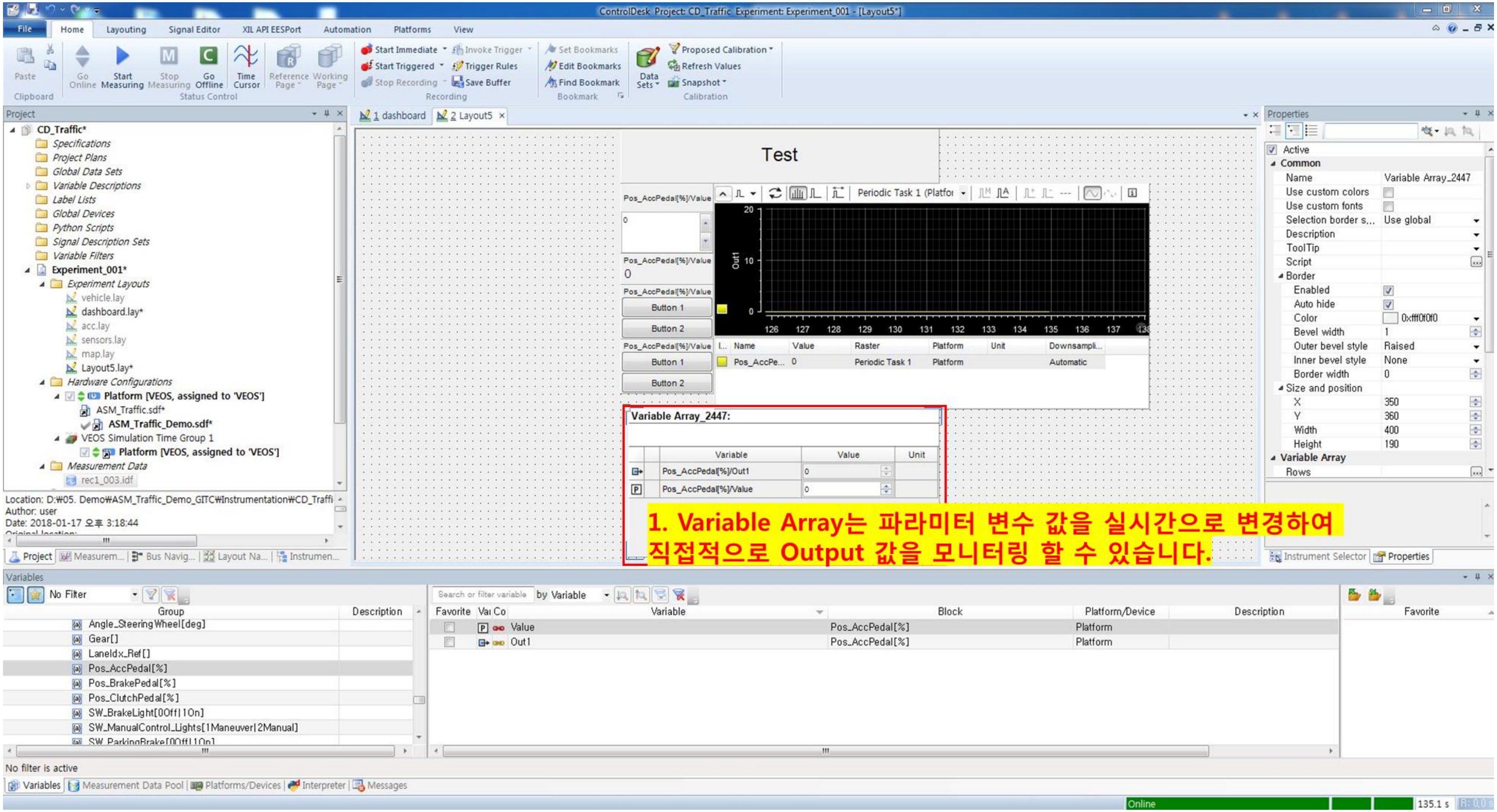
ControlDesk 기본 사용법


ControlDesk Project: CD_Traffic Experiment: Experiment_001 - [Layout5*]
Test
Time Plotter
Bar
Display
Frame
Gauge
Knob
Multiswitch
Numeric Input
Slider
Table Editor
Variable Array
Don't show Drop-List again
Out1
Pos_AccPedal[%]
Platform

2. Drag&Drop 후 Variable Arry 클릭

1. Vaule 값 선택

ControlDesk 기본 사용법


ControlDesk Project: CD_Traffic Experiment: Experiment_001 - [Layout5*]
File
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Layouting
Signal Editor
XIL API EESPort
Automation
Platforms
View
Paste
Clipboard
Go Online
Start Measuring
Stop Measuring
Go Offline
Time Cursor
Status Control
Reference Page
Working Page
Start Immediate
Start Triggered
Stop Recording
Invoke Trigger
Trigger Rules
Save Buffer
Recording
Set Bookmarks
Edit Bookmarks
Find Bookmark
Bookmark
Data Sets
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Refresh Values
Snapshot
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vehicle.lay
dashboard.lay*
acc.lay
sensors.lay
map.lay
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Hardware Configurations
Platform [VEOS, assigned to 'VEOS']
ASM_Traffic.sdf*
ASM_Traffic_Demo.sdf*
VEOS Simulation Time Group 1
Platform [VEOS, assigned to 'VEOS']
Measurement Data
rec1_003.idf
Project
Measurem...
Bus Navig...
Layout Na...
Instrumen...
1 dashboard
2 Layout5
Test
Pos_AccPedal[%]/Value
0
Pos_AccPedal[%]/Value
0
Pos_AccPedal[%]/Value
Button 1
Button 2
Pos_AccPedal[%]/Value
Button 1
Button 2
Periodic Task 1 (Platfor
Out1
20
10
0
126
127
128
129
130
131
132
133
134
135
136
137
138
Properties
Instrument Selector
Properties
Variables
No Filter
Search or filter variable
by Variable
Variables
Measurement Data Pool
Platforms/Devices
Interpreter
Messages
Online
135.1 s

Location: D:₩05. Demo₩ASM_Traffic_Demo_GITC₩Instrumentation₩CD_Traffi
Author: user
Date: 2018-01-17 오후 3:18:44

I...	Name	Value	Raster	Platform	Unit	Downsampli...
🟨	Pos_AccPe...	0	Periodic Task 1	Platform		Automatic

Variable Array_2447:

	Variable	Value	Unit
	Pos_AccPedal[%]/Out1	0	
P	Pos_AccPedal[%]/Value	0	

☑ Active	
Common	
Name	Variable Array_2447
Use custom colors	☐
Use custom fonts	☐
Selection border s...	Use global
Description	
ToolTip	
Script	
Border	
Enabled	☑
Auto hide	☑
Color	0xfff0f0f0
Bevel width	1
Outer bevel style	Raised
Inner bevel style	None
Border width	0
Size and position	
X	350
Y	360
Width	400
Height	190
Variable Array	
Rows	

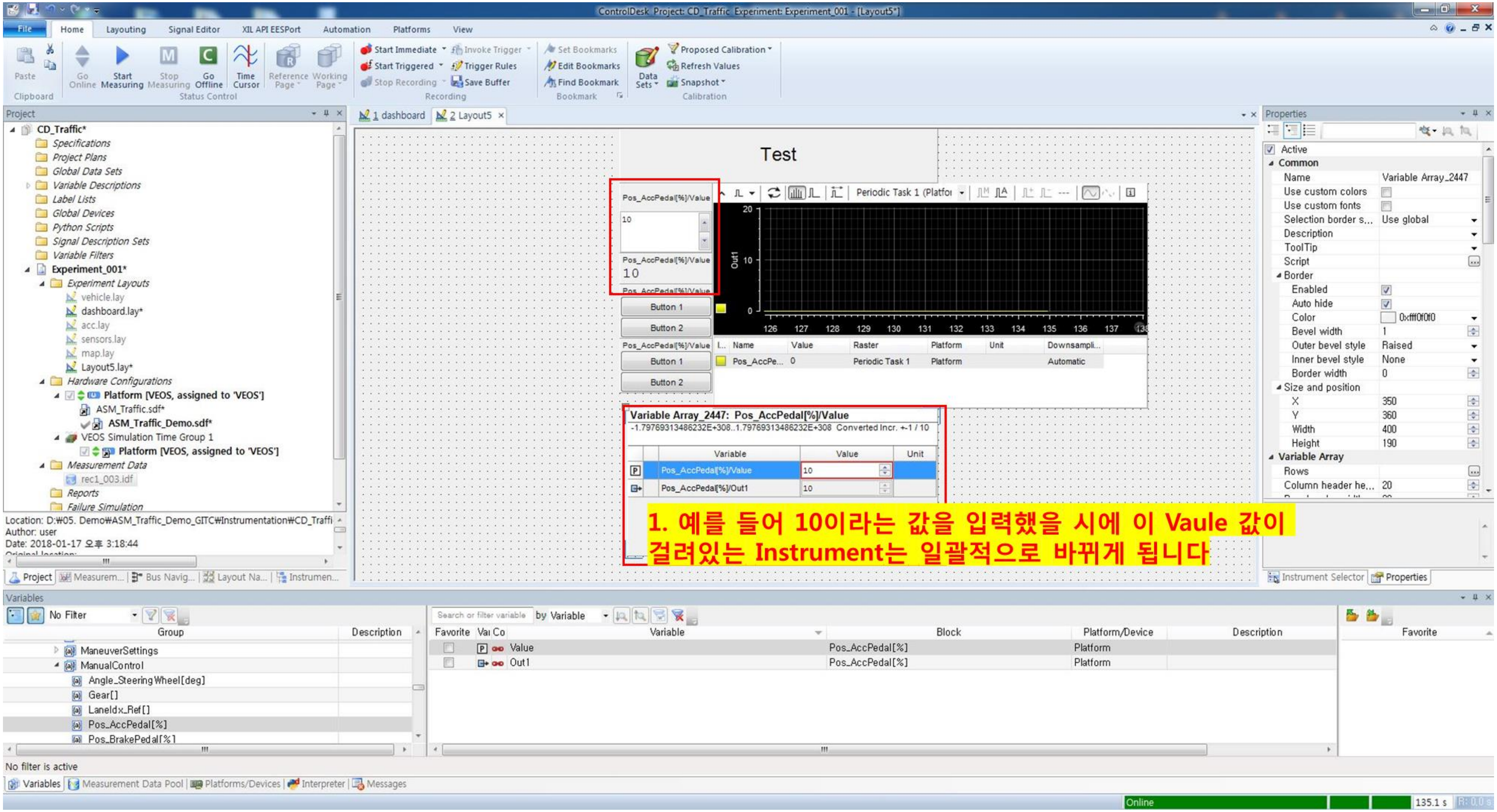
Group	Description
Angle_SteeringWheel[deg]	
Gear[]	
LaneIdx_Ref[]	
Pos_AccPedal[%]	
Pos_BrakePedal[%]	
Pos_ClutchPedal[%]	
SW_BrakeLight[0Off|1On]	
SW_ManualControl_Lights[1Maneuver|2Manual]	
SW_ParkingBrake[0Off|1On]	

No filter is active

Favorite	Va	Co	Variable	Block	Platform/Device	Description
☐	P		Value	Pos_AccPedal[%]	Platform	
☐			Out1	Pos_AccPedal[%]	Platform	

1. Variable Array는 파라미터 변수 값을 실시간으로 변경하여 직접적으로 Output 값을 모니터링 할 수 있습니다.

ControlDesk 기본 사용법


ControlDesk Project: CD_Traffic Experiment: Experiment_001 - [Layout5*]
File
Home
Layouting
Signal Editor
XIL API EESPort
Automation
Platforms
View
Go Online
Start Measuring
Stop Measuring
Go Offline
Time Cursor
Reference Page
Working Page
Status Control
Start Immediate
Start Triggered
Stop Recording
Invoke Trigger
Trigger Rules
Save Buffer
Recording
Set Bookmarks
Edit Bookmarks
Find Bookmark
Bookmark
Data Sets
Proposed Calibration
Refresh Values
Snapshot
Calibration
Project
1 dashboard
2 Layout5
Test
Button 1
Button 2
Periodic Task 1
Properties
Variables
No Filter
Online
135.1 s

Variable Array_2447: Pos_AccPedal[%]/Value

-1.79769313486232E+308..1.79769313486232E+308 Converted Incr. +-1 / 10

	Variable	Value	Unit
P	Pos_AccPedal[%]/Value	10	
⊡	Pos_AccPedal[%]/Out1	10	

Name	Value	Raster	Platform	Unit	Downsampli...
Pos_AccPe...	0	Periodic Task 1	Platform		Automatic

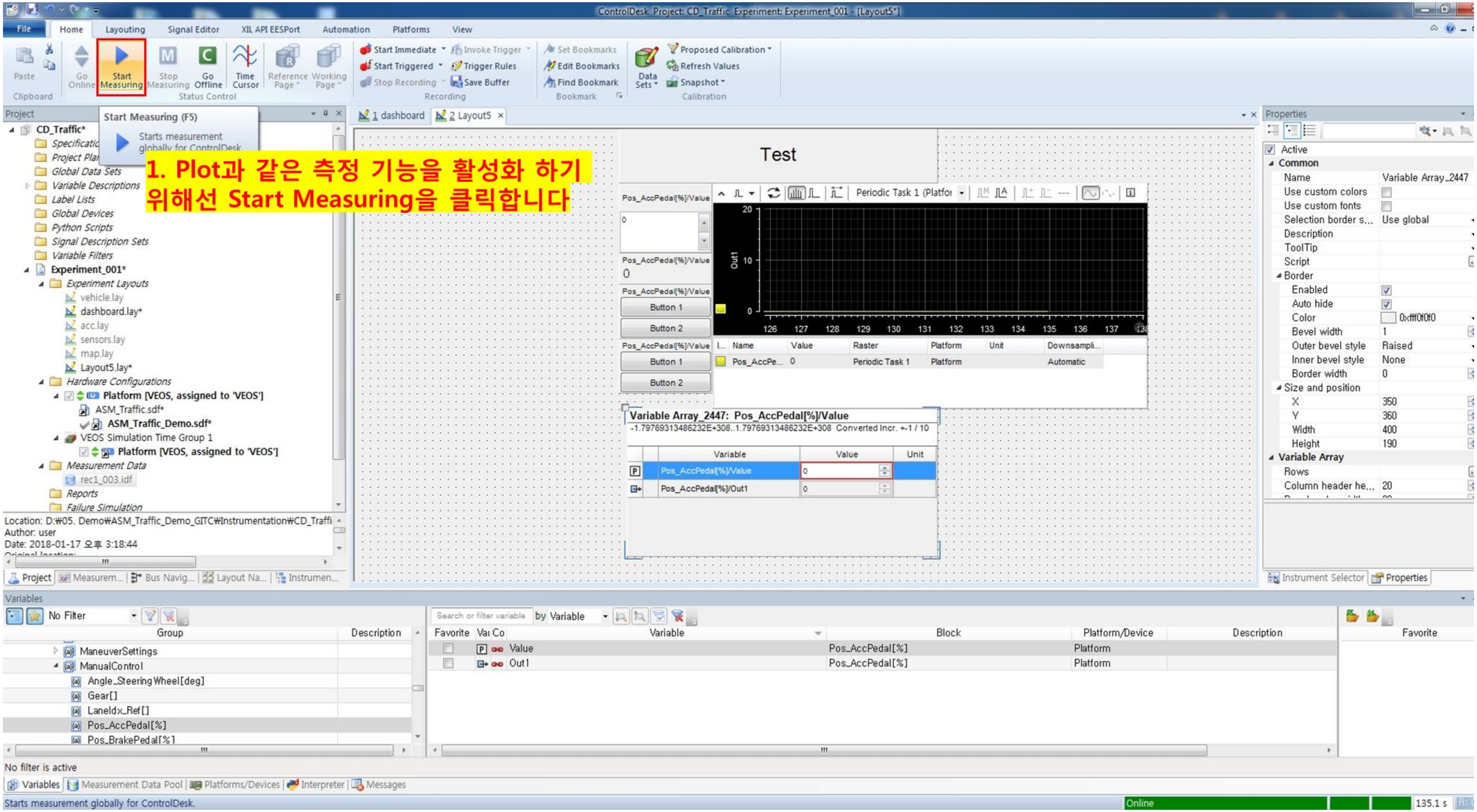
Property	Value
Name	Variable Array_2447
Selection border s...	Use global
Color	0xfff0f0f0
Bevel width	1
Outer bevel style	Raised
Inner bevel style	None
Border width	0
X	350
Y	360
Width	400
Height	190
Column header he...	20

Favorite	Variable	Block	Platform/Device
☐	Value	Pos_AccPedal[%]	Platform
☐	Out1	Pos_AccPedal[%]	Platform

Location: D:₩05. Demo₩ASM_Traffic_Demo_GITC₩Instrumentation₩CD_Traffi
Author: user
Date: 2018-01-17 오후 3:18:44

1. 예를 들어 10이라는 값을 입력했을 시에 이 Vaule 값이 걸려있는 Instrument는 일괄적으로 바뀌게 됩니다

ControlDesk 기본 사용법



1. Plot과 같은 측정 기능을 활성화 하기 위해선 Start Measuring을 클릭합니다

Start Measuring (F5)

Starts measurement globally for ControlDesk

Location: D:₩05. Demo₩ASM_Traffic_Demo_GITC₩Instrumentation₩CD_Traffi
Author: user
Date: 2018-01-17 오후 3:18:44

Variable Array_2447: Pos_AccPedal[%]/Value

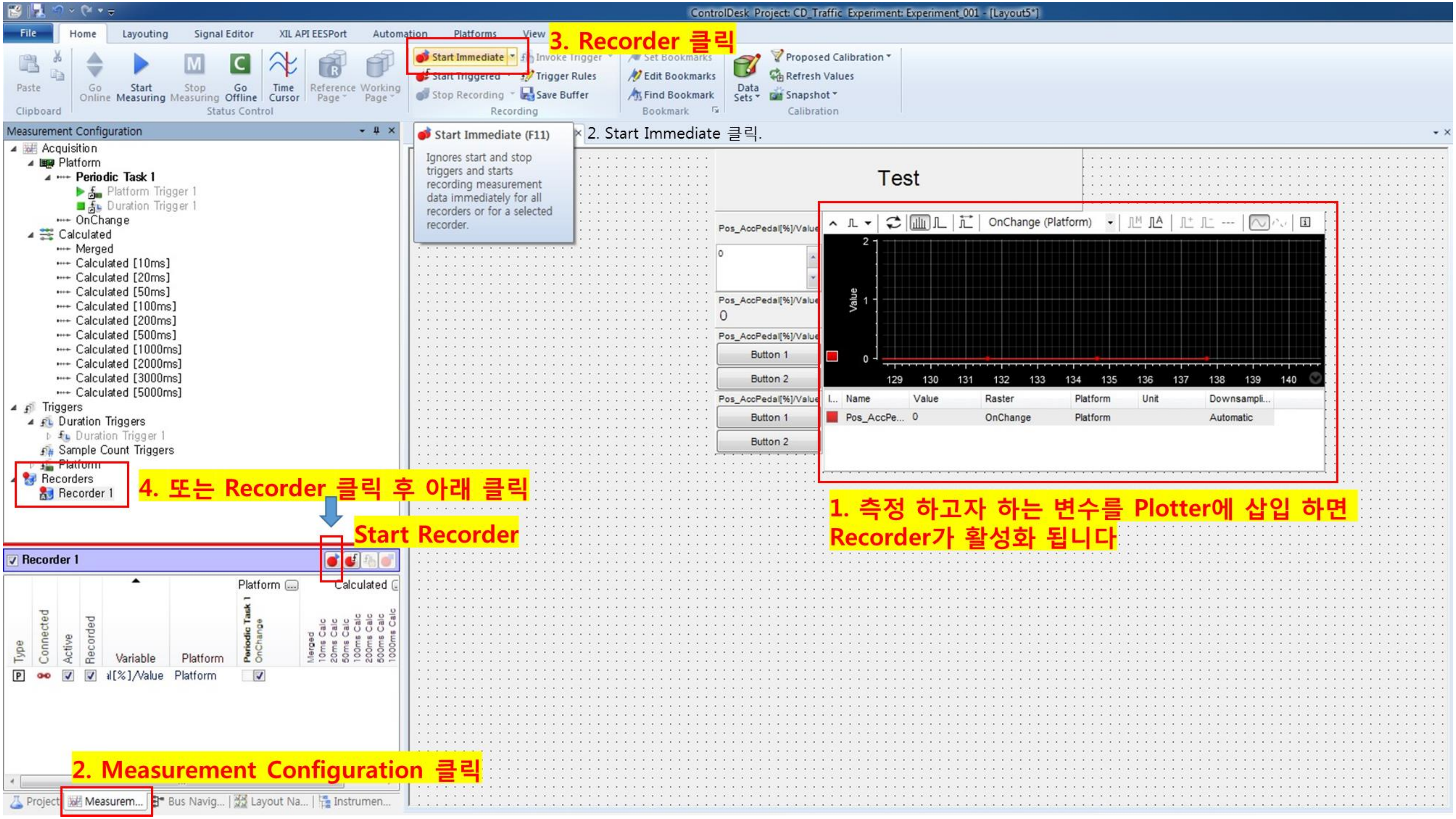
-1.79769313486232E+308..1.79769313486232E+308 Converted Incr. +-1 / 10

	Variable	Value	Unit
P	Pos_AccPedal[%]/Value	0	
	Pos_AccPedal[%]/Out1	0	

Property	Value
Active	☑
Name	Variable Array_2447
Use custom colors	☐
Use custom fonts	☐
Selection border s...	Use global
Enabled	☑
Auto hide	☑
Color	0xfff0f0f0
Bevel width	1
Outer bevel style	Raised
Inner bevel style	None
Border width	0
X	350
Y	360
Width	400
Height	190
Column header he...	20

Starts measurement globally for ControlDesk.

ControlDesk 기본 사용법


ControlDesk Project: CD_Traffic Experiment: Experiment_001 - [Layout5*]
File
Home
Layouting
Signal Editor
XIL API EESPort
Automation
Platforms
View
Paste
Clipboard
Go Online
Start Measuring
Stop Measuring
Go Offline
Time Cursor
Reference Page
Working Page
Status Control
Start Immediate
Start Triggered
Stop Recording
Invoke Trigger
Trigger Rules
Save Buffer
Recording
Set Bookmarks
Edit Bookmarks
Find Bookmark
Bookmark
Data Sets
Proposed Calibration
Refresh Values
Snapshot
Calibration
Measurement Configuration
Acquisition
Platform
Periodic Task 1
Platform Trigger 1
Duration Trigger 1
OnChange
Calculated
Merged
Calculated [10ms]
Calculated [20ms]
Calculated [50ms]
Calculated [100ms]
Calculated [200ms]
Calculated [500ms]
Calculated [1000ms]
Calculated [2000ms]
Calculated [3000ms]
Calculated [5000ms]
Triggers
Duration Triggers
Duration Trigger 1
Sample Count Triggers
Platform
Recorders
Recorder 1
Recorder 1
Type
Connected
Active
Recorded
Variable
Platform
Platform
Periodic Task 1
OnChange
Calculated
Merged
10ms Calc
20ms Calc
50ms Calc
100ms Calc
200ms Calc
500ms Calc
1000ms Calc
Project
Measurem...
Bus Navig...
Layout Na...
Instrumen...
Test
Pos_AccPedal[%]/Value
0
Button 1
Button 2
OnChange (Platform)
Value
2
1
0
129
130
131
132
133
134
135
136
137
138
139
140

Start Immediate (F11)

Ignores start and stop triggers and starts recording measurement data immediately for all recorders or for a selected recorder.

Type	Connected	Active	Recorded	Variable	Platform	Periodic Task 1 OnChange
P	⚭	☑	☑	l[%]/Value	Platform	☑

I...	Name	Value	Raster	Platform	Unit	Downsampli...
🟥	Pos_AccPe...	0	OnChange	Platform		Automatic

3. Recorder 클릭

2. Start Immediate 클릭.

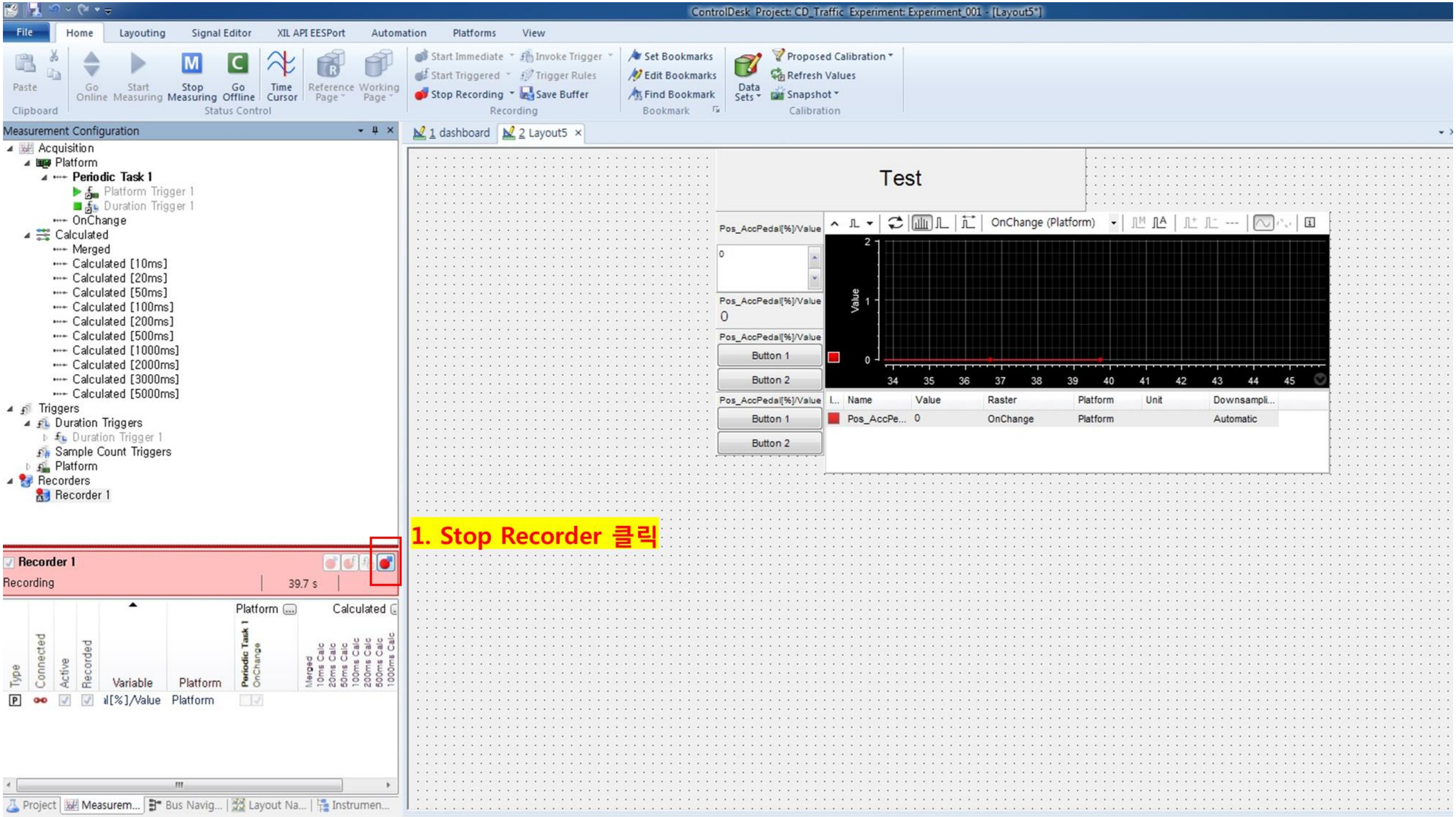
1. 측정 하고자 하는 변수를 Plotter에 삽입 하면 Recorder가 활성화 됩니다

4. 또는 Recorder 클릭 후 아래 클릭

Start Recorder

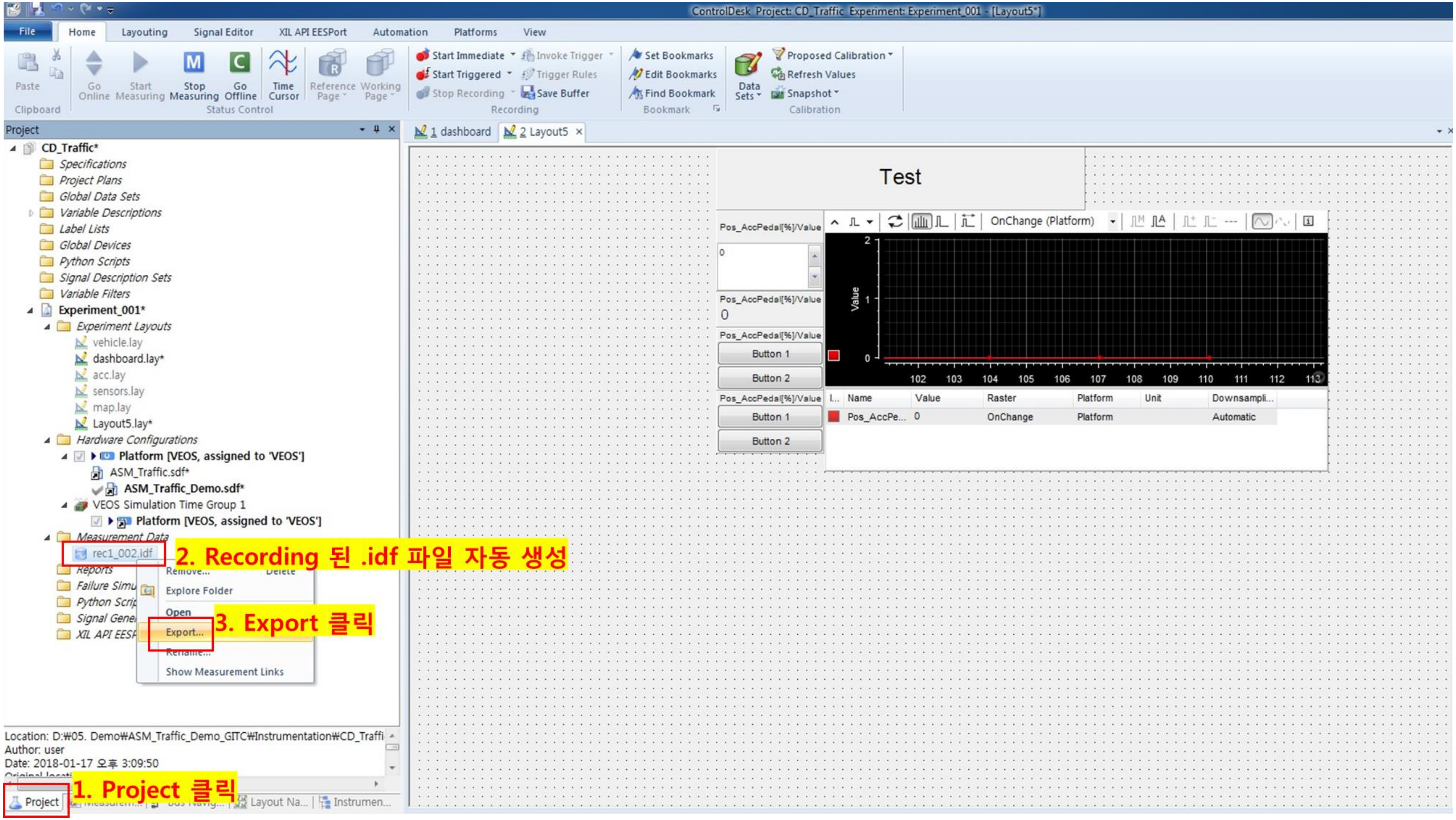
2. Measurement Configuration 클릭

ControlDesk 기본 사용법


ControlDesk Project: CD_Traffic Experiment: Experiment_001 - [Layout5*]
File
Home
Layouting
Signal Editor
XIL API EESPort
Automation
Platforms
View
Paste
Clipboard
Go Online
Start Measuring
Stop Measuring
Go Offline
Time Cursor
Status Control
Reference Page
Working Page
Start Immediate
Start Triggered
Stop Recording
Invoke Trigger
Trigger Rules
Save Buffer
Recording
Set Bookmarks
Edit Bookmarks
Find Bookmark
Bookmark
Data Sets
Proposed Calibration
Refresh Values
Snapshot
Calibration
Measurement Configuration
Acquisition
Platform
Periodic Task 1
Platform Trigger 1
Duration Trigger 1
OnChange
Calculated
Merged
Calculated [10ms]
Calculated [20ms]
Calculated [50ms]
Calculated [100ms]
Calculated [200ms]
Calculated [500ms]
Calculated [1000ms]
Calculated [2000ms]
Calculated [3000ms]
Calculated [5000ms]
Triggers
Duration Triggers
Duration Trigger 1
Sample Count Triggers
Platform
Recorders
Recorder 1
Recorder 1
Recording
39.7 s
Type
Connected
Active
Recorded
Variable
Platform
Platform
Periodic Task 1
OnChange
Calculated
Merged
10ms Calc
20ms Calc
50ms Calc
100ms Calc
200ms Calc
500ms Calc
1000ms Calc
P
l[%]/Value
Platform
Project
Measurem...
Bus Navig...
Layout Na...
Instrumen...
1 dashboard
2 Layout5
Test
Pos_AccPedal[%]/Value
0
Pos_AccPedal[%]/Value
0
Pos_AccPedal[%]/Value
Button 1
Button 2
Pos_AccPedal[%]/Value
Button 1
Button 2
OnChange (Platform)
Value
2
1
0
34
35
36
37
38
39
40
41
42
43
44
45
I...
Name
Value
Raster
Platform
Unit
Downsampli...
Pos_AccPe...
0
OnChange
Platform
Automatic

1. Stop Recorder 클릭

ControlDesk 기본 사용법


ControlDesk Project: CD_Traffic Experiment: Experiment_001 - [Layout5*]
File
Home
Layouting
Signal Editor
XIL API EESPort
Automation
Platforms
View
Paste
Clipboard
Go Online
Start Measuring
Stop Measuring
Go Offline
Status Control
Time Cursor
Reference Page
Working Page
Start Immediate
Start Triggered
Stop Recording
Invoke Trigger
Trigger Rules
Save Buffer
Recording
Set Bookmarks
Edit Bookmarks
Find Bookmark
Bookmark
Data Sets
Proposed Calibration
Refresh Values
Snapshot
Calibration
Project
CD_Traffic*
Specifications
Project Plans
Global Data Sets
Variable Descriptions
Label Lists
Global Devices
Python Scripts
Signal Description Sets
Variable Filters
Experiment_001*
Experiment Layouts
vehicle.lay
dashboard.lay*
acc.lay
sensors.lay
map.lay
Layout5.lay*
Hardware Configurations
Platform [VEOS, assigned to 'VEOS']
ASM_Traffic.sdf*
ASM_Traffic_Demo.sdf*
VEOS Simulation Time Group 1
Platform [VEOS, assigned to 'VEOS']
Measurement Data
rec1_002.idf
Reports
Failure Simu
Python Scrip
Signal Gene
XIL API EESP
Remove...
Delete
Explore Folder
Open
Export...
Rename...
Show Measurement Links
1 dashboard
2 Layout5
Test
Pos_AccPedal[%]/Value
0
Button 1
Button 2
OnChange (Platform)
Value
2
1
0
102
103
104
105
106
107
108
109
110
111
112
113
Name
Value
Raster
Platform
Unit
Downsampli...
Pos_AccPe...
0
OnChange
Platform
Automatic
Project
Measurem...
Bus Navig...
Layout Na...
Instrumen...

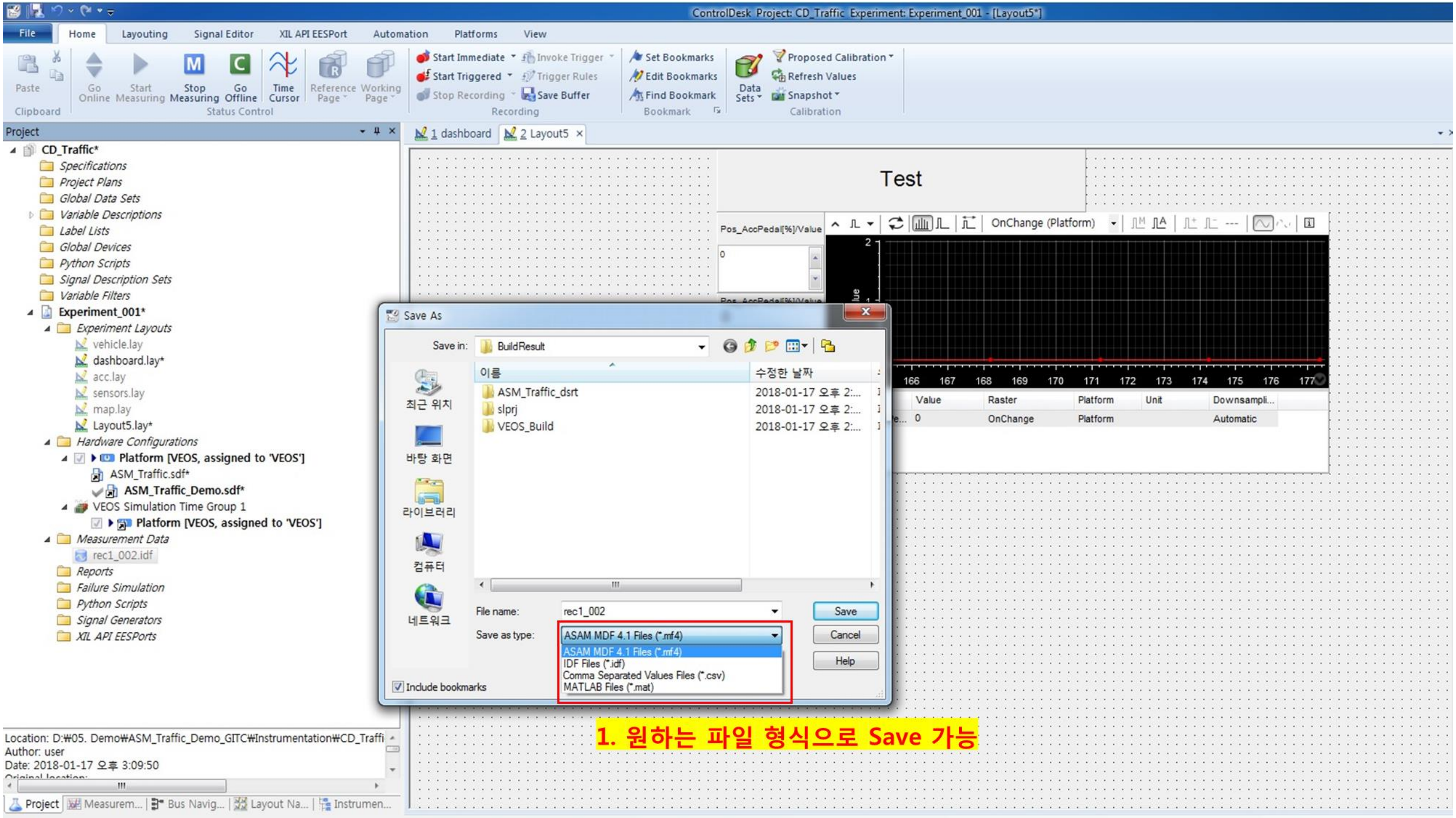
Location: D:₩05. Demo₩ASM_Traffic_Demo_GITC₩Instrumentation₩CD_Traffi
Author: user
Date: 2018-01-17 오후 3:09:50

1. Project 클릭

2. Recording 된 .idf 파일 자동 생성

3. Export 클릭

ControlDesk 기본 사용법



ControlDesk Project: CD_Traffic Experiment: Experiment_001 - [Layout5*]
File
Home
Layouting
Signal Editor
XIL API EESPort
Automation
Platforms
View
Save As
Save in:
BuildResult
이름
수정한 날짜
ASM_Traffic_dsrt
slprj
VEOS_Build
최근 위치
바탕 화면
라이브러리
컴퓨터
네트워크
Save
Cancel
Help
Test

File name: rec1_002

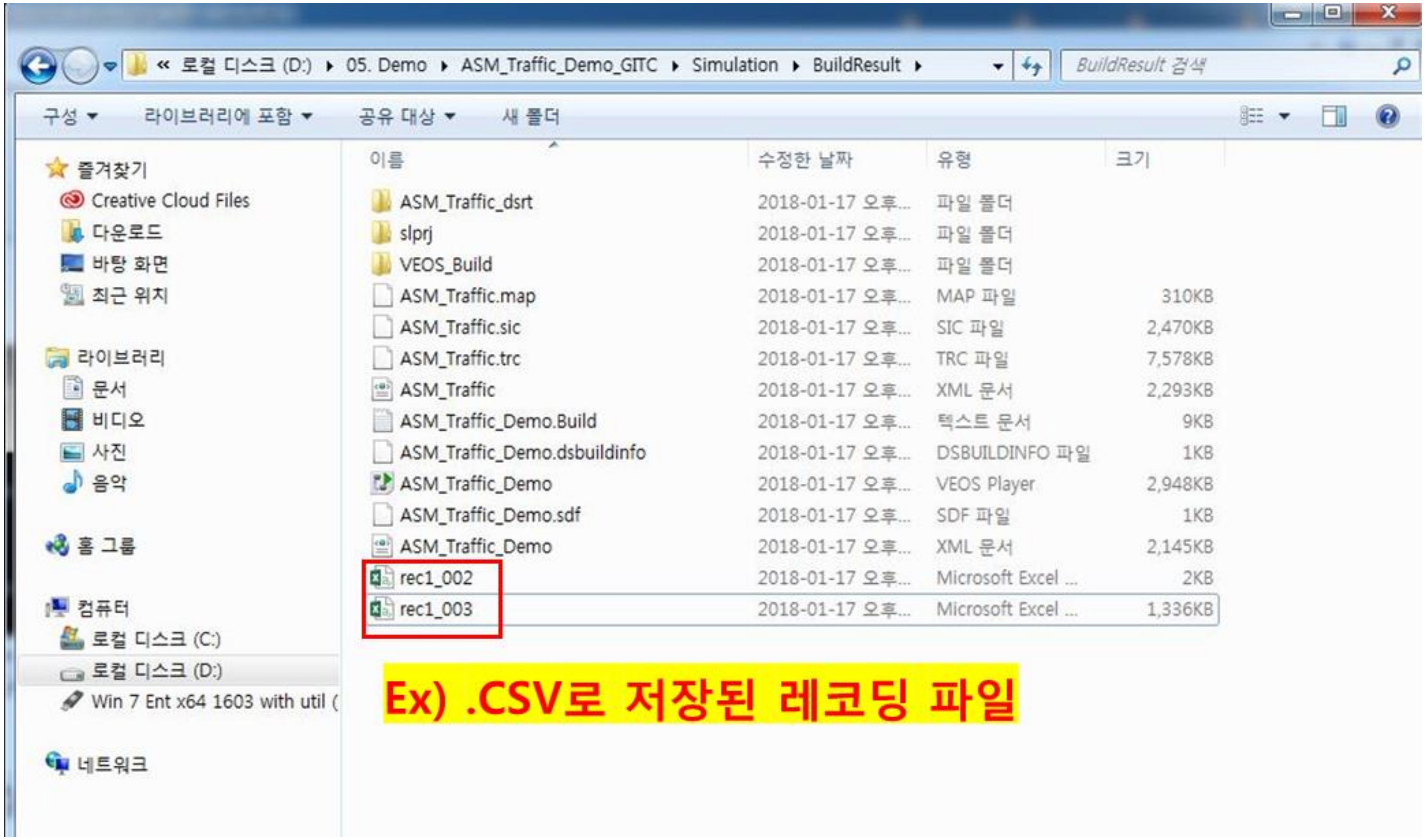
Save as type: ASAM MDF 4.1 Files (*.mf4)

- ASAM MDF 4.1 Files (*.mf4)
- IDF Files (*.idf)
- Comma Separated Values Files (*.csv)
- MATLAB Files (*.mat)

☑ Include bookmarks

1. 원하는 파일 형식으로 Save 가능

ControlDesk 기본 사용법


« 로컬 디스크 (D:) ▸ 05. Demo ▸ ASM_Traffic_Demo_GITC ▸ Simulation ▸ BuildResult ▸
BuildResult 검색
구성 ▾
라이브러리에 포함 ▾
공유 대상 ▾
새 폴더
즐겨찾기
Creative Cloud Files
다운로드
바탕 화면
최근 위치
라이브러리
문서
비디오
사진
음악
홈 그룹
컴퓨터
로컬 디스크 (C:)
로컬 디스크 (D:)
Win 7 Ent x64 1603 with util (
네트워크

이름	수정한 날짜	유형	크기
ASM_Traffic_dsrt	2018-01-17 오후...	파일 폴더	
slprj	2018-01-17 오후...	파일 폴더	
VEOS_Build	2018-01-17 오후...	파일 폴더	
ASM_Traffic.map	2018-01-17 오후...	MAP 파일	310KB
ASM_Traffic.sic	2018-01-17 오후...	SIC 파일	2,470KB
ASM_Traffic.trc	2018-01-17 오후...	TRC 파일	7,578KB
ASM_Traffic	2018-01-17 오후...	XML 문서	2,293KB
ASM_Traffic_Demo.Build	2018-01-17 오후...	텍스트 문서	9KB
ASM_Traffic_Demo.dsbuildinfo	2018-01-17 오후...	DSBUILDINFO 파일	1KB
ASM_Traffic_Demo	2018-01-17 오후...	VEOS Player	2,948KB
ASM_Traffic_Demo.sdf	2018-01-17 오후...	SDF 파일	1KB
ASM_Traffic_Demo	2018-01-17 오후...	XML 문서	2,145KB
rec1_002	2018-01-17 오후...	Microsoft Excel ...	2KB
rec1_003	2018-01-17 오후...	Microsoft Excel ...	1,336KB

Ex) .CSV로 저장된 레코딩 파일

Thank you

㈜한컴MDS www.hancommds.com

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연구소 13487 경기도 성남시 분당구 판교로 228번길 17 판교세븐벤처밸리 2단지 1동 9층 031-600-5000