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기본 PDO MAP 변경

× ESI 파일에서 제공되는 기본 PDO Map 변경에 대한 안내 페이지입니다.

Intro

The screenshot shows the 'Configurator' software interface. The 'Main' tab is active. The 'Scanned List' shows three slaves: #00 [02FFh] MASTER-DC, #01 [0001h] R88D-KN01H-ECT, and #02 [0002h] R88D-KN01H-ECT. The 'SyncManager' table lists SMs 0, 1, 2, and 3 with their sizes and types. The 'PDO List' table shows the mapping for SM 2, with '0x1701' mapped to '258th receive PDO Mapping'. The 'PDO Assignment' table has a red box around it, showing '0x1701' selected. The 'PDO Contents (0x1701)' table shows the contents of the selected PDO, including 'Controlword', 'Target position', 'Touch probe function', and 'Physical outputs'.

Index	Size	Name	SM
0x1600	8	1st receive PDO Mapping	
0x1701	12	258th receive PDO Mapping	2
0x1702	19	259th receive PDO Mapping	
0x1703	17	260th receive PDO Mapping	
0x1704	23	261th receive PDO Mapping	
0x1705	19	262th receive PDO Mapping	
0x1A00	22	1st transmit PDO Mapping	

Index	Size	Name	Type
0x6040:00	2	Controlword	UINT
0x607A:00	4	Target position	DINT
0x60B8:00	2	Touch probe function	UINT
0x60FE:01	4	Physical outputs	UDINT

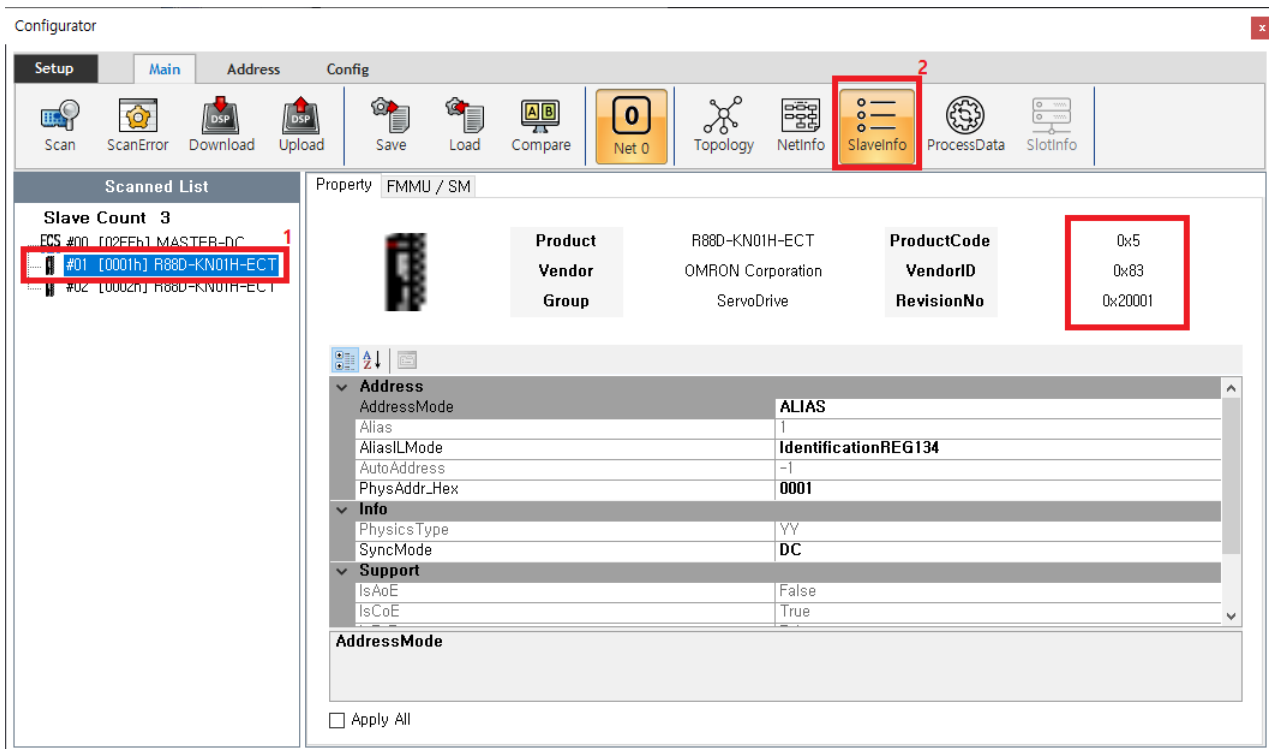
- SCAN을 진행하게 되면 각 슬레이브별로 'PDO Assignment'가 자동으로 선택됩니다.
 - 자동으로 선택되는 항목은 슬레이브의 ESI 파일¹⁾에 지정되어 있습니다.
- 'PDO Contents' 항목에 원하는 항목이 없는 경우 슬레이브 별로 'PDO Assignment'를 변경해야 합니다.
 - 보통 토크제어를 하거나 현재 토크를 확인해야 하는 경우, 'Target Torque' 또는 'Current Torque' 항목이 포함된 PDO Map(0x1702)으로 변경합니다.
- 변경 후에도 SCAN을 다시 진행하면 esi 파일의 값을 읽기 때문에, 값은 초기화됩니다.
 - 기본값을 변경하기 위해서는 ESI 파일을 수정해야 합니다.

ESI File 수정

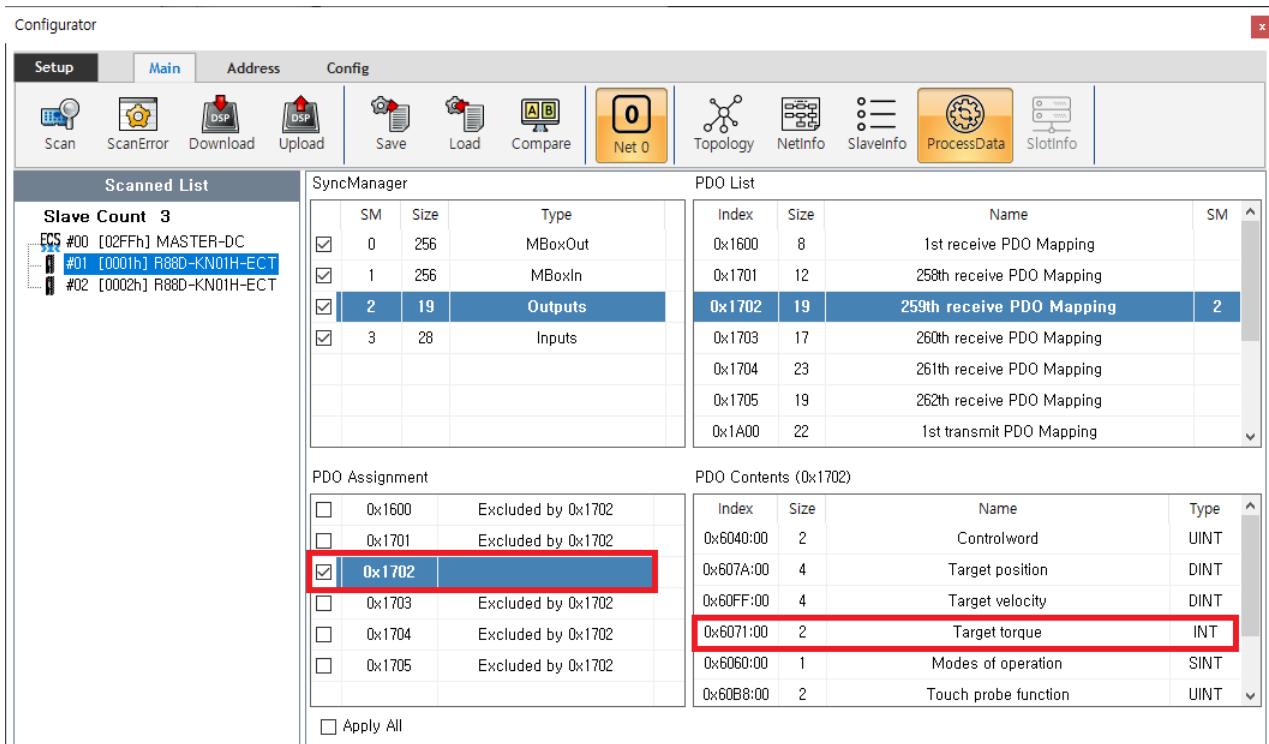
예시 환경은 다음과 같습니다.

- OMRON 드라이버 사용,

- Torque 제어 및 확인을 위해 PDO Map 변경



- 'SlaveInfo' 탭에서 ProductCode, RevisionNo를 확인합니다.



- 'ProcessData' 탭에서 변경해야할 PDO Map을 확인합니다.
 - 예시의 경우 'Target Troque' 항목이 있는 Map 확인: **0x1702**

```

1  <?xml version="1.0" encoding="utf-8"?>
2  <EtherCATInfo Version="1.4" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xsi:noNamespaceSchemaLoca
3  <Vendor FileVersion="100">
4    <!--1.00:NewRelease-->
5    <Id>#x83</Id>
6    <Name LcId="1033">OMRON Corporation</Name>
7    <Name LcId="1041">オムロン 株式会社</Name>
8    <ImageData16x14>424DD60200000000000003600000028000000100000000E0000000100180000000000A0020000000000
9  </Vendor>
10 <Descriptions>
11   <Groups>
12     <Group SortOrder="100">
13       <Type>ServoDrive</Type>
14       <Name LcId="1033">Servo Drives</Name>
15       <Name LcId="1041">サロボドライブ</Name>
16       <ImageData16x14>424DD60200000000000003600000028000000100000000E0000000100180000000000A002000
17     </Group>
18   </Groups>
19   <Devices>
20     <Device Invisible="0" Physics="YY">
8135   <Device Invisible="0" Physics="YY">
16250   <Device Invisible="0" Physics="YY">
24365   <Device Invisible="0" Physics="YY">
32480   <Device Invisible="0" Physics="YY">
32481     <Type ProductCode="#x00000005" RevisionNo="#x00020001">R88D-KN01H-ECT</Type>
32482     <HideType ProductCode="#x00000005" RevisionNo="#x00010000">R88D-KN01H-ECT</HideType>
32483     <HideType ProductCode="#x00000005" RevisionNo="#x00020000">R88D-KN01H-ECT</HideType>
32484     <Name LcId="1033"><![CDATA[R88D-KN01H-ECT G5 Series ServoDrive/Motor]]></Name>
32485     <Name LcId="1041"><![CDATA[R88D-KN01H-ECT G5 シリロズ サロボドライブ/モータ]]></Name>
32486     <Comment LcId="1033">200V/100W ServoDrive</Comment>
32487     <Comment LcId="1041">200V/100W サロボドライブ</Comment>
32488     <URL LcId="1033">http://www.ia.omron.com/</URL>
32489     <URL LcId="1041">http://www.fa.omron.co.jp/</URL>
32490     <Info>
32491       <StateMachine>
32492       <Timeout>

```

- XML Editor²⁾를 이용해 esi 파일을 열고, ProductCode와 RevisionNo가 일치하는 노드를 찾습니다.

The screenshot shows the CANopen configuration tool interface. On the left, the XML configuration is displayed with line numbers. On the right, the 'PDO Assignment' table is shown. The table has columns for SM, Size, and Type. The 'Outputs' row (SM 2, Size 12) is highlighted with a red box. A red arrow points from the '<RxPdo Fixed="1" Sm="2">' line in the XML to the '0x1701' entry in the PDO Assignment table.

SM	Size	Type
0	256	MBoxOut
1	256	MBoxIn
2	12	Outputs
3	28	Inputs

The 'PDO Assignment' table also includes a checkbox for each entry. The '0x1701' entry is checked. The 'PDO Contents (0x1701)' table shows the index and size for each entry.

Index	Size
0x1600	8
0x1701	12
0x1702	19
0x1703	17
0x1704	23
0x1705	19
0x1A00	22

- '<RxPdo Fixed="0">' 형식으로 표시되는 항목은 'SyncManager'의 Outputs 항목입니다.

The screenshot shows the CANopen configuration tool interface. On the left, the XML configuration is displayed with line numbers. On the right, the 'PDO Assignment' table is shown. The '0x1702' entry is highlighted with a blue box. A red arrow points from the '<RxPdo Fixed="1" Sm="2">' line in the XML to the '0x1702' entry in the PDO Assignment table.

SM	Size	Type
0	256	MBoxOut
1	256	MBoxIn
2	12	Outputs
3	28	Inputs

The 'PDO Assignment' table also includes a checkbox for each entry. The '0x1702' entry is checked. The 'PDO Contents (0x1702)' table shows the index and size for each entry.

Index	Size
0x6040:00	2
0x607A:00	4
0x60FF:00	4
0x6071:00	2
0x6060:00	1

- 'Sm="2"'로 표시된 노드가 자동 선택되는 노드입니다.

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32515

32516

39743

39744

39745

39746

39747

39748

39749

39783

39825

39891

39957

40039

40113

40178

40259

40340

40429

40518

40531

40532

40533

<Devices>

<Device Invisible="0" Physics="YY">

<Device Invisible="0" Physics="YY">

<Device Invisible="0" Physics="YY">

<Device Invisible="0" Physics="YY">

<Device Invisible="0" Physics="YY">

<Type ProductCode="#x00000005" RevisionNo="#x00020001">R88D-KN01H-ECT</Type>

<HideType ProductCode="#x00000005" RevisionNo="#x00010000">R88D-KN01H-ECT</HideType>

<HideType ProductCode="#x00000005" RevisionNo="#x00020000">R88D-KN01H-ECT</HideType>

<Name LcId="1033"><![CDATA[R88D-KN01H-ECT G5 Series ServoDrive/Motor]]></Name>

<Name LcId="1041"><![CDATA[R88D-KN01H-ECT G5 シリロズ サロボドライブ/モータ]]></Name>

<Comment LcId="1033">200V/100W ServoDrive</Comment>

<Comment LcId="1041">200V/100W サロボドライブ</Comment>

<URL LcId="1033">http://www.ia.omron.co.jp</URL>

<URL LcId="1041">http://www.fa.omron.co.jp</URL>

<Info>

<GroupType>ServoDrive</GroupType>

<Profile>

<Fmmu>Outputs</Fmmu>

<Fmmu>Inputs</Fmmu>

<Sm MinSize="40" MaxSize="256" DefaultSize="24" StartSize="12" StopSize="28">

<Sm MinSize="40" MaxSize="256" DefaultSize="24" StartSize="12" StopSize="28">

<Sm MaxSize="24" DefaultSize="12" StartSize="12" StopSize="28">

<Sm MaxSize="30" DefaultSize="28" StartSize="12" StopSize="28">

<RxPdo Fixed="0">

<RxPdo Fixed="1">

<RxPdo Fixed="1" Sm="2">

<RxPdo Fixed="1">

<RxPdo Fixed="1">

<TxPdo Fixed="0">

<TxPdo Fixed="1" Sm="3">

<TxPdo Fixed="1">

<TxPdo Fixed="1">

<TxPdo Fixed="1">

<TxPdo Fixed="1">

<Mailbox DataLinkLayer="1">

<CoE SdoInfo="1" PdoAssign="1" PdoConfig="1" CompleteAccess="0" SegmentedSdo="1" DiagHistory="1">

<InitCmd>

SyncManager

SM	Size	Type
☒ 0	256	MBoxOut
☒ 1	256	MBoxIn
☒ 2	19	Outputs
☒ 3	28	Inputs

PDO List

Index	Size	
0x1600	8	1st re
0x1701	12	258th r
0x1702	19	259th re
0x1703	17	260th r
0x1704	23	261th r
0x1705	19	262th r
0x1A00	22	1st tra

PDO Assignment

Index	Size	
☐ 0x1600		Excluded by 0x1702
☐ 0x1701		Excluded by 0x1702
☒ 0x1702		
☐ 0x1703		Excluded by 0x1702
☐ 0x1704		Excluded by 0x1702
☐ 0x1705		Excluded by 0x1702

PDO Contents (0x1702)

Index	Size	
0x6040:00	2	
0x607A:00	4	T
0x60FF:00	4	T
0x6071:00	2	T
0x6060:00	1	Mod
0x60B8:00	2	Touc

- 다른 노드에 'Sm="2"' 를 추가할 경우, 해당 노드가 자동 선택됩니다.

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8135

16250

24365

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32485

32486

32487

32488

32489

32490

32515

32516

39743

39744

39745

39746

39747

39748

39749

39783

39825

39891

39957

40039

40113

40178

40259

40340

40429

40518

40531

40532

40533

<Devices>

<Device Invisible="0" Physics="YY">

<Device Invisible="0" Physics="YY">

<Device Invisible="0" Physics="YY">

<Device Invisible="0" Physics="YY">

<Device Invisible="0" Physics="YY">

<Type ProductCode="#x00000005" RevisionNo="#x00020001">R88D-KN01H-ECT</Type>

<HideType ProductCode="#x00000005" RevisionNo="#x00010000">R88D-KN01H-ECT</HideType>

<HideType ProductCode="#x00000005" RevisionNo="#x00020000">R88D-KN01H-ECT</HideType>

<Name LcId="1033"><![CDATA[R88D-KN01H-ECT G5 Series ServoDrive/Motor]]></Name>

<Name LcId="1041"><![CDATA[R88D-KN01H-ECT G5 シリロズ サロボドライブ/モータ]]></Name>

<Comment LcId="1033">200V/100W ServoDrive</Comment>

<Comment LcId="1041">200V/100W サロボドライブ</Comment>

<URL LcId="1033">http://www.ia.omron.co.jp</URL>

<URL LcId="1041">http://www.fa.omron.co.jp</URL>

<Info>

<GroupType>ServoDrive</GroupType>

<Profile>

<Fmmu>Outputs</Fmmu>

<Fmmu>Inputs</Fmmu>

<Sm MinSize="40" MaxSize="256" DefaultSize="24" StartSize="12" StopSize="28">

<Sm MinSize="40" MaxSize="256" DefaultSize="24" StartSize="12" StopSize="28">

<Sm MaxSize="24" DefaultSize="12" StartSize="12" StopSize="28">

<Sm MaxSize="30" DefaultSize="28" StartSize="12" StopSize="28">

<RxPdo Fixed="0">

<RxPdo Fixed="1" Sm="2">

<RxPdo Fixed="1">

<RxPdo Fixed="1">

<RxPdo Fixed="1">

<TxPdo Fixed="0">

<TxPdo Fixed="1" Sm="3">

<TxPdo Fixed="1">

<TxPdo Fixed="1">

<TxPdo Fixed="1">

<TxPdo Fixed="1">

<Mailbox DataLinkLayer="1">

<CoE SdoInfo="1" PdoAssign="1" PdoConfig="1" CompleteAccess="0" SegmentedSdo="1" DiagHistory="1">

<InitCmd>

SyncManager

SM	Size	Type
☒ 0	256	MBoxOut
☒ 1	256	MBoxIn
☒ 2	12	Outputs
☒ 3	28	Inputs

PDO List

Index	Size	
0x1600	8	
0x1701	12	
0x1702	19	
0x1703	17	
0x1704	23	
0x1705	19	
0x1A00	22	

PDO Assignment

Index	Size	
☐ 0x1A00		
☒ 0x1B01		
☐ 0x1B02		
☐ 0x1B03		
☐ 0x1B04		
☐ 0x1BFF		

PDO Contents (0x1B01)

Index	Size	
0x603F:00	2	
0x6041:00	2	
0x6064:00	4	
0x6077:00	2	
0x60F4:00	4	
0x60B9:00	2	

- '<TxPdo Fixed="0">' 형식으로 표시되는 항목은 'SyncManager'의 Inputs 항목입니다.
- 'Sm="3"로 표시된 노드가 자동 선택되는 노드입니다.
- 변경 완료 후 저장합니다.
- Configurator를 재실행한 후 SCAN을 진행합니다.

1)

.xml 형태로 제공되는 슬레이브 설정 파일

2)

Notepad, Notepad++, Ultra Editor 등

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