Table of Contents

Process Data	1	L
개요	1	I
구섯	1	1
Outputs		3
Inputs	2	1
PDO Map 관	년집	5

Process Data

× Process Data 설정에 대한 안내 페이지입니다.

개요												
Setup ESP Scan	Main Corror ScanError	Addres	s Conf	ig Pilot Save	Load	AB ZS Compare	O Net 0	1 Net 1	Topology	NetInfo	SlaveInfo	ProcessData
Scan	ScanError	Download	Upload	Save	Load	Compare	Net 0	Net 1	Topology	NetInfo	SlaveInfo	ProcessData

- ProcessData 버튼을 클릭하여 활성화합니다.
- PDO¹⁾를 지원하는Slave의 PDO 목록, Contents 등을 설정합니다.

Setup Main Address	c	onfig						
Scan ScanError Download	Upload		Save 2	Load Compare	0 1 Net 0 Net		Topology Netinfo	ProcessData
Scanned List	Sync	Manag	er		1 PDO List			
Slave Count 15		SM	Size	Туре	Index	Size	Name	SM
#00 [02FFh] MASTER-DC	V	0	256	MBoxOut	0×1600	8	1st receive PDO Mapping	
- 🤹 #UT [U3UUN] ETS-HUBU6	V	1	256	MBoxIn	0x1701	12	258th receive PDO Mapping	2
#03 [0002h] R88D-KN01H-E0		2	12	Outputs	0×1702	19	259th receive PDO Mapping	
- 🚓 #04 [0301h] ETS-HUB06		3	28	Inputs	0x1703	17	260th receive PDO Mapping	
■ #05 [02FAn] GX-JC06(IN,X2)					0×1704	23	261th receive PDO Mapping	
- 🔣 #07 [0243h] ETS-Al08AH					0×1705	19	262th receive PDO Mapping	
#08 [0242h] ETS-Al08AH-					0x1A00	22	1st transmit PDO Mapping	
ETS #10 [0245h] ETS-D08MN					0×1801	28	258th transmit PDO Manning	3
#11 [0246h] ETS-D08MN					0.1002	95	2E0th transmit DDO Manaina	
	PDO	Assign	ment		3 PDO Conten	ts (Ox1"	701)	
🛄 👫 #14 [02FBh] GX-JC06(X4,X5		-	0x1600		Index	Size	Name	Type
		ſ	x1701		0×6040:00	2	Controlword	UINT
			0v1702		0×607A:00	4	Target position	DINT
			0v1703		0x60B8:00	2	Touch probe function	LIINT
			0.1704		0×60EE+01	4	Physical outputs	LIDINT
			0X1704		0X00FE-01	4		ODIN
			UX 1705					

- 1. SyncManager
 - "MBoxOut", "MBoxIn" 은 메일박스 통신²⁾을 의미합니다.
 - "Outputs", "Inputs"는 PDO 통신을 의미하며, Size는 할당 된 크기를 Byte 단위로 나타 냅니다.
 - 클릭하면 PDO List 등이 해당 SM에 맞는 항목으로 변경됩니다.
- 2. PDO List
 - "SyncManager"에서 "Outputs" 또는 "Inputs" 선택 시 표시됩니다.
 - Slave의 ESI에서 제공하는 고정PDO Map 과 해당 맵에 할당되는 크기, SM 등을 표시합 니다.
 - 클릭시 선택된 PDO Map에 포함되는 Object가 PDO Contens 에 표시됩니다.
- 3. PDO Assignment
 - 고정 PDO Map을 선택합니다.
 - 선택된 Map은 SyncManager에 할당되어 Process Data에 포함됩니다.
 - 선택 시 다른 항목이 배제(excluded)될 수 있습니다³.

Sync	Manage	er		PDO List			
	SM	Size	Туре	Index	Size	Name	SM
v	0	256	MBoxOut	0×1600	8	1st receive PDO Mapping	
v	1	256	MBoxIn	0x1701	12	258th receive PDO Mapping	
	2	17	Outputs	0×1702	19	259th receive PDO Mapping	
V	3	28	Inputs	0x1703	17	260th receive PDO Mapping	2
				0×1704	23	261th receive PDO Mapping	
				0×1705	19	262th receive PDO Mapping	
PDO	Assigni	ment		PDO Conter	nts (Ox1	703)	
	0×16	00	Excluded by 0x1703	Index	Size	Name	Туре
	0×17	01	Excluded by 0x1703	0×6040:00	2	Controlword	UINT
	0×17	02	Excluded by 0x1703	0x607A:00	4	Target position	DINT
V	0x17	03		0x60FF:00	4	Target velocity	DINT
	0×17	04	Excluded by 0x1703	0×6060:00	1	Modes of operation	SINT
	0×17	05	Excluded by 0x1703	0×60B8:00	2	Touch probe function	UINT

🔲 Apply All

0x1705

- 4. PDO Contents
 - 선택된 PDO Map에 포함되는 Object를 표시합니다.
 - 편집이 가능합니다.

Excluded by 0x1703

- 5. Apply All
 - 체크 후 변경 되는 내용은 동일한 모듈⁴⁾에 모두 적용됩니다.

Outputs

SyncManager

PDO List

SM	Size	Туре	Index	Size	Name	SM
0	256	MBoxOut	0x1600	9	Receive PDO mapping 1	2
1	256	MBoxIn	0×1601	19	Receive PDO mapping 2	
2	9	Outputs	0×1602	15	Receive PDO mapping 3	
3	25	Inputs	0x1603	21	Receive PDO mapping 4	
			0x1A00	23	Transmit PDO mapping 1	
			0×1A01	25	Transmit PDO mapping 2	3
			0x1A02	25	Transmit PDO mapping 3	
			0x1A03	25	Transmit PDO mapping 4	
			0x1A00 0x1A01 0x1A02 0x1A03	23 25 25 25	Transmit PDO mapping 1 Transmit PDO mapping 2 Transmit PDO mapping 3 Transmit PDO mapping 4	

3/7

PDO) Assignment	PDO Conten	t (0x1A	,00)	
1	0×1600	Index	Size	Name	Туре
	0×1601	0×6040:00	2	Controlword	UINT
	0×1602	0×6060:00	1	Modes of operation	SINT
	0×1603	0×607A:00	4	Target position	DINT
		0×60B8:00	2	Touch probe function	UINT

- "Ouputs"는 마스터에서 슬레이브로 전달되는⁵⁾ 주기적 데이터(Process Data)를 의미합니다.
- 선택된 슬레이브의 경우, 4개의 PDO (RxPDO)가 지원되며 그 중 0x1600 PDO가 할당된 것을 확인할 수 있습니다.
 - 이는 마스터에서 슬레이브로 0x1600의 PDO Content에 해당하는 Controlword, Modesof operation, Target position, TouchProbe function 의 값을 주기적으로 전달한 다는 뜻입니다.
 - 이 경우, 마스터에서 슬레이브로 Torque 값은 전달되지 않으므로, Torque 제어는 사용 할수 없습니다.
- PDO Assignment 변경 시 체크된 항목이 RxPDO로 할당됩니다.

SyncMa	anager		PDO List			
SM	Size	Туре	Index	Size	Name	SM
0	256	MBoxOut	0×1600	9	Receive PDO mapping 1	
1	256	MBoxIn	0×1601	19	Receive PDO mapping 2	2
2	19	Outputs	0×1602	15	Receive PDO mapping 3	
3	23	Inputs	0×1603	21	Receive PDO mapping 4	
			0x1A00	23	Transmit PDO mapping 1	3
			0x1A01	25	Transmit PDO mapping 2	
			0x1A02	25	Transmit PDO mapping 3	
			0~1403	25	Transmit PDO manning 4	
PDO As	signment		PDO Conten	it (0x1A00)		
'DO As	signment 0x1600		PDO Conten	t (0x1A00) Size	Name	Туре
DO As	signment 0x1600 0x1601		PDO Conten Index 0x6040:00	t (0x1A00) Size 2	Name Controlword	Type UINT
DO As	signment 0x1600 0x1601 0x1602	-	PDO Conten Index 0x6040:00 0x6060:00	t (0x1A00) Size 2 1	Name Controlword Modes of operation	Type UINT SINT
DO As	signment 0x1600 0x1601 0x1602 0x1603		PDO Conten Index 0x6040:00 0x6060:00 0x6071:00	t (0x1A00) Size 2 1 2	Name Controlword Modes of operation Target torque	Type UINT SINT INT
DO As	signment 0x1600 0x1601 0x1602 0x1603		PDO Conten Index 0x6040:00 0x6060:00 0x6071:00 0x607A:00	tt (0x1A00) Size 2 1 2 4	Name Controlword Modes of operation Target torque Target position	Type UINT SINT INT DINT
DO As	signment 0x1600 0x1601 0x1602 0x1603		PDO Conten Index 0x6040:00 0x6060:00 0x6071:00 0x607A:00 0x6080:00	t (0x1A00) Size 2 1 2 4 4 4	Name Controlword Modes of operation Target torque Target position Max motor speed	Type UINT SINT INT DINT UDINT
VDO As	signment 0x1600 0x1601 0x1602 0x1603		PDO Conten Index 0x6040:00 0x6060:00 0x6060:00 0x607A:00 0x6080:00 0x6088:00	t (0x1A00) Size 2 1 2 4 4 4 2	Name Controlword Modes of operation Target torque Target position Max motor speed Touch probe function	Type UINT SINT INT DINT UDINT UINT

• PDO를 0x1601로 변경하는 경우, 0x1601에 해당하는 PDO Content 가 표시됩니다.

• 0x1600 에 비해 Target torque와 Max motor speed가 추가된 것을 확인할 수 있습니다.
• 이 경우, Torque제어가 가능합니다.

Inputs

5/7

yncM	anager		PDO List			
SM	Size	Туре	Index	Size	Name	SM
0	256	MBoxOut	0×1600	9	Receive PDO mapping 1	2
1	256	MBoxIn	0×1601	19	Receive PDO mapping 2	
2	9	Outputs	0×1602	15	Receive PDO mapping 3	
3	25	Inputs	0×1603	21	Receive PDO mapping 4	
			0×1A00	23	Transmit PDO mapping 1	
			0x1A01	25	Transmit PDO mapping 2	3
			0×1A02	25	Transmit PDO mapping 3	
			0×1A03	25	Transmit PDO mapping 4	
DO As	ssignment 0x1A00		PDO Conter Index	it (0x1A00) Size) Name	Туре
7	0x1A01		0×603F:00	2	Error code	UINT
	0x1A02		0×6041:00	2	Statusword	UINT
	0x1A03		0×6061:00	1	Modes of operation display	SINT
			0×6064:00	4	Position actual value	DINT
			0×606C:00	4	Velocity actual value	DINT
			0×606C:00 0×6077:00	4 2	Velocity actual value Torque actual value	DINT

- "Inputs"는 슬레이브에서 마스터로 전달되는⁶⁾ 주기적 데이터(Process Data)를 의미합니다.
- 선택된 슬레이브의 경우, 4개의 PDO (TxPDO)가 지원되며 그 중 0x1A01 PDO가 할당된 것을 확인할 수 있습니다.
 - 이는 슬레이브에서 마스터로 0x1A01의 PDO Content에 해당하는 항목의 값이 주기적 으로 전달된다는 의미입니다.
 - 이 경우, PDO Content에 Torque actual value 항목이 있으므로 torque를 모니터링 할 수 있습니다.



SM Size Type Index Size Name Size Image: Ima	Syno	Manage	er		PDO List			
Image: See See See See See See See See See S		SM	Size	Туре	Index	Size	Name	SM
Image: Normal state in the image: Normal state in the image in the image. Image in the image. Image in the	1	0	256	MBoxOut	0×1600	8	1st receive PDO Mapping	
2 12 Outputs 0x1702 19 259th receive PDO Mapping 1 3 28 Inputs 0x1703 17 260th receive PDO Mapping 0x1704 23 261th receive PDO Mapping 0x1704 19 262th receive PDO Mapping 0x1704 19 261th receive PDO Mapping 1 0x1704 19 261th receive PDO Mapping 1 0x1704 19 261th receive PDO Mapping 1 0x1705 19 262th receive PDO Mapping 1 1 1 0x1705 19 262th receive PDO Mapping 1	1	1	256	MBoxIn	0x1701	12	258th receive PDO Mapping	2
3 28 Inputs 0x1703 17 260th receive PDO Mapping 1 0x1704 23 261th receive PDO Mapping 0x1704 23 262th receive PDO Mapping 1 0x1705 19 262th receive PDO Mapping 1 <t< td=""><td>7</td><td>2</td><td>12</td><td>Outputs</td><td>0×1702</td><td>19</td><td>259th receive PDO Mapping</td><td></td></t<>	7	2	12	Outputs	0×1702	19	259th receive PDO Mapping	
0x1704 23 261th receive PDO Mapping 0x1705 19 262th receive PDO Mapping 0x1600 PDO Contents (0x1701) 0x1701 Index Size Name Typ 0x1702 0x6040:00 2 Controlword UIN 0x1703 0x607A:00 4 Target position DIN 0x1704 0x6088:00 2 Touch probe function UIN 0x1704 0x60FE:01 4 Physical outputs UDIN	v	3	28	Inputs	0×1703	17	260th receive PDO Mapping	
Ox1705 19 262th receive PDO Mapping PDO Assignment PDO Contents (0x1701) 0x1600 Index Size Name Typ 0x1701 0x6040:00 2 Controlword UIN 0x1703 0x6088:00 2 Touch probe function UIN 0x1704 0x60FE:01 4 Physical outputs UDIN					0×1704	23	261th receive PDO Mapping	
Image: PDO Assignment PDO Contents (0x1701) 0x1600 Index Size Name Typ 0x1701 0x6040:00 2 Controlword UIN 0x1702 0x607A:00 4 Target position DIN 0x1703 0x6088:00 2 Touch probe function UIN 0x1704 0x60FE:01 4 Physical outputs UDIN					0×1705	19	262th receive PDO Mapping	
0x1702 0x01702 0x01700 4 1raiget position Div 0x1703 0x60B8:00 2 Touch probe function UIN 0x1704 0x60FE:01 4 Physical outputs UDIN	V	0:	x1701		0×6040:00	2	Controlword	
0x1702 0x607A:00 4 Target position DIN 0x1703 0x60B8:00 2 Touch probe function UIN 0x1704 0x60FE:01 4 Physical outputs UDIN	V	0:	x1701		0×6040:00	2	Controlword	UINT
0x1703 0x000000 2 10000000 2 0x1704 0x60FE:01 4 Physical outputs UDIN		0	×1702		0×6088:00	4 2	Target position	
		0	×1703		0x60EE:01	4	Physical autouto	
		0	×1704		0,001 2.01	4		ODINT
Edit		U	×1705				Edit	

• PDO Contenst 창에서 마우스를 우클릭 하면 EDIT 버튼을 선택할 수 있습니다.

PDO Editor	X
E Outputs	*
- 🔲 [0x4103:00] Coordinate System Setting Mode	
- 🔲 [0x4104:00] Coordinate System Setting Position	
🔽 [0x6040:00] Controlword	
- 🔄 [0x6060:00] Modes of operation	
🥅 [0x6071:00] Target torque	
🥅 [0x6072:00] Max torque	=
- 🔽 [0x607A:00] Target position	
🥅 [0x607F:00] Max profile velocity	
🥅 [0x6081:00] Profile velocity	
- 🥅 [0x6086:00] Motion profile type	
- 🥅 [0x60B0:00] Position offset	
- 🥅 [0x60B1:00] Velocity offset	
- 🥅 [0x60B2:00] Torque offset	
- 🔽 [0x60B8:00] Touch probe function	
En COv60E0:001 Desitive terrare limit value	*

• EDIT 창 활성화 시 ProcessData 항목에 추가할 수 있는 Object 항목이 표시 됩니다.

- 최상위 노드 클릭 시 전체 선택 / 전체 취소가 가능합니다.
- Edit 창에서 OK 클릭 시 반영됩니다.

	SM	Size	Туре	Index	Size	Name	SM
1	0	256	MBoxOut	0×1600	8	1st receive PDO Mapping	
1	1	256	MBoxIn	0x1701	12	258th receive PDO Mapping	2
V	2	17	Outputs	0×1702	19	259th receive PDO Mapping	
1	3	28	Inputs	0×1703	17	260th receive PDO Mapping	
				0×1704	23	261th receive PDO Mapping	
				0×1705	19	262th receive PDO Mapping	
				0×1A00	22	1st transmit PDO Mapping	
PDO	Assigni	ment		PDO Conter	its (0x17	01)	
PDO	Assigni C	ment 0x1600		PDO Conter Index	its (0x17 Size	01) Name	Туре
PDO	Assigni C O	ment)x1600 x1701		PDO Conter Index 0x6040:00	its (0x17 Size 2	01) Name Controlword	Type UINT
PDO	Assigni C O O	ment 1×1600 ×1701 1×1702		PDO Conter Index 0×6040:00 0×6060:00	nts (0×17 Size 2 1	01) Name Controlword Modes of operation	Type UINT SINT
PDO	Assigni C O C C	ment)×1600 ×1701)×1702)×1703		PDO Conter Index 0x6040:00 0x6060:00 0x607A:00	nts (0x17 Size 2 1 4	01) Name Controlword Modes of operation Target position	Type UINT SINT DINT
PDO	Assigni O O O O O O	ment x1600 x1701 x1702 x1703 x1704		PDO Conter Index 0x6040:00 0x6060:00 0x607A:00 0x6081:00	nts (0x17 Size 2 1 4 4	01) Name Controlword Modes of operation Target position Profile velocity	Type UINT SINT DINT UDINT
PDO	Assigni C C C C C C C C C C	ment x 1600 x 1701 x 1702 x 1703 x 1703 x 1704 x 1705		PDO Conter Index 0x6040:00 0x6060:00 0x607A:00 0x6081:00 0x6088:00	ts (0x17 Size 2 1 4 4 2	01) Name Controlword Modes of operation Target position Profile velocity Touch probe function	Type UINT SINT DINT UDINT UINT

1) CANopen Process Data Object 2) 비주기적, 요청시에만 주고 받는 Data 3) ESI 파일에 정의 4) VendorID 와 ProductCode가 동일한 모듈 5) 슬레이브 기준으로는 마스터로부터 수신되는 Data이므로 RxPDO에 해당 6)

From: http://comizoa.co.kr/info/ - -Permanent link: http://comizoa.co.kr/info/doku.php?id=platform:ethercat:1_setup:10_config:20_desc:40_processdata&rev=1587001167 Last update: 2024/07/08 18:22