EPS Software Reference Manual

COMIZOA

4CHANNEL ANALOG INPUT MODULE

EPS-AI04RnT (v1.00)

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Table Of Contents

1. EtherCAT Object

◉ **1.1 PDO Mapping**

Index	Type	Value	Name	Bit Len	Data Type
0x1A00	RTD Ch.0	0x6000 : 01	Underrange	1	BOOL
		0x6000 : 02	Overrange	1	BOOL
		0x6000 : 03	Limit1	2	BIT2
		0x6000 : 04	Limit2	2	BIT2
		0x6000 : 05	Error	1	BOOL
		-	Reserved	7	-
		0x6000 : 15	TxPDO State	1	BOOL
		0x6000 : 16	TxPDO Toggle	1	BOOL
		0x6000 : 17	Value	32	INT32
0x1A01	RTD Ch.1	-	-	-	-
0x1A02	TC Ch.0	-	-	-	-
0x1A03	TC Ch.1	-	-	-	-

▣ **1.2 Standard SDO Object**

Index	SubIndex	Name	Value	Data Type	Flags
0x1000	-	Device type	0x012C1389	UINT32	RO
0x1008	-	Device name	EPS-AI04RnT	STRING	RO
0x1009	-	Hardware version	-	STRING	RO
0x100A	-	Software version	-	STRING	RO
0x1018	0	Identity	4	UINT8	RO
	1	Vendor ID	0xAAAAAAAA	UINT32	RO
	2	Product code	0x50321274	UINT32	RO
	3	Revision	-	UINT32	RO
	4	Serial number	-	UINT32	RO
0x1C00	0	Sync manager type	4	UINT8	RO
	1	SubIndex 001	0x01(1)	UINT32	RO
	2	SubIndex 002	0x02(2)	UINT32	RO
	3	SubIndex 003	0x03(3)	UINT32	RO
	4	SubIndex 004	0x04(4)	UINT32	RO
0x1C12	0	RxPDO assign	0	UINT8	RO
0x1C13	0	TxPDO assign	4	UINT8	RO
	1	SubIndex 001	0x1A00	UINT16	RO
	2	SubIndex 002	0x1A01	UINT16	RO
	3	SubIndex 003	0x1A02	UINT16	RO
	4	SubIndex 004	0x1A03	UINT16	RO
0x1A0n (n = 0~3)	0	TxPDO Mapping	9	UINT8	RO
	1	SubIndex 001	0x6000:01, 1	UINT32	RO
	2	SubIndex 002	0x6000:02, 1	UINT32	RO
	3	SubIndex 003	0x6000:03, 2	UINT32	RO
	4	SubIndex 004	0x6000:04, 2	UINT32	RO
	5	SubIndex 005	0x6000:05, 1	UINT32	RO
	6	SubIndex 006	0x0000:00, 0	UINT32	RO
	7	SubIndex 007	0x6000:0E, 1	UINT32	RO
	8	SubIndex 008	0x6000:0F, 1	UINT32	RO
	9	SubIndex 009	0x6000:11, 32	UINT32	RO

□ **1.3 Specific SDO Object**

▶ **0x60n0 RTD Channel Input (n = 0~1)**

0x6000 : RTD Ch.0 Input

0x6010 : RTD Ch.1 Input

Index	SubIndex	Name	Value		Data Type	Flags
0x60n0 (n = 0~1)	0	Analog Input	17		UINT8	RO
	1	Underrange	1	AD Value -200℃ 이하	BOOL	RO
	2	Overrange	1	AD Value 800℃ 이상	BOOL	RO
	3	Limit1	0	사용안함	BIT4	RO
			1	AD Value > Limit 1		
			2	AD Value < Limit 1		
			3	AD Value = Limit 1		
	4	Limit2	0	사용안함	BIT4	RO
			1	AD Value > Limit 1		
			2	AD Value < Limit 1		
			3	AD Value = Limit 1		
	5	Error	1	Data Read 실패	BOOL	RO
	E	TxPDO State	AD Chip 동작 상태 반환		BOOL	RO
	F	TxPDO Toggle	AD Data Update시 Toggle		BOOL	RO
	11	Value	입력 받은 RTD 온도 값을 표시합니다. Ex) Value 3400 = 340.0℃		UINT32	RO

▶ **0x60n0 TC Channel Input (n = 2~3)**

0x6020 : TC Ch.0 Input

0x6030 : TC Ch.1 Input

Index	SubIndex	Name	Value		Data Type	Flags
0x60n0 (n = 2~3)	0	Analog Input	17		UINT8	RO
	1	Underrange	타입 B : Value 0℃ 이하 타입 E : Value -260℃ 이하 타입 J : Value -200℃ 이하 타입 K : Value -260℃ 이하 타입 N : Value -260℃ 이하 타입 R : Value 0℃ 이하 타입 S : Value 0℃ 이하 타입 T : Value -200℃ 이하	1	BOOL	RO
	2	Overrange	타입 B : Value 1820℃ 이상 타입 E : Value 1000℃ 이상 타입 J : Value 1200℃ 이상 타입 K : Value 1380℃ 이상 타입 N : Value 1300℃ 이상 타입 R : Value 1450℃ 이상 타입 S : Value 14500℃ 이상 타입 T : Value 350℃ 이상	1	BOOL	RO
	3	Limit1	사용안함	0	BIT4	RO
			AD Value > Limit 1	1		
			AD Value < Limit 1	2		
			AD Value = Limit 1	3		
	4	Limit2	사용안함	0	BIT4	RO
			AD Value > Limit 1	1		
			AD Value < Limit 1	2		
			AD Value = Limit 1	3		
	5	Error	Data Read 실패	1	BOOL	RO
	E	TxPDO State	AD Chip 동작 상태 반환		BOOL	RO
	F	TxPDO Toggle	AD Data Update시 Toggle		BOOL	RO
	11	Value	입력 받은 TC 온도 값을 표시합니다. Ex) Value 3400 = 340.0℃		UINT32	RO

▶ **0x80n0 RTD Channel Setting**

0x8000 : RTD Ch.0 Setting

0x8010 : RTD Ch.1 Setting

Index	SubIndex	Name	Value		Data Type	Flags
0x80n0 (n = 0~1)	0	RTD Setting	21		UINT8	RO
	1	Enable Limit1	Limit 1 Enable		BOOL	RW
	2	Enable Limit2	Limit 2 Enable		BOOL	RW
	3	Enable User Offset	User Offset 사용 여부		BOOL	RW
	9	Connection technology	0	2 Wire	BOOL	RW
			1	3 Wire		
	A	RTD element	0	PT1000	BOOL	RW
			1	PT100		
	11	Limit1 Value	Limit1 값		INT32	RW
	12	Limit2 Value	Limit2 값		INT32	RW
	13	User Offset	User Offset 값		INT32	RW

▶ **0x80n0 TC Channel Setting**

0x8020 : TC Ch.0 Setting

0x8030 : TC Ch.1 Setting

Index	SubIndex	Name	Value		Data Type	Flags
0x80n0 (n = 2~3)	0	TC Setting	21		UINT8	RO
	1	Enable Limit1	Limit 1 Enable		BOOL	RW
	2	Enable Limit2	Limit 2 Enable		BOOL	RW
	3	Enable User Offset	User Offset 사용 여부		BOOL	RW
	9	TC element	0	TYPE – B	UINT8	RW
			1	TYPE – E		
			2	TYPE – J		
			3	TYPE – K		
			4	TYPE – N		
			5	TYPE – R		
			6	TYPE – S		
			7	TYPE - T		
	11	Limit1 Value	Limit1 값		INT32	RW
	12	Limit2 Value	Limit2 값		INT32	RW
	13	User Offset	User Offset 값		INT32	RW

▶ 0xF001 Setting Save Flag

Index	SubIndex	Name	Value		Data Type	Flags
0xF001	-	Setting Save Flag	AD Setting 정보를 Flash에 저장합니다.		UINT16	RO
			0 → 1	저장 실행		

Software Reference Manual Update List

No.	Version	Date	Changes in
1	1.00	2015.05.27	First Edition

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SRC Reference Manual

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