

## CANopenNXPSDK\_Mgr

### Electronic Datasheet Information

Version 1, revision 2

CANopen Library for NXP SDK - Manager Example

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[www.em-sa.com/nxp](http://www.em-sa.com/nxp)

### Product Information

Property	Value
Vendor Name	NXP Semiconductors BV
Vendor ID	0xAF0002DC
Product Name	CANopen NXP CiA 401 Manager
Product Code	0xCODE0001
Revision Number	0x20201014
Order Code	CODE0001

### Commissioning Information

Property	Value
Node ID	0x01
Name	CANopenMgr
Bitrate	500 kbps
Network Number	0
Network Name	
LSS Serial Number	0x00000000
CANopen Manager	Yes

### PDO Configuration

#### Communication Parameters

PDO	COBID	Tx Type	Inhibit Time	Event Time	Sync Start
RPDO1	\$NODEID+0x80000200	255			
RPDO2	\$NODEID+0x80000300	255			
TPDO1	\$NODEID+0xC0000180	255	100.0 ms	500 ms	0
TPDO2	\$NODEID+0xC0000280	255	250.0 ms	1000 ms	0

#### Mappings

PDO	Mappings
RPDO1	[0x6200,0x01] Write State 8 Output Lines - DigOutput8_1 (Unsigned8) [0x6200,0x02] Write State 8 Output Lines - DigOutput8_2 (Unsigned8) [0x6200,0x03] Write State 8 Output Lines - DigOutput8_3 (Unsigned8) [0x6200,0x04] Write State 8 Output Lines - DigOutput8_4 (Unsigned8)

RPDO2	[0x6411,0x01]	Write Analog Output 16-bit - AnalogOutput16_1 (Integer16)
	[0x6411,0x02]	Write Analog Output 16-bit - AnalogOutput16_2 (Integer16)
TPDO1	[0x6000,0x01]	Read State 8 Input Lines - DigInput8_1 (Unsigned8)
	[0x6000,0x02]	Read State 8 Input Lines - DigInput8_2 (Unsigned8)
	[0x6000,0x03]	Read State 8 Input Lines - DigInput8_3 (Unsigned8)
	[0x6000,0x04]	Read State 8 Input Lines - DigInput8_4 (Unsigned8)
TPDO2	[0x6401,0x01]	Read Analog Input 16-bit - AnalogInput16_1 (Integer16)
	[0x6401,0x02]	Read Analog Input 16-bit - AnalogInput16_2 (Integer16)

## Object Dictionary

### Overview

Index	Subindex	Name	Type	Access	Default Value
0x0001	0x00	BOOLEAN	Bool	CO	
0x0002	0x00	INTEGER8	I8	CO	
0x0003	0x00	INTEGER16	I16	CO	
0x0004	0x00	INTEGER32	I32	CO	
0x0005	0x00	UNSIGNED8	U8	CO	
0x0006	0x00	UNSIGNED16	U16	CO	
0x0007	0x00	UNSIGNED32	U32	CO	
0x1000	0x00	Device Type	U32	RO	
0x1001	0x00	Error Register	U8	RO	
0x1005	0x00	COB-ID SYNC	U32	RO	0x00000080
0x1006	0x00	SYNC Communication cycle time	U32	RW	0
0x1008	0x00	Manufacturer Device Name	VisStr	RO	See description
0x1010	0x00	Store Parameters	U8	RO	0x04
	0x01	Save All Parameters	U32	RW	
	0x02	Save Communication Parameters	U32	RW	
	0x03	Save Application Parameters	U32	RW	
	0x04	Save Manufacturer Parameters	U32	RW	
0x1014	0x00	COB-ID EMCY	U32	RO	\$NODEID+0x80
0x1015	0x00	Inhibit Time Emergency	U16	CO	100
0x1016	0x00	Consumer Heartbeat Time	U8	CO	0x0A
	0x01	Consumer HB Time	U32	RW	0x000108CA
	0x02	Consumer HB Time	U32	RW	0x000208CA
	0x03	Consumer HB Time	U32	RW	0x000308CA
	0x04	Consumer HB Time	U32	RW	0x000408CA
	0x05	Consumer HB Time	U32	RW	0x000508CA
	0x06	Consumer HB Time	U32	RW	0x000608CA
	0x07	Consumer HB Time	U32	RW	0x000708CA
	0x08	Consumer HB Time	U32	RW	0x000808CA
	0x09	Consumer HB Time	U32	RW	0x000908CA
	0x0A	Consumer HB Time	U32	RW	0x000A08CA
0x1017	0x00	Producer Heartbeat Time	U16	RW	333

0x1018	0x00	Identity Object	U8	CO	4
	0x01	Vendor Id	U32	CO	0xAF0002DC
	0x02	Product Code	U32	CO	0xC0DE0001
	0x03	Revision number	U32	CO	0x20201014
	0x04	Serial Number	U32	CO	
0x1019	0x00	SYNC counter overflow value	U8	RW	0
0x1400	0x00	Receive PDO Communication Parameter	U8	RO	2
	0x01	COB-ID	U32	RW	\$NODEID+0x80000200
	0x02	Transmission Type	U8	RW	255
0x1401	0x00	Receive PDO Communication Parameter	U8	RO	2
	0x01	COB-ID	U32	RW	\$NODEID+0x80000300
	0x02	Transmission Type	U8	RW	255
0x1600	0x00	Receive PDO Mapping Parameter	U8	CO	0x04
	0x01	PDO Mapping Entry	U32	CO	0x62000108
	0x02	PDO Mapping Entry	U32	CO	0x62000208
	0x03	PDO Mapping Entry	U32	CO	0x62000308
	0x04	PDO Mapping Entry	U32	CO	0x62000408
0x1601	0x00	Receive PDO Mapping Parameter	U8	CO	2
	0x01	PDO Mapping Entry	U32	CO	0x64110110
	0x02	PDO Mapping Entry	U32	CO	0x64110210
	0x00	Transmit PDO Communication Parameter	U8	CO	6
	0x01	COB-ID	U32	RW	\$NODEID+0xC0000180
0x1800	0x02	Transmission Type	U8	RW	255
	0x03	Inhibit Time	U16	RW	1000
	0x05	Event Timer	U16	RW	500
	0x06	Sync Start Value	U8	RW	0
	0x00	Transmit PDO Communication Parameter	U8	CO	6
	0x01	COB-ID	U32	RW	\$NODEID+0xC0000280
	0x02	Transmission Type	U8	RW	255
0x1801	0x03	Inhibit Time	U16	RW	2500
	0x05	Event Timer	U16	RW	1000
	0x06	Sync Start Value	U8	RW	0
	0x00	Transmit PDO Mapping Parameter	U8	CO	0x04
	0x01	PDO Mapping Entry	U32	CO	0x60000108
	0x02	PDO Mapping Entry	U32	CO	0x60000208
	0x03	PDO Mapping Entry	U32	CO	0x60000308
0x1A00	0x04	PDO Mapping Entry	U32	CO	0x60000408
	0x00	Transmit PDO Mapping Parameter	U8	CO	2
	0x01	PDO Mapping Entry	U32	CO	0x64010110
	0x02	PDO Mapping Entry	U32	CO	0x60000208
	0x03	PDO Mapping Entry	U32	CO	0x60000308
0x1A01	0x04	PDO Mapping Entry	U32	CO	0x60000408
	0x00	Transmit PDO Mapping Parameter	U8	CO	2
	0x01	PDO Mapping Entry	U32	CO	0x64010110
	0x02	PDO Mapping Entry	U32	CO	0x60000208
	0x03	PDO Mapping Entry	U32	CO	0x60000308

	0x02	PDO Mapping Entry	U32	CO	0x64010210
0x5FFF	0x00	EmSA	VisStr	RO	See description
0x6000	0x00	Read State 8 Input Lines	U8	RO	8
	0x01	DigInput8_1	U8	RO	
	0x02	DigInput8_2	U8	RO	
	0x03	DigInput8_3	U8	RO	
	0x04	DigInput8_4	U8	RO	
	0x05	DigInput8_5	U8	RO	
	0x06	DigInput8_6	U8	RO	
	0x07	DigInput8_7	U8	RO	
	0x08	DigInput8_8	U8	RO	
0x6200	0x00	Write State 8 Output Lines	U8	RO	8
	0x01	DigOutput8_1	U8	RWW	
	0x02	DigOutput8_2	U8	RWW	
	0x03	DigOutput8_3	U8	RWW	
	0x04	DigOutput8_4	U8	RWW	
	0x05	DigOutput8_5	U8	RWW	
	0x06	DigOutput8_6	U8	RWW	
	0x07	DigOutput8_7	U8	RWW	
	0x08	DigOutput8_8	U8	RWW	
0x6401	0x00	Read Analog Input 16-bit	U8	RO	2
	0x01	AnalogInput16_1	I16	RO	
	0x02	AnalogInput16_2	I16	RO	
0x6411	0x00	Write Analog Output 16-bit	U8	RO	2
	0x01	AnalogOutput16_1	I16	RWW	
	0x02	AnalogOutput16_2	I16	RWW	

#### Device Type (0x1000)

Subindex	0x00
Data Type	Unsigned32
Access	ReadOnly
Can be mapped	No

#### Error Register (0x1001)

Subindex	0x00
Data Type	Unsigned8
Access	ReadOnly
Can be mapped	No

#### COB-ID SYNC (0x1005)

Subindex	0x00
Data Type	Unsigned32
Access	ReadOnly
Can be mapped	No
Default Value	0x00000080

#### SYNC Communication cycle time (0x1006)

Subindex	0x00
Data Type	Unsigned32

Access	ReadWrite
Can be mapped	No
Default Value	0

#### Manufacturer Device Name (0x1008)

Subindex	0x00
Data Type	Visible String
Access	ReadOnly
Can be mapped	No
Default Value	CANopenLibNXPSDK Manager Example

#### Store Parameters (0x1010)

Subindex	0x00
Name	Highest Subindex
Data Type	Unsigned8
Access	ReadOnly
Can be mapped	No
Default Value	0x04

Subindex	0x01
Name	Save All Parameters
Data Type	Unsigned32
Access	ReadWrite
Can be mapped	No

Subindex	0x02
Name	Save Communication Parameters
Data Type	Unsigned32
Access	ReadWrite
Can be mapped	No

Subindex	0x03
Name	Save Application Parameters
Data Type	Unsigned32
Access	ReadWrite
Can be mapped	No

Subindex	0x04
Name	Save Manufacturer Parameters
Data Type	Unsigned32
Access	ReadWrite
Can be mapped	No

#### COB-ID EMCY (0x1014)

Subindex	0x00
Data Type	Unsigned32
Access	ReadOnly
Can be mapped	No
Default Value	\$NODEID+0x80

### Inhibit Time Emergency (0x1015)

Subindex	0x00
Data Type	Unsigned16
Access	Const
Can be mapped	No
Default Value	100

### Consumer Heartbeat Time (0x1016)

Subindex	0x00
Name	Highest Subindex
Data Type	Unsigned8
Access	Const
Can be mapped	No
Default Value	0x0A

Subindex	0x01
Name	Consumer HB Time
Data Type	Unsigned32
Access	ReadWrite
Can be mapped	No
Default Value	0x000108CA

Subindex	0x02
Name	Consumer HB Time
Data Type	Unsigned32
Access	ReadWrite
Can be mapped	No
Default Value	0x000208CA

Subindex	0x03
Name	Consumer HB Time
Data Type	Unsigned32
Access	ReadWrite
Can be mapped	No
Default Value	0x000308CA

Subindex	0x04
Name	Consumer HB Time
Data Type	Unsigned32
Access	ReadWrite
Can be mapped	No
Default Value	0x000408CA

Subindex	0x05
Name	Consumer HB Time
Data Type	Unsigned32
Access	ReadWrite
Can be mapped	No

Default Value	0x000508CA
Subindex	0x06
Name	Consumer HB Time
Data Type	Unsigned32
Access	ReadWrite
Can be mapped	No
Default Value	0x000608CA

Subindex	0x07
Name	Consumer HB Time
Data Type	Unsigned32
Access	ReadWrite
Can be mapped	No
Default Value	0x000708CA

Subindex	0x08
Name	Consumer HB Time
Data Type	Unsigned32
Access	ReadWrite
Can be mapped	No
Default Value	0x000808CA

Subindex	0x09
Name	Consumer HB Time
Data Type	Unsigned32
Access	ReadWrite
Can be mapped	No
Default Value	0x000908CA

Subindex	0x0A
Name	Consumer HB Time
Data Type	Unsigned32
Access	ReadWrite
Can be mapped	No
Default Value	0x000A08CA

#### Producer Heartbeat Time (0x1017)

Subindex	0x00
Data Type	Unsigned16
Access	ReadWrite
Can be mapped	No
Default Value	333

#### Identity Object (0x1018)

Subindex	0x00
Name	Highest Subindex
Data Type	Unsigned8

Access	Const
Can be mapped	No
Default Value	4
Low Limit	1
High Limit	4

Subindex	0x01
Name	Vendor Id
Data Type	Unsigned32
Access	Const
Can be mapped	No
Default Value	0xAF0002DC

Subindex	0x02
Name	Product Code
Data Type	Unsigned32
Access	Const
Can be mapped	No
Default Value	0xC0DE0001

Subindex	0x03
Name	Revision number
Data Type	Unsigned32
Access	Const
Can be mapped	No
Default Value	0x20201014

Subindex	0x04
Name	Serial Number
Data Type	Unsigned32
Access	Const
Can be mapped	No

#### [SYNC counter overflow value \(0x1019\)](#)

Subindex	0x00
Data Type	Unsigned8
Access	ReadWrite
Can be mapped	No
Default Value	0

#### [Receive PDO Communication Parameter \(0x1400\)](#)

Subindex	0x00
Name	Highest Subindex
Data Type	Unsigned8
Access	ReadOnly
Can be mapped	No
Default Value	2



Subindex	0x01
Name	COB-ID
Data Type	Unsigned32
Access	ReadWrite
Can be mapped	No
Default Value	\$NODEID+0x80000200
High Limit	0xFFFFFFFF

Subindex	0x02
Name	Transmission Type
Data Type	Unsigned8
Access	ReadWrite
Can be mapped	No
Default Value	255

#### Receive PDO Communication Parameter (0x1401)

Subindex	0x00
Name	Highest Subindex
Data Type	Unsigned8
Access	ReadOnly
Can be mapped	No
Default Value	2

Subindex	0x01
Name	COB-ID
Data Type	Unsigned32
Access	ReadWrite
Can be mapped	No
Default Value	\$NODEID+0x80000300
High Limit	0xFFFFFFFF

Subindex	0x02
Name	Transmission Type
Data Type	Unsigned8
Access	ReadWrite
Can be mapped	No
Default Value	255

#### Receive PDO Mapping Parameter (0x1600)

Subindex	0x00
Name	Highest Subindex
Data Type	Unsigned8
Access	Const
Can be mapped	No
Default Value	0x04
Low Limit	0
High Limit	64

Subindex	0x01
Name	PDO Mapping Entry
Data Type	Unsigned32
Access	Const
Can be mapped	No
Default Value	0x62000108 [0x6200,0x01] Write State 8 Output Lines - DigOutput8_1 (Unsigned8)

Subindex	0x02
Name	PDO Mapping Entry
Data Type	Unsigned32
Access	Const
Can be mapped	No
Default Value	0x62000208 [0x6200,0x02] Write State 8 Output Lines - DigOutput8_2 (Unsigned8)

Subindex	0x03
Name	PDO Mapping Entry
Data Type	Unsigned32
Access	Const
Can be mapped	No
Default Value	0x62000308 [0x6200,0x03] Write State 8 Output Lines - DigOutput8_3 (Unsigned8)

Subindex	0x04
Name	PDO Mapping Entry
Data Type	Unsigned32
Access	Const
Can be mapped	No
Default Value	0x62000408 [0x6200,0x04] Write State 8 Output Lines - DigOutput8_4 (Unsigned8)

#### Receive PDO Mapping Parameter (0x1601)

Subindex	0x00
Name	Highest Subindex
Data Type	Unsigned8
Access	Const
Can be mapped	No
Default Value	2
Low Limit	0
High Limit	64

Subindex	0x01
Name	PDO Mapping Entry
Data Type	Unsigned32
Access	Const
Can be mapped	No
Default Value	0x64110110

[0x6411,0x01] Write Analog Output 16-bit - AnalogOutput16\_1 (Integer16)

Subindex	0x02
Name	PDO Mapping Entry
Data Type	Unsigned32
Access	Const
Can be mapped	No
Default Value	0x64110210

[0x6411,0x02] Write Analog Output 16-bit - AnalogOutput16\_2 (Integer16)

#### Transmit PDO Communication Parameter (0x1800)

Subindex	0x00
Name	Highest Subindex
Data Type	Unsigned8
Access	Const
Can be mapped	No
Default Value	6

Subindex	0x01
Name	COB-ID
Data Type	Unsigned32
Access	ReadWrite
Can be mapped	No
Default Value	\$NODEID+0xC0000180
High Limit	0xFFFFFFFF

Subindex	0x02
Name	Transmission Type
Data Type	Unsigned8
Access	ReadWrite
Can be mapped	No
Default Value	255

Subindex	0x03
Name	Inhibit Time
Data Type	Unsigned16
Access	ReadWrite
Can be mapped	No
Default Value	1000

Subindex	0x05
Name	Event Timer
Data Type	Unsigned16
Access	ReadWrite
Can be mapped	No
Default Value	500

Subindex	0x06
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Name	Sync Start Value
Data Type	Unsigned8
Access	ReadWrite
Can be mapped	No
Default Value	0

#### Transmit PDO Communication Parameter (0x1801)

Subindex	0x00
Name	Highest Subindex
Data Type	Unsigned8
Access	Const
Can be mapped	No
Default Value	6

Subindex	0x01
Name	COB-ID
Data Type	Unsigned32
Access	ReadWrite
Can be mapped	No
Default Value	\$NODEID+0xC0000280
High Limit	0xFFFFFFFF

Subindex	0x02
Name	Transmission Type
Data Type	Unsigned8
Access	ReadWrite
Can be mapped	No
Default Value	255

Subindex	0x03
Name	Inhibit Time
Data Type	Unsigned16
Access	ReadWrite
Can be mapped	No
Default Value	2500

Subindex	0x05
Name	Event Timer
Data Type	Unsigned16
Access	ReadWrite
Can be mapped	No
Default Value	1000

Subindex	0x06
Name	Sync Start Value
Data Type	Unsigned8
Access	ReadWrite
Can be mapped	No

Default Value 0

#### Transmit PDO Mapping Parameter (0x1A00)

Subindex 0x00  
Name Highest Subindex  
Data Type Unsigned8  
Access Const  
Can be mapped No  
Default Value 0x04  
Low Limit 0  
High Limit 64

Subindex 0x01  
Name PDO Mapping Entry  
Data Type Unsigned32  
Access Const  
Can be mapped No  
Default Value 0x60000108  
[0x6000,0x01] Read State 8 Input Lines - DigInput8\_1 (Unsigned8)

Subindex 0x02  
Name PDO Mapping Entry  
Data Type Unsigned32  
Access Const  
Can be mapped No  
Default Value 0x60000208  
[0x6000,0x02] Read State 8 Input Lines - DigInput8\_2 (Unsigned8)

Subindex 0x03  
Name PDO Mapping Entry  
Data Type Unsigned32  
Access Const  
Can be mapped No  
Default Value 0x60000308  
[0x6000,0x03] Read State 8 Input Lines - DigInput8\_3 (Unsigned8)

Subindex 0x04  
Name PDO Mapping Entry  
Data Type Unsigned32  
Access Const  
Can be mapped No  
Default Value 0x60000408  
[0x6000,0x04] Read State 8 Input Lines - DigInput8\_4 (Unsigned8)

#### Transmit PDO Mapping Parameter (0x1A01)

Subindex 0x00  
Name Highest Subindex  
Data Type Unsigned8

Access	Const
Can be mapped	No
Default Value	2
Low Limit	0
High Limit	64

Subindex	0x01
Name	PDO Mapping Entry
Data Type	Unsigned32
Access	Const
Can be mapped	No
Default Value	0x64010110

[0x6401,0x01] Read Analog Input 16-bit - AnalogInput16\_1 (Integer16)

Subindex	0x02
Name	PDO Mapping Entry
Data Type	Unsigned32
Access	Const
Can be mapped	No
Default Value	0x64010210

[0x6401,0x02] Read Analog Input 16-bit - AnalogInput16\_2 (Integer16)

#### EmSA (0x5FFF)

Subindex	0x00
Data Type	Visible String
Access	ReadOnly
Can be mapped	No
Default Value	EmSA <a href="http://www.em-sa.com">www.em-sa.com</a> , CANopen Architect Mini

#### Read State 8 Input Lines (0x6000)

Subindex	0x00
Name	Number of Elements
Data Type	Unsigned8
Access	ReadOnly
Can be mapped	No
Default Value	8

Subindex	0x01
Name	DigInput8_1
Data Type	Unsigned8
Access	ReadOnly
Can be mapped	Yes

Subindex	0x02
Name	DigInput8_2
Data Type	Unsigned8
Access	ReadOnly
Can be mapped	Yes

Subindex	0x03
Name	DigInput8_3
Data Type	Unsigned8
Access	ReadOnly
Can be mapped	Yes

Subindex	0x04
Name	DigInput8_4
Data Type	Unsigned8
Access	ReadOnly
Can be mapped	Yes

Subindex	0x05
Name	DigInput8_5
Data Type	Unsigned8
Access	ReadOnly
Can be mapped	Yes

Subindex	0x06
Name	DigInput8_6
Data Type	Unsigned8
Access	ReadOnly
Can be mapped	Yes

Subindex	0x07
Name	DigInput8_7
Data Type	Unsigned8
Access	ReadOnly
Can be mapped	Yes

Subindex	0x08
Name	DigInput8_8
Data Type	Unsigned8
Access	ReadOnly
Can be mapped	Yes

#### Write State 8 Output Lines (0x6200)

Subindex	0x00
Name	Number of Elements
Data Type	Unsigned8
Access	ReadOnly
Can be mapped	No
Default Value	8

Subindex	0x01
Name	DigOutput8_1
Data Type	Unsigned8

Access	ReadWriteWrite
Can be mapped	Yes

Subindex	0x02
Name	DigOutput8_2
Data Type	Unsigned8
Access	ReadWriteWrite
Can be mapped	Yes

Subindex	0x03
Name	DigOutput8_3
Data Type	Unsigned8
Access	ReadWriteWrite
Can be mapped	Yes

Subindex	0x04
Name	DigOutput8_4
Data Type	Unsigned8
Access	ReadWriteWrite
Can be mapped	Yes

Subindex	0x05
Name	DigOutput8_5
Data Type	Unsigned8
Access	ReadWriteWrite
Can be mapped	Yes

Subindex	0x06
Name	DigOutput8_6
Data Type	Unsigned8
Access	ReadWriteWrite
Can be mapped	Yes

Subindex	0x07
Name	DigOutput8_7
Data Type	Unsigned8
Access	ReadWriteWrite
Can be mapped	Yes

Subindex	0x08
Name	DigOutput8_8
Data Type	Unsigned8
Access	ReadWriteWrite
Can be mapped	Yes

#### Read Analog Input 16-bit (0x6401)

Subindex	0x00
Name	Number of Elements



Data Type	Unsigned8
Access	ReadOnly
Can be mapped	No
Default Value	2

Subindex	0x01
Name	AnalogInput16_1
Data Type	Integer16
Access	ReadOnly
Can be mapped	Yes

Subindex	0x02
Name	AnalogInput16_2
Data Type	Integer16
Access	ReadOnly
Can be mapped	Yes

#### Write Analog Output 16-bit (0x6411)

Subindex	0x00
Name	Number of Elements
Data Type	Unsigned8
Access	ReadOnly
Can be mapped	No
Default Value	2

Subindex	0x01
Name	AnalogOutput16_1
Data Type	Integer16
Access	ReadWriteWrite
Can be mapped	Yes

Subindex	0x02
Name	AnalogOutput16_2
Data Type	Integer16
Access	ReadWriteWrite
Can be mapped	Yes