

Endurance - CANopen User Guide V1.0

This document covers the configuration of Producer Heartbeat Time, Event Timer, and RGB LED.

Prerequisite/Requirements

- Use any CANopen Adapter like Kvaser, Peak, Ixxat etc.
- Use any adapter-supported CANopen software like CANopen Magic standard, PCAN view, CAN analyzer, Opto Analyzer, etc.

Event Timer (PDO Transmission Time)

Definition: Maximum interval for PDO transmission

[1800sub5]
 Parameter Name=Event Timer
 Object Type=0x7
 Data Type=0x0006
 Access Type=rw
 Default Value=20
 PDO Mapping=0

How to update Event time in CANopen Network

- Step 1:** Make sure your device/joystick is connected to CANopen Network.
Step 2: Verify your device/joystick is on operational state.
Step 3: Select New transmit Message from menu.
 Type ID(hex) = 0x600 + Node ID
 Length = 8 byte
 Data(hex) =

Data	CS	Index Lower Byte	Index Higher Byte	Sub Index	Data Byte	Data Byte	Data Byte	Data Byte
Byte	0	1	2	3	4	5	6	7

CS: Command Specifier

For example, to change event timer for 20ms on TPDO 1 (1800h Index and 05h Subindex)

Data(hex) = 2B 00 18 05 14 00 00 00

Data	CS	Index Lower Byte	Index Higher Byte	Sub Index	Data Byte	Data Byte	Data Byte	Data Byte
Byte	0	1	2	3	4	5	6	7
Data(hex)	2B	00	18	05	14	00	00	00

- Step 4:** Click ok and close the window.
 You will receive the message from CAN ID(0x580 +Node Id) = 60 00 18 05 00 00 00 00.
 Your device/joystick is now updated with a new event timer

Producer Heartbeat Time

Definition

A CANopen node periodically sends out a heartbeat message which lets the CANopen master or the heartbeat consumer, know that the node is still alive.

[1017]

Parameter Name=Producer Heartbeat Time

Object Type=0x7

Data Type=0x0006

Access Type=rw

Default Value=100

PDO Mapping=0

How to Update Producer Heartbeat Time in CANopen Network

Step 1: Make sure your device/joystick is connected to CANopen Network.

Step 2: Verify your device/joystick is on operational state.

Step 3: Select new transmit message from menu.

Type ID(hex) = 0x600 + Node ID

Length = 8 byte

Data(hex) =

Data	2B	Index Lower Byte	Index Higher Byte	Sub Index	Data Byte	Data Byte	Data Byte	Data Byte
Byte	0	1	2	3	4	5	6	7

For example, to change heartbeat time for 20ms on 1017h index and 00 subindex

Data(hex) = 2B 17 10 00 14 00 00 00

Data	CS	Index Lower Byte	Index Higher Byte	Sub Index	Data Byte	Data Byte	Data Byte	Data Byte
Byte	0	1	2	3	4	5	6	7
Data(hex)	2B	17	10	00	14	00	00	00

Step 4: Click ok and close the window.

You will receive the message from CAN ID(0x580 +Node Id) = 60 17 10 00 00 00 00 00.

Your device/joystick is now updated with a new heartbeat time.

Note: When you reset the device, the defaults will be reflected.

RGB LED Configuration

Step 1: Make sure your device/joystick is connected to CANopen Network.

Step 2: Verify your device/joystick is in an operational state.

Step 3: Select new transmit message from the menu.

Type ID(hex) = 0x600 + Node ID

Length = 8 byte

Data(hex) =

Data(hex)	CS	Index Lower Byte	Index Higher Byte	Sub Index	Data Byte	Data Byte	Data Byte	Data Byte	Message
Byte	0	1	2	3	4	5	6	7	
Transmit Message 1	23	20	63	01	RR	GG	BB	SGID	For LED configuration
Transmit Message 2	2F	00	62	01	NL	00	00	00	LED position

RR- Intensity of RED LED

Data length: 1 byte

Resolution: 256 values

Operational range: 0 to FF

GG- Intensity of Green LED

Data length: 1 byte

Resolution: 256 values

Operational range: 0 to FF

BB- Intensity of Blue LED

Data length: 1 byte

Resolution: 256 values

Operational range: 0 to FF

SGID – Sure Grip Controls ID

Data length: 1 byte

Value: 0x9A

NL- Number of LED

Data length: 8 bits

Resolution: 1 bit per LED

Data range: 0 to 255, with each bit in the byte targeting a specific LED

Bit	LED Position
1	LED1
2	LED2
3	LED3
4	LED4
5	LED5
6	LED6
7	LED7
8	LED8

Example 1: Turn on all white LEDs with transmit message.

Data(hex)	CS	Index Lower Byte	Index Higher Byte	Sub Index	Data Byte	Data Byte	Data Byte	Data Byte	Message
Byte	0	1	2	3	4	5	6	7	
Transmit Message 1	23	20	63	01	FF	FF	FF	9A	For LED configuration
Transmit Message 2	2F	00	62	01	FF	00	00	00	LED position

Example 2: Turn off all LEDs.

Data(hex)	CS	Index Lower Byte	Index Higher Byte	Sub Index	Data Byte	Data Byte	Data Byte	Data Byte	Message
Byte	0	1	2	3	4	5	6	7	
Transmit Message 1	23	20	63	01	00	00	00	9A	For LED configuration
Transmit Message 2	2F	00	62	01	FF	00	00	00	LED position

Example 3: Turn on all yellow LEDs 2, 4, 6.

Data(hex)	CS	Index Lower Byte	Index Higher Byte	Sub Index	Data Byte	Data Byte	Data Byte	Data Byte	Message
Byte	0	1	2	3	4	5	6	7	
Transmit Message 1	23	20	63	01	FF	FF	00	9A	For LED configuration
Transmit Message 2	2F	00	62	01	2A	00	00	00	LED position