

□□□□□□□□|D□ 01

0000							0000						0000	0000
0000	0000	0000~1F00	0000~FF00	0000~FF00	0000~FF00		0000~1F00	0000~FF00	0000~FF00	0000~FF00	0000	0000		
0000	0000	01	xx	xx	11		01	xx	xx	B1	0000	0000	00	
	0000	01	xx	xx	12		01	xx	xx	B2	0000	0000	00	
	/	/	/	/	/		01	xx	xx	B3	0000	0000	00	
	/	/	/	/	/		01	xx	xx	B4	0000	0000	00	0000
	0000	01	xx	xx	15		01	xx	xx	B5	0000	0000	00	
	0000	01	xx	xx	16		01	xx	xx	B6	0000	0000	00	
	0000	01	xx	xx	17		01	xx	xx	B7	0000	0000	00	
	0000	01	xx	xx	18		01	xx	xx	B8	0000	0000	00	
	0000	01	xx	xx	19		01	xx	xx	B9	0000	0000	00	0000
	/	/	/	/	/		01	xx	xx	BA	0000	0000	00	
	00RTC	01	xx	xx	1B		01	xx	xx	BB	RTC00	0000	00	0000
	00RTC	01	xx	xx	1C		01	xx	xx	BC	00RTC	0000	00	

byte[2]	8bits	unsigned int16	0.1V
byte[3]	8bits		
byte[4]	4bits	unsigned int8	0x00: / 0x01:
byte[5]	4bits	unsigned int8	0: / 1:
byte[6]	4bits	unsigned int8	0x00: / 0x01:
byte[7]	5bits	unsigned int8	0x00: / 0x01:

CAN SWA CAN

0x00

0x02 0x03 CAN CANID 0x 01 02 03 11 02 01 00 00

	CAN ID				L->H
	0x01 02 03 11			4	02 01 00 00
	0x01 02 03 B1			7	00 02 XX XX 01 00 00

2. /

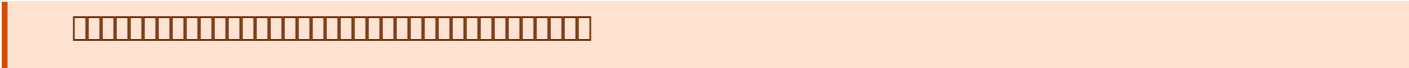
		CAN ID		ms

		0x 01 XX XX 12	8	/
byte[0]	x[8]	signed int16	mm/s	
byte[1]	x[8]			
byte[2]	y[8]	signed int16	mm/s	
byte[3]	y[8]			
byte[4]	[8]	signed int16	[16] mrad/s	
byte[5]	[8]			
byte[6]	[8]	signed int16	[8] mrad	
byte[7]	[8]			

		CAN ID		ms
		0x 01 XX XX B2	8	20
byte[0]	x[8]	signed int16	mm/s	
byte[1]	x[8]			
byte[2]	y[8]	signed int16	mm/s	
byte[3]	y[8]			
byte[4]	[8]	signed int16	mrad/s	
byte[5]	[8]			
byte[6]	[8]	signed int16	[8] mrad	
byte[7]	[8]			

Y[0]

[16]



“ 0x02 0x03 0.5m/s-0.1rad/sCANID0x01 02 03 12 F4 01 0C

	CAN ID				L->H
	0x01 02 03 12			8	F4 01 00 00 9C FF 00 00
	0x01 02 03 B2			8	F4 01 00 00 9C FF 00 00

3.

		CAN ID		ms
		0x 01 XX XX B3	8	20
byte[0]	[7:0]	signed int32	mm	
byte[1]	[15:8]			
byte[2]	[23:16]			
byte[3]	[31:24]			
byte[4]	[7:0]	signed int32	mm	
byte[5]	[15:8]			
byte[6]	[23:16]			
byte[7]	[31:24]			

XXXXXXXXXXXXXXXXXXXXXXXXXXXX

XXXXXXXXXX				
XXX	XXX	CAN ID	XXX	ms
XX	XXX	0x 01 XX XX 15	1	/
XXX	XX	XXXX	XX	
byte[0]	XXXXXX	unsigned int8	0: XXXXXX / 1~20:20ms / 20~255:XXX	
byte[1~7]	/	/	/	

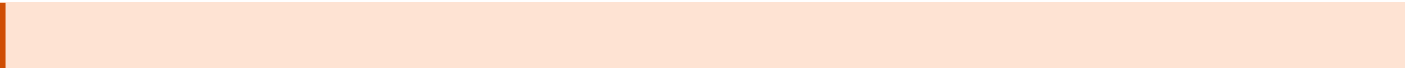
XXXXXXXXXX				
XXX	XXX	CAN ID	XXX	XXXms
XXX	XX	0x 01 XX XX B5	7	20~255XXXXXX
XXX	XX	XXXX	XX	
byte[0]	XXXX	unsigned int8	XXXXXXXXXX	
byte[1]	XXXXXX	signed int8	XX:-100~100	
byte[2]	XXXXXX	signed int8	XX:-100~100	
byte[3]	XXXXXX	signed int8	XX:-100~100	
byte[4]	XXXXXX	signed int8	XX:-100~100	
byte[5]	XXXVRA	signed int8	XX:-100~100	
byte[6]	XXXVRA	signed int8	XX:-100~100	
byte[7]	/	/	/	

XXXXXX		
X	X	XX
bit[0]	0: XX 1: XX 2: XX 3: XX	SWA
bit[1]		

byte[1~7]	/	/	/
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CAN ID				
CAN ID	Length	CAN ID	Length	Unit
0x 01 XX XX B6	7			20~255cm
byte[0]	0	unsigned int8		
byte[1]	1	unsigned int8		0~255cm
byte[2]	2	unsigned int8		0~255cm
byte[3]	3	unsigned int8		0~255cm
byte[4]	4	unsigned int8		0~255cm
byte[5]	5	unsigned int8		0~255cm
byte[6]	6	unsigned int8		0~255cm
byte[7]	/	/	/	

CAN ID		
bit	Length	Unit
bit[0]	0 / 1	0
bit[1]	0 / 1	1
bit[2]	0 / 1	2
bit[3]	0 / 1	3
bit[4]	0 / 1	4
bit[5]	0 / 1	5
bit[6]	0 / 1	6
bit[7]	0 / 1	7



“ 0x02 0x03 100ms CANID 0x01 02 03 16 64

	CAN ID				L->H
	0x01 02 03 16			1	64
	0x01 02 03 B6			7	XX XX XX XX XX XX XX

6. /

		CAN ID		ms
		0x 01 XX XX 17	1	/
byte[0]		unsigned int8	0: / 1~20:20ms / 20~255:	
byte[1~7]	/	/	/	

		CAN ID		ms
		0x 01 XX XX B7	7	20~255
byte[0]		unsigned int8	01234567	
byte[1]	8	signed int16	Rpm	

byte[2]	00000000		
byte[3]	00000000 [7:0]	signed int32	00000000
byte[4]	00000000 [15:8]		
byte[5]	00000000 [23:16]		
byte[6]	00000000 [31:24]		
byte[7]	/	/	/

“ 00 00 0x02 00 0x03 00000000 100ms 00000000 CANID 0x01 02 03 17 0000 64 ”

0000					
0000	CAN ID	000	000	0000	0000L->H
00	0x01 02 03 17	000	000	1	64
000	0x01 02 03 B7	000	000	7	XX XX XX XX XX XX XX

7. 00000000 / 00000000

000000000000000000000000

00000000				
000	000	CAN ID	0000	ms
00	000	0x 01 XX XX 18	1	/
000	00	0000	00	
byte[0]	000000	unsigned int8	0: 000000 / 1~100: 100ms / 100~255:000	
byte[1~7]	/	/	/	

CAN ID				
CAN ID	DATA LENGTH	CAN ID	DATA LENGTH	UNIT
0x 01 XX XX B8	8			100~255ms
DATA	DATA	DATA	DATA	
byte[0]	DATA	unsigned int8	bit0~bit7	
byte[1]	DATA8	unsigned int16	0.1V	
byte[2]	DATA8			
byte[3]	DATA8	unsigned int16	0.1A	
byte[4]	DATA8			
byte[5]	DATA	signed int8	1°C	
byte[6]	DATA	signed int8	1°C	
byte[7]	DATA	unsignedint8	DATA	

CAN ID		
DATA	DATA	DATA
bit[0]	0: 0 / 1: 1	DATA
bit[1]	0: 0 / 1: 1	DATA
bit[2]	0: 0 / 1: 1	DATA
bit[3]	0: 0 / 1: 1	DATA
bit[4]	0: 0 / 1: 1	DATA
bit[5~7]	/	/

CAN ID 0x01 02 03 18 DATA 64

CAN ID					
CAN ID	CAN ID	Length	Direction	Priority	Header
0x01 02 03 18	0x01 02 03 18	1	64		
0x01 02 03 B8	0x01 02 03 B8	8	XX XX XX XX XX XX XX XX		

8. CAN ID / CAN ID

CAN ID

CAN ID				
Length	Direction	CAN ID	Priority	Header
0x 01 XX XX 19	8	/		
Length	Direction	CAN ID	Priority	Header
byte[0]	CAN ID 1	int32	CAN ID	CAN ID
byte[1]				
byte[2]				
byte[3]				
byte[4]	CAN ID 2	int32	CAN ID	CAN ID
byte[5]				
byte[6]				
byte[7]				

CAN ID				
Length	Direction	CAN ID	Priority	Header
0x 01 XX XX B9	8	/		

字节	数据	数据类型	单位
byte[0]	10000001	int32	1000mrad
byte[1]			
byte[2]			
byte[3]			
byte[4]	10000010	int32	1000mrad
byte[5]			
byte[6]			
byte[7]			

1000000010000000100000100000010000100000

“ 00 0002 0003 100000001000mrad0000CANID0001 02 03 19 00E8 03 00 00 00 00 00

数据帧					
字节	CAN ID	数据	数据	长度	数据L->H
00	0x01 02 03 19	0000	0000	8	E8 03 00 00 00 00 00 00
0000	0x01 02 03 B9	0000	0000	8	E8 03 00 00 00 00 00 00

9. 数据帧

10000000

数据帧				
字节	数据	CAN ID	长度	单位ms

000	00	0x 01 XX XX BA	5	500
000	00	0000	00	
byte[0]	0000	unsigned int8	000000	
byte[1]	0000	unsigned int8	000000	
byte[2]	0000	unsigned int8	000000	
byte[3]	0000	unsigned int8	000000	
byte[4]	0000	unsigned int8	000000	
byte[5]	/	/	/	

00000		
0	0	00
bit[0]	0: 00 / 1:00	000000
bit[1]	0: 00 / 1:00	000000
bit[2]	0: 00 / 1:00	00000
bit[3]	0: 00 / 1:00	0000000
bit[4~7]	/	/

00000		
0	0	00
bit[0]	0: 00 / 1:00	000000
bit[1]	0: 00 / 1:00	000000
bit[2~7]	/	/

00000		
0	0	00
bit[0]	0: 00 / 1:00	1000000
bit[1]	0: 00 / 1:00	20000000
bit[2]	0: 00 / 1:00	30000000

bit[3]	0: 00 / 1:00	4000000
bit[4~7]	/	/

0000		
0	0	00
bit[0]	0: 00 / 1:00	000000 (<15%) (00000000)
bit[1]	0: 00 / 1:00>	000000 (<5%)(00000000)
bit[2]	0: 000 / 1:00	000000
bit[3]	0: 000 / 1:00	0000
bit[4~7]	/	/

0000		
0	0	00
bit[0]	0: 00 / 1:00>	000000
bit[1]	0: 00 / 1:00>	0000
bit[2]	0: 00 / 1:00>	000000
bit[3]	0: 00 / 1:00>	000000
bit[4]	0: 00 / 1:00>	000000
bit[5~7]	/	/

“ 00 000x02 000x03 0000000000

0000					
0000	CAN ID	000	000	0000	0000L->H0
00	/	/	/	/	/
000	0x01 02 03 BA	000	000	5	00 00 00 04 00

10. RTC

RTC

RTC				
		CAN ID		ms
		0x 01 XX XX 1B	0	/
byte[0~7]	/	/	/	

RTC				
		CAN ID		ms
		0x 01 XX XX BB	4	/
byte[0]	unix[0:7]	unsigned int32	unix19700101000000	
byte[1]	unix[8:15]			
byte[2]	unix[16:23]			
byte[3]	unix[24:31]			
byte[4~7]	/	/	/	

RTC

“ 0x02 0x03 2024-01-01 00:00:30 ”

	CAN ID				L->H
	0x01 02 03 1B			0	/
	0x01 02 03 BB			4	1E 90 91 65

11. RTC

RTC				
		CAN ID		ms
		0x 01 XX XX 1C	4	/
byte[0]	unix[0:7]	unsigned int32	unix[1970:01:01:00:00:00]	
byte[1]	unix[8:15]			
byte[2]	unix[16:23]			
byte[3]	unix[24:31]			
byte[4~7]	/	/	/	

RTC				
		CAN ID		ms
		0x 01 XX XX BC	1	/
byte[0]	RTC	unsigned int8	0 1	
byte[1~7]	/	/	/	

“ 0x02 0x03 RTC2024-01-01 00:00:30

	CAN ID				L->H
	0x01 02 03 1C			4	1E 90 91 65
	0x01 02 03 BC			1	00

12. 数据帧

帧头RTC数据域

帧头				
帧类型	帧标识	CAN ID	数据长度	帧校验
数据帧	0x01	XX XX 1D	4	/
字节	数据	数据类型	数据域	
byte[0]	unix时间[0:7]	unsigned int32	unix时间戳 1970-01-01 00:00:00 0	
byte[1]	unix时间[8:15]			
byte[2]	unix时间[16:23]			
byte[3]	unix时间[24:31]			
byte[4~7]	/	/	/	

帧头				
帧类型	帧标识	CAN ID	数据长度	帧校验
数据帧	0x01	XX XX BD	5	/
字节	数据	数据类型	数据域	
byte[0]	0x00~0xFF	unsigned int8	0x00~0xFF	
byte[1]	数据[0:7]	unsigned int32	unix时间戳 1970-01-01 00:00:00 0	
byte[2]	数据[8:15]			
byte[3]	数据[16:23]			
byte[4]	数据[24:31]			
byte[5]	/	/	/	

“ 帧头 0x02 0x03 数据域 2024-01-01 00:00:30 ”

数据域

□□□□	CAN ID	□□□	□□□	□□□□	□□□□L->H□
□□	0x01 02 03 1D	□□□	□□□	4	1E 90 91 65
□□□	0x01 02 03 BD	□□□	□□□	5	00 1E 90 91 65

13.

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CAN 2.0B 数据帧格式				
帧类型	帧长度	CAN ID	数据长度	数据内容
标准帧	8	0x 01 XX XX 1E	1	/
扩展帧	12	XXXX	8	
byte[0]	XXXXXX	unsigned int8	0:XXXX 1:XXXX 2:XXXXXXXX	
byte[1~7]	/	/	/	

CAN 2.0B 数据帧格式				
帧类型	帧长度	CAN ID	数据长度	帧间隔
标准帧	8	0x 01 XX XX BE	2	/
扩展帧	12	扩展 CAN ID	8	
byte[0]	数据字节 0	unsigned int8	0: 数据字节 0 1: 数据字节 1 2: 数据字节 2	
byte[1]	数据字节 1	unsigned int8	0: 数据字节 3 1: 数据字节 4	
byte[2~7]	/	/	/	

“ 0x02 0x03 0x04 0x05 0x06 0x07 0x08 0x09 0x0A 0x0B 0x0C 0x0D 0x0E 0x0F 0x10 0x11 0x12 0x13 0x14 0x15 0x16 0x17 0x18 0x19 0x1A 0x1B 0x1C 0x1D 0x1E 0x1F 0x20 0x21 0x22 0x23 0x24 0x25 0x26 0x27 0x28 0x29 0x2A 0x2B 0x2C 0x2D 0x2E 0x2F 0x30 0x31 0x32 0x33 0x34 0x35 0x36 0x37 0x38 0x39 0x3A 0x3B 0x3C 0x3D 0x3E 0x3F 0x40 0x41 0x42 0x43 0x44 0x45 0x46 0x47 0x48 0x49 0x4A 0x4B 0x4C 0x4D 0x4E 0x4F 0x50 0x51 0x52 0x53 0x54 0x55 0x56 0x57 0x58 0x59 0x5A 0x5B 0x5C 0x5D 0x5E 0x5F 0x60 0x61 0x62 0x63 0x64 0x65 0x66 0x67 0x68 0x69 0x6A 0x6B 0x6C 0x6D 0x6E 0x6F 0x70 0x71 0x72 0x73 0x74 0x75 0x76 0x77 0x78 0x79 0x7A 0x7B 0x7C 0x7D 0x7E 0x7F 0x80 0x81 0x82 0x83 0x84 0x85 0x86 0x87 0x88 0x89 0x8A 0x8B 0x8C 0x8D 0x8E 0x8F 0x90 0x91 0x92 0x93 0x94 0x95 0x96 0x97 0x98 0x99 0x9A 0x9B 0x9C 0x9D 0x9E 0x9F 0xA0 0xA1 0xA2 0xA3 0xA4 0xA5 0xA6 0xA7 0xA8 0xA9 0xAA 0xAB 0xAC 0xAD 0xAE 0xAF 0xB0 0xB1 0xB2 0xB3 0xB4 0xB5 0xB6 0xB7 0xB8 0xB9 0xBA 0xBB 0xBC 0xBD 0xBE 0xBF 0xC0 0xC1 0xC2 0xC3 0xC4 0xC5 0xC6 0xC7 0xC8 0xC9 0xCA 0xCB 0xCC 0xCD 0xCE 0xCF 0xD0 0xD1 0xD2 0xD3 0xD4 0xD5 0xD6 0xD7 0xD8 0xD9 0xDA 0xDB 0xDC 0xDD 0xDE 0xDF 0xE0 0xE1 0xE2 0xE3 0xE4 0xE5 0xE6 0xE7 0xE8 0xE9 0xEA 0xEB 0xEC 0xED 0xEE 0xEF 0xF0 0xF1 0xF2 0xF3 0xF4 0xF5 0xF6 0xF7 0xF8 0xF9 0xFA 0xFB 0xFC 0xFD 0xFE 0xFF

	CAN ID				
	0x01 02 03 1E			1	00
	0x01 02 03 BE			2	00 01

[illegible]

CAN ID				
CAN ID	CAN ID	CAN ID	CAN ID	ms
00	000	0x 01 XX XX 1F	2	/
CAN ID	CAN ID	CAN ID	CAN ID	
byte[0]	0000	uint16	0: 000 000mm	
byte[1]				
byte[2~7]	/	/	/	

CAN ID				
CAN ID	CAN ID	CAN ID	CAN ID	CAN ID
0x 01 XX XX BF	0x 01 XX XX BF	0x 01 XX XX BF	0x 01 XX XX BF	0x 01 XX XX BF
0x 01 XX XX BF	0x 01 XX XX BF	0x 01 XX XX BF	0x 01 XX XX BF	0x 01 XX XX BF

01	0x01 02 03 1F	01	01	1	C8 00
02	0x01 02 03 BF	01	01	7	01 F4 01 2C 01 C8 00

15. odom

odometerIMU

odometer				
01	02	CAN ID	03	ms
01	02	0x 01 XX XX 20	2	/
03	04	05	06	
byte[0]	odometer	uint8	0: 000000 / 100000	
byte[1]	IMU	uint8	0: 000 / 1000000 000000IMU000000	
byte[2~7]	/	/	/	

odometer-01				
01	02	CAN ID	03	ms
01	02	0x 01 XX XX C0	8	20
03	04	05	06	
byte[0]	odom_x [7:0]	signed int32	mm	
byte[1]	odom_x[15:8]			
byte[2]	odom_x[23:16]			
byte[3]	odom_x[31:24]			
byte[4]	odom_y[7:0]	signed int32	mm	

☐☐ #1

☐ Yangfan He ☐☐ 29 ☐☐ 2024 06:53:18

☐ Yangfan He ☐☐ 29 ☐☐ 2024 07:35:43