

CAN BUS Protocol for ADAS Outdoor AGV

1.1 AGV Control command-1: Turn signal..... ID:43Fh

Message Parameter definition				Parameter definition		
Name/ID	Cycle time	Byte	Bit	parameter	Factor	Offset
AGV control command-1 Turn signal..... 201h	100ms	1	1..8	Reserve	1	0
		2	1..8	Reserve	1	0
		3	1..8	Reserve	1	0
		4	1..8	Reserve	1	0
		5	1..4	Reserve	1	0
		5		L turn signal(1:on/0:off)	1	0
		6		R turn signal(1:on/0:off)	1	0
		7		auto pilot mode off (1:disable auto pilot /0:n/a)	1	0
		8		Headlight (1:off/0:on)	1	0
		6	1..8	Reserve	1	0
		7	1..8	Reserve	1	0
		8	1..8	Heart beam (0~FF)	1	0

CAN BUS Protocol for ADAS Outdoor AGV

1.2 AGV Control command-2: Stall command ID:168h

Message Parameter definition				Parameter definition		
Name/ID	Cycle time	Byte	Bit	parameter	Factor	Offset
AGV control command-2 Stall command ID:168	100ms	1	1..8	Stall command P:8 R:2 N:4 D:1	1	0
		2	1..8	Reserve	1	0
		3	1..8	Reserve	1	0
		4	1..8	Reserve	1	0
		5	1..8	Reserve	1	0
		6	1..8	Reserve	1	0
		7	1..8	Reserve	1	0
		8	1..8	Reserve	1	0

CAN BUS Protocol for ADAS Outdoor AGV

1.3 AGV Control command-3: Throttle command ID:075h

Message Parameter definition				Parameter definition		
Name/ID	Cycle time	Byte	Bit	parameter	Factor	Offset
AGV control command-3 Throttle command ID:075h	100ms	1	1..8	Throttle command low byte(%)	0.4%	0
		2	1..8	Reserve	1	0
		3	1..8	Reserve	1	0
		4	1..8	Reserve	1	0
		5	1..8	Reserve	1	0
		6	1..8	Reserve	1	0
		7	1..8	Reserve	1	0
		8	1..8	Reserve	1	0

CAN BUS Protocol for ADAS Outdoor AGV

1.4 AGV Control command-4: EPS command ID:065h

Message Parameter definition				Parameter definition		
Name/ID	Cycle time	Byte	Bit	parameter	Factor	Offset
AGV control command-4 EPS command ID:065h	25ms	1	1..8	EPS command low byte	0.1	0
		2	1..8	EPS command high byte (0~18000 central position 9000)		
		3	1..8	Reserve	1	0
		4	1..8	Reserve	1	0
		5	1..8	Reserve	1	0
		6	1..8	Reserve	1	0
		7	1..8	Reserve	1	0
		8	1..8	Reserve	1	0

CAN BUS Protocol for ADAS Outdoor AGV

2.1 AGV Status-1: AGV Status

ID:363h

Message Parameter definition				Parameter definition		
Name/ID	Cycle time	Byte	Bit	parameter	Factor	Offset
AGV Status-1 AGV Status ID:203h	10ms	1	1..8	Vehicle speed low byte (M/KMh)	1	0
		2	1..8	Vehicle speed high byte (M/KMh)	1	0
		3	1..8	Reserve	1	0
		4	1..8	Reserve	1	0
		5	1..8	VCU leve 1 alarm Bit0: Remoter receiver signal lose Bit1: Remoter receiver power lose Bit2: Reserve Bit3: AI CAN signal lose Bit4: EPS hardware fault Bit5: EPS CAN bus fault Bit6: reserve Bit7:S-driver alarm	1	0
		6	1..8	VCU leve 2 alarm(reserve)	1	0
		7	1	Remote controller button 1	1	0
			2	Remote controller button 2	1	0
			3..4	Reserve	1	0
			5	L turn left	1	0
			6	R turn right	1	0
			7	Manual Mode	1	0
			8	Auto pilot mode	1	0
		8	1..8	Heart beam (0~FF)	1	0

CAN BUS Protocol for ADAS Outdoor AGV

2.2 AGV Status-2: Stall Status ID:0A3h

Message Parameter definition				Parameter definition		
Name/ID	Cycle time	Byte	Bit	parameter	Factor	Offset
AGV Status-2 Stall Status ID:0A3h	25ms	1	1..8	Stall Status P:8 R:2 N:4 D:1	1	0
		2	1..8	Reserve	1	0
		3	1..8	Reserve	1	0
		4	1..8	Reserve	1	0
		5	1..8	Reserve	1	0
		6	1..8	Reserve	1	0
		7	1..8	Reserve	1	0
		8	1..8	Reserve	1	0

CAN BUS Protocol for ADAS Outdoor AGV

2.3 AGV Status-3: Throttle status ID:050h

Message Parameter definition				Parameter definition		
Name/ID	Cycle time	Byte	Bit	parameter	Factor	Offset
AGV Status-3 Throttle Status ID:050h	10ms	1	1..8	Throttle Status(%)	0.4%	0
		2	1..8	Reserve	1	0
		3	1..8	Reserve	1	0
		4	1..8	Reserve	1	0
		5	1..8	Reserve	1	0
		6	1..8	Reserve	1	0
		7	1..8	Reserve	1	0
		8	1..8	Reserve	1	0

CAN BUS Protocol for ADAS Outdoor AGV

2.4.1 AGV Status-4: EPS status ID:067h

Message Parameter definition				Parameter definition		
Name/ID	Cycle time	Byte	Bit	parameter	Factor	Offset
AGV Status-5 EPS Status ID:067h	10ms	1	1..8	Heart beam	1	0
		2	1..8	EPS voltage(12V=100%)	1	0
		3	1..8	Steering angle low byte (0~18000 central postiton 9000)	0.1	0
		4	1..8	Steering angle high byte (0~18000 central postiton 9000)		
		5	1..8	Steering torque low byte	1	0
		6	1..8	Steering torque high byte	1	0
		7	1..8	Steering speed low byte	1	0
		8	1..8	Steering speed high byte	1	0

CAN BUS Protocol for ADAS Outdoor AGV

2.4.2 AGV Status-5: EPS status

ID:167h

Message Parameter definition				Parameter definition		
Name/ID	Cycle time	Byte	Bit	parameter	Factor	Offset
AGV Status-6 EPS Status ID:167h	10ms	1	1..8	Reserve	1	0
		2	1..8	Reserve	1	0
		3	1..8	Reserve	1	0
		4	1..8	EPS mode status 00:steering assist 01: steering angle control 02:steering speed control 03:steering torque control FF:EPS off	1	0
		5	1..8	Reserve	1	0
		6	1..8	Reserve	1	0
		7	1..8	Reserve	1	0
		8	1	EPS under voltage fault	1	0
			2	EPS over voltage fault	1	0
			3	EPS excessive current error	1	0
			4	EPS over current shut down	1	0
			5	EPS Temp>110	1	0
			6	EPS Temp>120	1	0
			7	EPS motor encoder fault	1	0
			8	EPS position encoder fault	1	0

CAN BUS Protocol for ADAS Outdoor AGV

2.4.3 AGV Status-6: EPS status ID:267h

Message Parameter definition				Parameter definition		
Name/ID	Cycle time	Byte	Bit	parameter	Factor	Offset
AGV Status-7 EPS Status ID:267h	10ms	1	1..8	Steering central position High byte	1	0
		2	1..8	Steering central position Low byte	1	0
		3	1..8	Steering left position High byte	1	0
		4	1..8	Steering left position Low byte	1	0
		5	1..8	Steering right position High byte	1	0
		6	1..8	Steering right position Low byte	1	0
		7	1..8	Reserve	1	0
		8	1..8	Reserve	1	0

CAN BUS Protocol for ADAS Outdoor AGV

2.4.3 AGV Status-7: Rear Wheel speed status ID:101h

Message Parameter definition				Parameter definition		
Name/ID	Cycle time	Byte	Bit	parameter	Factor	Offset
AGV Status-7 Rear Wheel Speed Status ID:101h	10ms	1	1..8	Wheel speed L byte_0 @mm	1	0
		2	1..8	Wheel speed L byte_1 @mm	1	0
		3	1..8	Wheel speed L byte_2 @mm	1	0
		4	1..8	Wheel speed L byte_3 @mm	1	0
		5	1..8	Wheel speed R byte_0 @mm	1	0
		6	1..8	Wheel speed R byte_1 @mm	1	0
		7	1..8	Wheel speed R byte_2 @mm	1	0
		8	1..8	Wheel speed R byte_3 @mm	1	0

Alarm Led flashing Indicated

01: Battery low /battery connector fault

02: Motor power connected fault

03: Motor short circuit

04: Freewheel switch activate

05: No use

06: Charger connected driving limited

07: Throttle fault

08: S-driver controller fault

09: Parking brakes fault

10: An excessive voltage

11: Battery voltage<20

12: EPS CAN bus fault

13: EPS hardware fault

14: AI CAN bus fault

15: Battery voltage<22

16: Remoter receiver power lose

17: Remoter signal lose