

SEND_BUF(SEND_DATA) DEFINITION

SEND_BUF(SEND_DATA):

[illegible]

TABLE 1

HEADER LENGTH: 10 BYTE	NO. (BYTE)	NAME	SIZE(BYTE)
	0	Request (see TABLE2)	10
	1	length-byte1 (see TABLE3)	
	2	length-byte2 (see TABLE3)	
	3	group_select (see TABLE4)	
	4	GROUP0 data_select (see TABLE5)	
	5	GROUP1 data_select (see TABLE5)	
	6	GROUP2 data_select (see TABLE5)	
	7	GROUP3 data_select (see TABLE5)	
	8	GROUP4 data_select (see TABLE5)	
9	GROUP5 data_select (see TABLE5)		
DATA LENGTH: 0- 2133BYTE	...	Robot_state information	0-2113?
CRC32 CHECK	at end	CRC CODE	32

TABLE2 REQ

REQUEST	BYTE0	BIT8	REQUEST TYPE	PKT_START=0 x30; //0011 - ---
		BIT7		
		BIT6		
		BIT5	PACKET NUMBER	PACKET NUMBER 0-15 = 0x00-0x0F
		BIT4		
		BIT3		
		BIT2		
		BIT1		

TABLE3 LENGTH

LENGTH OF SENDDATA	BYTE1	Char >> Convert to Type >> unsigned short int
	BYTE2	

TABLE4 GROUP SELECT

		BIT	VALUE
		BIT8	1=GROUP7 Slected, 0=GROUP7 not Selected,
		BIT7	1=GROUP6 Slected, 0=GROUP6 not Selected,
		BIT6	1=GROUP5 Slected, 0=GROUP5 not Selected,

GROUP SELECT	BYTE3	BIT5	1=GROUP4 Slected, 0=GROUP4 not Selected,
		BIT4	1=GROUP3 Slected, 0=GROUP3 not Selected,
		BIT3	1=GROUP2 Slected, 0=GROUP2 not Selected,
		BIT2	1=GROUP1 Slected, 0=GROUP1 not Selected,
		BIT1	1=GROUP0 Slected, 0=GROUP0 not Selected,

TABLE5 DATA SELECT

NO.(BYTE)	GROUP	BIT	NAME	SIZE(BYTE)	VALUE
BYTE4	GROUP0	8	#define O_T_EE 0x0101	128	1=selected, 0=not selected
		7	#define O_T_EE_d 0x0102	128	1=selected, 0=not selected
		6	#define F_T_EE 0x0104	128	1=selected, 0=not selected
		5	#define EE_T_K 0x0108	128	1=selected, 0=not selected
		4	#define m_ee 0x0110	8	1=selected, 0=not selected
		3	#define I_ee 0x0120	72	1=selected, 0=not selected
		2	#define F_x_Cee 0x0140	24	1=selected, 0=not selected
BYTE5	GROUP1	1	#define m_load 0x0180	8	1=selected, 0=not selected
		8	#define I_load 0x0201	72	1=selected, 0=not selected
		7	#define F_x_Cload 0x0202	24	1=selected, 0=not selected
		6	#define m_total 0x0204	8	1=selected, 0=not selected
		5	#define I_total 0x0208	72	1=selected, 0=not selected
		4	#define F_x_Ctotal 0x0210	24	1=selected, 0=not selected
		3	#define elbow 0x0220	16	1=selected, 0=not selected
BYTE6	GROUP2	2	#define elbow_d 0x0240	16	1=selected, 0=not selected
		1	#define elbow_c 0x0280	16	1=selected, 0=not selected
		8	#define delbow_c 0x0401	16	1=selected, 0=not selected
		7	#define ddelbow_c 0x0402	16	1=selected, 0=not selected
		6	#define tau_J 0x0404	56	1=selected, 0=not selected
		5	#define tau_J_d 0x0408	56	1=selected, 0=not selected
		4	#define dtau_J 0x0410	56	1=selected, 0=not selected
BYTE7	GROUP3	3	#define q 0x0420	56	1=selected, 0=not selected
		2	#define q_d 0x0440	56	1=selected, 0=not selected
		1	#define dq 0x0480	56	1=selected, 0=not selected
		8	#define dq_d 0x0801	56	1=selected, 0=not selected
		7	#define ddq_d 0x0802	56	1=selected, 0=not selected
		6	#define joint_contact 0x0804	56	1=selected, 0=not selected
		5	#define cartesian_contact 0x0808	48	1=selected, 0=not selected
BYTE8	GROUP4	4	#define joint_collision 0x0810	56	1=selected, 0=not selected
		3	#define cartesian_collision 0x0820	48	1=selected, 0=not selected
		2	#define tau_ext_hat_filtered 0x0840	56	1=selected, 0=not selected
		1	#define O_F_ext_hat_K 0x0880	48	1=selected, 0=not selected
		8	#define K_F_ext_hat_K 0x1001	48	1=selected, 0=not selected
		7	#define O_dP_EE_d 0x1002	48	1=selected, 0=not selected
		6	#define O_T_EE_c 0x1004	128	1=selected, 0=not selected
BYTE9	GROUP5	5	#define O_dP_EE_c 0x1008	48	1=selected, 0=not selected
		4	#define O_ddP_EE_c 0x1010	48	1=selected, 0=not selected
		3	#define theta 0x1020	56	1=selected, 0=not selected
		2	#define dtheta 0x1040	56	1=selected, 0=not selected
		1	#define current_errors 0x1080	5?	1=selected, 0=not selected
		8	#define last_motion_errors 0x2001	5?	1=selected, 0=not selected
		7	#define control_command_success_rate 0x2002	8	1=selected, 0=not selected
BYTE9	GROUP5	6	#define robot_mode 0x2004	1	1=selected, 0=not selected
		5	#define time 0x2008	8	1=selected, 0=not selected
		4	#define UNDEF1 0x2010		1=selected, 0=not selected
		3	#define UNDEF2 0x2020		1=selected, 0=not selected
		2	#define UNDEF3 0x2040		1=selected, 0=not selected
		1	#define UNDEF4 0x2080		1=selected, 0=not selected
			sum	2113	