# C33DB-Z03(EX300)项目 VBUS网段PTC节点信号通信矩阵 (Communication Matrix)

编制:

校对:

审核:

批准:





#### Revision Management 版本管理

Revision 版本	Date 日期	Author 作者	Reviewed by 审核	Approved by 批准	Changes Comments 修改说明
V1.0	2016/2/5	王道静			1、C33DB-Z01EX项目FP阶段VBUS网段报文设计;
V2.0	2016/3/29	王道静			2、取消PTC节点接收0x211帧报文(娄建勋反馈);
V3.0	2016/4/14	王道静			3、沿用C33DB-Z01扩展版协议;
V5.0	2016/11/14	王道静			4、沿用C33DB-Z03项目VBUS网段PTC节点协议;
V5.2	2017/3/23	王道静			5、0x4E0帧报文周期由500ms修改为100ms;



#### **卫・蓝之旅** Travelling in Blue,Living in Blue



## Legend - CAN 参数说明 - CAN

Intel:	start b	it:12							
		7	6	5	4	3	2	1	0
	0	7	6	5	4	3	2	1	0
	1 ~	15	14	13	1sb 12	11	10	9	8
	2 r	nsb							
		23	22	21	20	19	18	17	16
	3	30	30	29	28	27	26	25	24
	4	39	38	37	36	35	34	33	32
	5	47	46	45	44	43	42	41	40
	6	55	54	53	52	51	50	49	48
	7	63	62	61	60	59	58	57	56

Motorola MSB:	start b	it:11							
		7	6	5	4	3	2	1	0
	0	7	6	5	4	3	2	1	0
	1	15	14	13	12	nsb 11	10	9	8
	3	<							1sb
	2	23	22	21	20	19	18	17	16
	3	30	30	29	28	27	26	25	24
	4	39	38	37	36	35	34	33	32
	5	47	46	45	44	43	42	41	40
	6	55	54	53	52	51	50	49	48
	7	63	62	61	60	59	58	57	56

Motorola LSB:	start bi	t:16							
		7	6	5	4	3	2	1	0
	0	7	6	5	4	3	2	1	0
	1	15	14	13	12	nsb 11	10	9	8 1sb
	2	23	22	21	20	19	18	17	16
	3	30	30	29	28	27	26	25	24
	4	39	38	37	36	35	34	33	32
	5	47	46	45	44	43	42	41	40
	6	55	54	53	52	51	50	49	48
	7	63	62	61	60	59	58	57	56

注:请将CANdb++ 中的排列显示方式和Excel 通信矩阵中的显示方式调整为一致 调整方法: 菜单Options -> Settings -> Display format of start position of signals.

Property 属性	Description 描述	Remarks 备注
Msg Name 报文名称	Message name 报文名称	eg.BCM_ALS - BCM transfers messages of ALS (from PCAN to BCAN); 举例:BCM_ALS为节点BCM转发ALS发送的报文(从PCAN转发到BCAN)
Msg Type 报文类型	报文类型: 常规应用报文, 网络管理报文, 诊断报	Normal: Normal Communication message NM: Network Mangment message Diag: Diagnostic message
Msg ID 报文标识符	Message identifier 报文标识符	
Msg Send Type 报文发送类型	Send type for the message. 报文的发送类型 Send type:"Cycle", "Event", "IfActive", "CE" and "CA" 发送类型: "Cycle", "Event", "IfActive", "CE" and "CA"	"CE - Cycle and Event", "CA - Cycle if Active"



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Property 属性	Description 描述	Remarks 备注
Msg Cycle Time (ms) 报文周期时间	Cycle time of the message if it should be sent cyclically 报文发送周期时间(仅对周期性发送报文)	Unit: ms 单位: 毫秒
Msg Length (Byte) 报文长度	Byte length of the message 报文的字节长度	
Signal Name 信号名称	Signal Name 信号名称	
Signal Description 信号描述	Comment for the signal 信号描述	
Byte Order 排列格式	Description the byte order, intel or mortoral 描述了字节排布顺序	Intel Motorola LSB Motorola MSB
Start Byte 起始字节		
Start Bit 起始位		
Signal Send Type 信号发送类型	Send type for the signal 信号的发送类型	Cycle OnWrite OnWrite OnWriteWithRepetition OnChange OnChangeWithRepetition IfActive IfActiveWithRepetition.
Bit Length (Bit) 信号长度	Bit length of the signal 信号的位长度	
Date Type 数据类型	Date type of the signal 信号的数据类型 Date type: Unsigned, Signed 数据类型: Unsigned, Signed	



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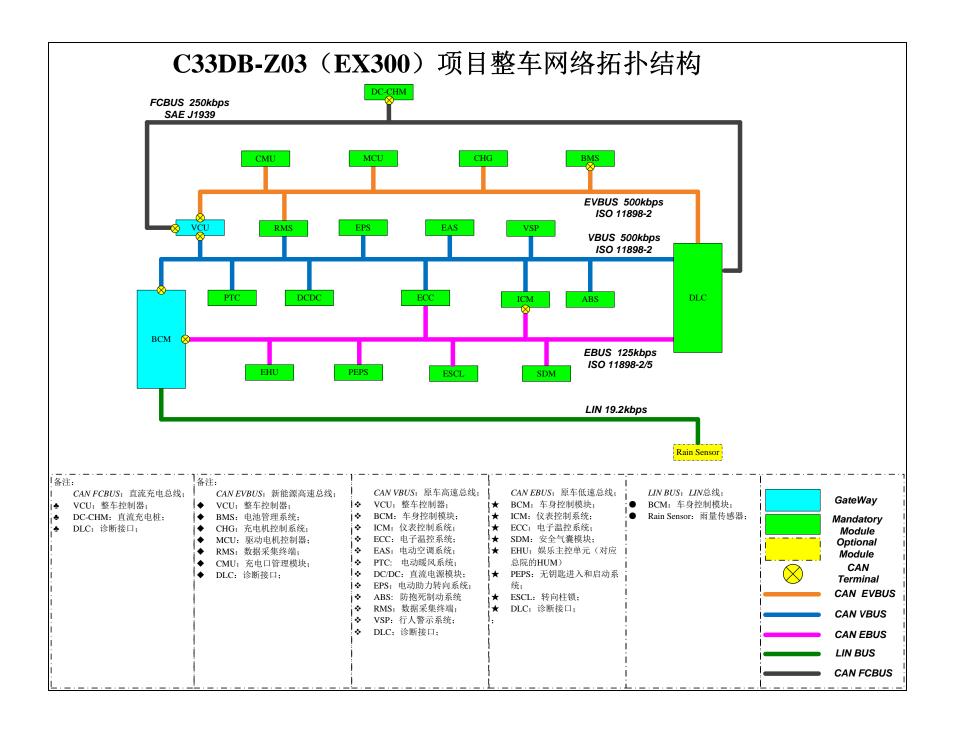
Property	Description	Remarks
Froperty 属性	Description 描述	Kemarks 备注
Resolution 精度	Resolution value is to calculate the physical value of the signal. 十六进制值的比例因子是为了计算信号的物理值。	The signal's conversion formula (Rasolution, Offset) is used to transform the hex value to a physical value or in the reverse direction.  [Physical value] = ([Hex value] * [Resolution]) + [Offset] 使用信号的转换公式用来作为十六进制和物理值之间的相互转换。 [物理值] = ([十六进制值] * [精度]) + [偏移量]
Offset 偏移量	Offset value is to calculate the physical value of the signal. 偏移量用来计算信号的物理值。	
Signal Min. Value (phys) 物理最小值	Physical minimum value of the signal in physical value 信号的物理最小值	The "physical value" of a signal is the value of the physical quantity (e.g. speed, rpm, temperature, etc.) that represents the signal. 信号的物理值即这个信号所代表的物理量(例如:速度、转速、温度等)。
Signal Max. Value(phys) 物理最大值	Physical maximum value of the signal in physical value 信号的物理最大值	
Signal Min. Value (Hex) 总线最小值	minimum value of the signal in Hex value 信号的总线最小值	
Signal Max. Value(Hex) 总线值最大值	maximum value of the signal in Hex value 信号的总线最大值	
Initial Value(Hex) 初始值	If no valid signal is available after network startup, the predefined value (refer to the functional requirement) shall be sent. The valid value shall be available within this time from the startup. 如果在网络启动后没有可用的有效信号,预定义的值将被发送(取决于功能需求)。有效值必须在启动后此时间内可用。	If this value is 0, always valid signal value will be sent in the normal operating condition. 如果此值为0,正常操作状态下只能发送有效值。



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Property 属性	Description 描述	Remarks 备注
Invalid Value(Hex) 无效值	Invalid value in hex value 十六进制表示的无效值	
Inactive Value(Hex) 非使能值	Inactive value in hex value if the message sent type is ifActive and PA 十六进制表述的非使能值,仅用于使能型及周期使能型报文	
Unit 单位	Unit of the signal physical value 信号物理值的单位	
Signal Value Description 信号值描述	Hex-physics representation of the signal value 信号十六进制值所代表的物理值	
Msg Cycle Time Fast(ms) 报文发送的快速周期(ms)	The fast cycle time of message if the Msg Send Type of message is not "Cycle" 当报文发送类型不为周期型时,报文发送的快速周期。	
Msg Nr. Of Reption 报文快速发送的次数	The reption number of message if the Msg Send Type of message is not "Cycle" 当报文发送类型不为周期型时,报文快速发送的次数。	
Msg Delay Time(ms) 报文延时时间(ms)	The min time between the same ID message if the Msg Send Type of message is not "Cycle" 当报文发送类型不为周期型时,相同ID报文之间的最小间隔。	



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Msg Name 报文名称	Msg Type 报文类 型	Msg ID 根文标 设符	Msg Send Type 报文发 送类型	Msg Cycle Time (ms) 报文周 期时间	Msg Length (Byte) 根文长 度	SignalName 備号名業	Signal Description <b>信号描述</b>	Byte Order 排列格 式 (IntelMoto rola)	Start Byte <b>起始字</b> 节	Start Bit <b>超始位</b>	Bit Length (Bit) 信号长度	End Bit 舞止位	Signal Send Type 信号发 送类型	Date Type 數据类 型	Resolution 精度	Offset 傷夢量	Signal Min. Value (phys) 物理量 小值	Signal Max. Value (phys)	Signal Min. Value (Hex) 总统是 小值	Signal Max. Value (Hex)	Initial Value (Hex) 初始值	Invalid Value(Hex ) 无效值	Inactive Value (Hex) 非使能 僅	Unit 单位	Signal Wilne Description <b>撰号推搬池</b>	Msg Cycle Time Fast(ms) 提文发 送的快	Msg Nr. Of Reption 提文快 建发送 的决策	Msg Delay Time(ms) 接文廷 时时间 (ms)	CMU	EAS ECC EPS	ICM PTC	RAFS	Tester
PTC_0x4B0	Normal	0x4B0	Cycle	100	8																					0	0	0		R		S R	
						PTC_4B0_INIT	PTC初始化状态	Motorola LSB	0	0	1	0	Cycle	Unsigned	1	0	0	1	0x0	0x1	0x0				0x0: 初始化未完成: 0x1: 初始化己完成:					R		R	
						PTC_4B0_STA	PTC当前工作状态	Motorola LSB	0	1	2	1	Cycle	Unsigned	1	0	0	3	0x0	0x3	0x0				0x0: 待机状态: 0x1: 工作状态: 0x2: 故障状态: 0x3: Void					R		R	
						PTC_4B0_LEVEL	PTC当前工作等级	Motorola LSB	0	3	4	3	Cycle	Unsigned	1	0	0	12	0x0	0xC	0x0				0x0:未工作状态: 0x1:工作转级_1: 0x1:工作转级_1: 0x3:工作转级_2: 0x3:工作转级_3: 0x4:工作转级_4: 0x5:工作转级_5: 0x6:工作等级_6: 0x7:工作等级_6: 0x7:工作等级_9: 0x6:工作等级_9: 0x6:工作等级_9: 0x6:工作等级_1:					R		R	
						PTC_4B0_TEMP	PTC当前工作温度	Motorola LSB	1	8	8	8	Cycle	Unsigned	1	-48	-48	206	0x0	0xFE	0x30	0xFF								R	Ш	R	
						PTC_4B0_CUR	PTC当前工作电流	Motorola LSB	3	24	16	24	Cycle	Unsigned	0.001	0	0	65.534	0x0	0xFFFE	0x0	0xFFFF								R	Ш	R	Ш
						PTC_4B0_HV_CHECK_FIN _FLG	电动暖风系统高压检测完成标志位	Motorola LSB	4	32	1	32	Cycle	Unsigned	1	0	0	1	0x0	0x1	0x0				0x0:未完成; 0x1:已完成;					R		R	
						PTC_4B0_LV_OFF_REQ	电动暖风系统低压下电请求	Motorola LSB	4	33	1	33	Cycle	Unsigned	1	0	0	1	0x0	0x1	0x0				0x0:未请求: 0x1:请求下电:					R		R	
						PTC_4B0_PTC_A_CORE_SH ORT	PTC_A热芯短路故障	Motorola LSB	5	40	1	40	Cycle	Unsigned	1	0	0	1	0x0	0x1	0x0				0x0: 正常 0x1: 异常					R		R	
						PTC_4B0_PTC_B_CORE_SH ORT	PTC_B热芯短路故障	Motorola LSB	5	41	1	41	Cycle	Unsigned	1	0	0	1	0x0	0x1	0x0				0x0:正常 0x1:异常					R		R	
						PTC_4B0_CAN_COM_ERR	CAN通讯故障	Motorola LSB	6	48	1	48	Cycle	Unsigned	1	0	0	1	0x0	0x1	0x0				0x0:正常 0x1:异常					R		R	
						PTC_4B0_CUR_ERR	PTC电流异常故障	Motorola LSB	6	49	1	49	Cycle	Unsigned	1	0	0	1	0x0	0x1	0x0				0x0: 正常 0x1: 异常					R		R	
						PTC_4B0_TEMP_SEN_OPE	PTC温度传感器斯路故障	Motorola LSB	6	50	1	50	Cycle	Unsigned	1	0	0	1	0x0	0x1	0x0				0x0:正常 0x1:异常					R		R	
						PTC_4B0_TEMP_SEN_SHO RT	PTC温度传感器短路故障	Motorola LSB	6	51	1	51	Cycle	Unsigned	1	0	0	1	0x0	0x1	0x0				0x0: 正常 0x1: 异常					R	T	R	
						PTC_4B0_TEMP_HIGH	PTC本体温度过高故障	Motorola LSB	6	52	1	52	Cycle	Unsigned	1	0	0	1	0x0	0x1	0x0				0x0: 正常 0x1: 异常					R	T	R	
						PTC_4B0_IGBT_TEMP_HIG	IGBT温度过高故障	Motorola LSB	6	53	1	53	Cycle	Unsigned	1	0	0	1	0x0	0x1	0x0				0x0:正常 0x1:异常					R	$\Box$	R	
						PTC_4B0_IGBT_A_FAULT	IGBT_A 驱动芯片故障	Motorola LSB	6	54	1	54	Cycle	Unsigned	1	0	0	1	0x0	0x1	0x0				0x0: 正常 0x1: 异常					R		R	
						PTC_4B0_IGBT_B_FAULT	IGBT_B驱动芯片故障	Motorola LSB	6	55	1	55	Cycle	Unsigned	1	0	0	1	0x0	0x1	0x0				0x0: 正常 0x1: 异常					R	$\top$	R	
						PTC_4B0_HV_LESS	PTC高压欠故障	Motorola LSB	7	56	1	56	Cycle	Unsigned	1	0	0	1	0x0	0x1	0x0				0x0: 正常 0x1: 异常				T	R	$\dagger \dagger$	R	$\dagger$
						PTC_4B0_PTC_A_CORE_OF EN	PTC_A热芯未连接故障	Motorola LSB	7	57	1	57	Cycle	Unsigned	1	0	0	1	0x0	0x1	0x0				0x0: 正常 0x1: 异常				T	R	$\dagger \dagger$	R	$\dagger$
						PTC_4B0_PTC_B_CORE_OP EN	PTC_B热芯未连接故障	Motorola LSB	7	58	1	58	Cycle	Unsigned	1	0	0	1	0x0	0x1	0x0				0x0:正常 0x1:异常					R	$\dagger \dagger$	R	$\dagger$
						PTC_4B0_TEMP_SEN_ERR	IGBT温度传感器故障	Motorola LSB	7	59	1	59	Cycle	Unsigned	1	0	0	1	0x0	0x1	0x0				0x0:正常 0x1:异常					R	$\dagger$	R	$\dagger$



Msg Name 报文名称	Msg Type 根文类 型	Msg ID 根文标 识符	Msg Send Type 报文发 送类型	Msg Cycle Time (ms) 报文周 期时间	Msg Length (Byte) 根文长 度	SignalName 僧号名業	Signal Description 簡号描述	Byte Order 养列格 式 (IntelMoto rola)	Start Byte 超始字 节	Start Bit <b>起始位</b>	Bit Length (Bit) 信号长度	End Bit #止位	Signal Send Type 傳号发 送类型	Date Type 數据英 型	Resolution 精度	Offset 備夢量	Signal Min. Value (phys) 物理量 小位	Signal Max. Value (phys) 物理量	Signal Min. Value (Hex) 基數景 小值	Signal Max. Value (Hex)	Initial Value (Hex) 初始值	Invalid Value(Hex ) 无效值	Inactive Value (Hex) 非使體	Unit 单位	Signal Value Description <b>俯号推描述</b>	Msg Cycle Time Fast(ms) 报文发 送的快	Msg Nr. Of Reption 报文快 速发送 的次素	Msg Delay Time(ms) 报文基 时时间 (ms)	CMU	EAS	ICM	PTC RMS VCU	Tester
						PTC_4B0_IGBT_A_OPEN	IGBT_A斯路故障	Motorola LSB	7	60	1	60	Cycle	Unsigned	1	0	0	1	0x0	0x1	0x0				0x0: 正常 0x1: 异常					R		R	
						PTC_4B0_IGBT_B_OPEN	IGBT_B断路故障	Motorola LSB	7	61	1	61	Cycle	Unsigned	1	0	0	1	0x0	0x1	0x0				0x0: 正常 0x1: 异常					R		R	
						PTC_4B0_IGBT_A_SHORT	IGBT_A短路故障	Motorola LSB	7	62	1	62	Cycle	Unsigned	1	0	0	1	0x0	0x1	0x0				0x0: 正常 0x1: 异常					R		R	
						PTC_4B0_IGBT_B_SHORT	IGBT_B短路故障	Motorola LSB	7	63	1	63	Cycle	Unsigned	1	0	0	1	0x0	0x1	0x0				0x0: 正常 0x1: 异常					R		R	
ECC_0x4E0	Normal	0x4E0	Cycle	100	8																					0	0	0		S		R R R	F
						ECC_4E0_WIND_MODE	出风模式	Motorola LSB	0	2	3	2	Cycle	Unsigned	1	0	0	4	0x0	0x4	0x0				0x1:吹面模式 0x1:吹面吹足模式 0x2:吹足模式 0x3:吹足模式 0x3:吹足模击模式 0x4:除霜模式							R R	
						ECC_4E0_CYCLE_STA	循环状态	Motorola LSB	0	5	1	5	Cycle	Unsigned	1	0	0	1	0x0	0x1	0x0				0x0: 内循环状态 0x1: 外循环状态							R R	
						ECC_4E0_FAN_REQ	风崩开启请求	Motorola LSB	0	6	2	6	Cycle	Unsigned	1	0	0	3	0x0	0x3	0x0				0x0:风扇无请求 0x1:风扇低速请求 0x2:风扇高速请求 0x3:Void							R R	
						ECC_4E0_WIND_SPD_STA	风速状态	Motoro la LSB	1	8	4	8	Cycle	Unsigned	1	0	0	8	0x0	0x8	0x0				0x0:无风槽位 0x1:风速一指 0x2:风速三指 0x2:风速三指 0x4:风速即挡 0x6:风速五指 0x6:风速五指 0x7:风速七指 0x7:风速七指							R R	
						ECC_4E0_HEATING_COOL ING_STAGE	冷暖程度需求状态	Motoro la LSB	1	12	4	12	Cycle	Unsigned	1	0	0	8	0x0	0x8	0x0				0x0:—指(最冷挡) 0x1:—指 0x2:三结 0x2:三结 0x3:回指 0x4:五结 0x5:六档 0x5:六档 0x7:八档 0x7:八档							R R	
						ECC_4E0_OUT_TEMP	车外环境温度	Motorola LSB	2	16	8	16	Cycle	Unsigned	1	-48	-48	206	0x0	0xFE	0x30	0xFF		°C	The second second							R R	Ĺ
						ECC_4E0_WIND_MODE_V ALID	出风模式有效性	Motorola LSB	3	24	1	24	Cycle	Unsigned	1	0	0	1	0x0	0x1	0x0	0x1			0x0:VALID 0x1:INVALID							R R	
						ECC_4E0_WIND_SPD_STA _VALID	风速状态有效性	Motorola LSB	3	25	1	25	Cycle	Unsigned	1	0	0	1	0x0	0x1	0x0	0x1			0x0:VALID 0x1:INVALID							R R	
						ECC_4E0_HEATING_COOL ING_VALID	冷暖程度需求状态有效性	Motorola LSB	3	26	1	26	Cycle	Unsigned	1	0	0	1	0x0	0x1	0x0	0x1			0x0:VALID 0x1:INVALID							R R	
						ECC_4E0_OUT_TEMP_VAL	车外环境温度有效性	Motorola LSB	3	27	1	27	Cycle	Unsigned	1	0	0	1	0x0	0x1	0x0	0x1			0x0:VALID 0x1:INVALID							R R	
						ECC_4E0_PIPE_P_HL_STA	管路压力高低压状态	Motorola LSB	3	28	1	28	Cycle	Unsigned	1	0	0	1	0x0	0x1	0x0	0 x 1			0x0:VALID 0x1:INVALID							R R	
						ECC_4E0_PIPE_P_M_STA	管路压力中压状态	Motorola LSB	3	29	1	29	Cycle	Unsigned	1	0	0	1	0x0	0x1	0x0	0x1			0x0:VALID 0x1:INVALID							R R	
						ECC_4E0_PTC_EA	PTC使能指令	Motorola LSB	6	52	1	52	Cycle	Unsigned	1	0	0	1	0x0	0x1	0x0				0x0: Disable 0x1: En able							R R R	
VCU_0x617	Normal	0x617	Cycle	100	8																					0	0	0	R	R R	R R	R R S	
						VCU_617_VEH_SPD	车速信号	Motorola LSB	3	24	16	24	Cycle	Unsigned	0.01	0	0	655.35	0x0	0xFFFF	0x0			km/h					R	R R	R R	R	ſ



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Msg Name 根文名称	Msg Type 根文美 型	Msg ID 报文标 识符	Msg Send Type 根文发 送类型	Msg Cycle Time(ms) 根文周 期时間	Msg Length (Byte) 报文长 度	SignalName <b>信号名章</b>	Signal Description 信号描述	Byte Order 排列格 式 (IntelMoto rola)	Start Byte 避始字 节	Start Bit 避婚位	Bit Leng th (Bit) 信号长度	End Bit <b>货止位</b>	Signal Send Type 信号发 送类型	Date Type 素据美 型	Resolution 精度	Offset 備夢量	Signal Min. Value (phys) 物理景 小位	Signal Max. Value (phys)	Signal Min. Value (Hex) 总统是 小位	Signal Max. Value (Hex)	Initial Value (Hex) 初始值	Invalid Value(Hex ) 无效值	Inactive Value (Hex) 非使能 值	Unit 単位	Signal Value Description 僧号值描述	Msg Cycle Time Fast(ms) 提文发 送的快	Msg Nr. Of Reption 报文使 速发送 的决数	Msg Delay Time(ms) <b>报文廷</b> 时时间 (ms)	CMU	EAS	ICM	PTC RMS	VCU Tester
PTC_0x6BF	Normal	0x6BF	Cycle	1000	8																					0	0	0		R		S R	R
						PTC_6BF_CAL_VERS	PTC次软件版本号后两位	Motorola LSB	1	8	8	8	Cycle	Unsigned	1	0	0	255	0x0	0xFF	0x0									R	i	R	R
						PTC_6BF_PART_VERS	PTC零部件号	Motorola LSB	5	40	32	40	Cycle	Unsigned	1	0	0	4294967 295	0x0	0xFFFFF FFF	0x0									R		R	R
						PTC_6BF_HW_VERS	PTC硬件版本号后两位	Motorola LSB	6	48	8	48	Cycle	Unsigned	1	0	1	50	0x1	0x32	0x1									R		R	R
						PTC_6BF_SW_VERS	PTC软件版本号后两位	Motorola LSB	7	56	8	56	Cycle	Unsigned	1	0	51	255	0x33	0xFF	0x33									R		R	R
VCU_0x214	Normal	0x214	Cycle	10	8																					0	0	0	R	R R	R	R	S
						VCU_214_VEH_STATE	整车State状态(状态机编码)	Motorola LSB	1	8	16	8	Cycle	Unsigned	1	0	0	65535	0x0	0xFFFF	0x0								R	R R	R		
Diag_FUN_Re	Diag	0x7DF	Event		8																											R	S
Diag_PTC_Re	Diag	0x7F4	Event		8																											R	S
Diag_PTC_Re sp	Diag	0x7FC	Event		8																					0	0	0				S	R
																														ш	ш	ヹ	世



#### **卫・蓝之旅** Travelling in Blue,Living in Blue

纤有道·造天下

Your Wish · Our Ways

Msg Name 报文名称	Msg Type 报文类型	Msg ID 报文标识 符	Msg Send Type 报文发送 类型	Msg Cycle Time (ms) 报文周期 时间	Msg Length (Byte) 报文长度	СМО	рага	EAS	ECC	EPS	ICM	PTC	RMS	VCU
PTC_0x4B0	Normal	0x4B0	Cycle	100	8				R			S	R	
ECC_0x4E0	Normal	0x4E0	Cycle	100	8				S			R	R	R
VCU_0x617	Normal	0x617	Cycle	100	8		R	R	R	R	R	R	R	S
PTC_0x6BF	Normal	0x6BF	Cycle	1000	8				R			S	R	R
VCU_0x214	Normal	0x214	Cycle	10	8	R		R	R		R	R		S
Diag_PTC_Resp	Diag	0x7FC	Event		8							S		