

Communication Message Standards 2017

For C1 - C6 create class which inherits (`INHERITS_ABSPACKET` or `comnet::AbstractPacket`) as a base class. Make sure you create pack and unpack which is designed like a stack (First in First out) Try to make one file per class.

#1000 Vehicle Identification				
Field	Data Set	Description	Type	Units
2	1	Vehicle_ID	uint_16	
3	1	Vehicle_Type	uint_8	enum

#1001 Vehicle Authorization Request				
Field	Data Set	Description	Type	Units
2	1	Vehicle_ID	uint_16	
3	2	Vehicle_Type	uint_8	key
4	2	Authorized_Services	uint_8	enum
5	2	Granted_Services	uint_8	enum

#1002 Vehicle Authorization reply				
Field	Data Set	Description	Type	Units
2	1	Vehicle_ID	uint_16	
3	1	Vehicle_Type	uint_8	enum
4	2	Authorized_Services	uint_8	enum
5	2	Granted_Services	uint_8	enum

#1003 Vehicle Mode Command				
Field	Data Set	Description	Type	Units
2	1	Vehicle_ID	uint_16	
3	2	Vehicle_Mode	uint_8	enum

#1005 Vehicle Termination Command				
Field	Data Set	Description	Type	Units
2	2	Vehicle_ID	uint_16	
3	3	Termination_Mode	uint_8	enum

#1006 Vehicle Telemetry Command				
Field	Data Set	Description	Type	Units
2	2	Vehicle_ID	uint_16	
3	3	Telemetry_Select	uint_8	enum
4	4	Telemetry_Rate	uint_8	ms

#2000 Vehicle System Status				
Field	Data Set	Description	Type	Units
2	1	Vehicle_ID	uint_16	
3	2	Vehicle_Mode	uint_8	enum
4	2	Vehicle_State	uint_8	enum

#2001 Vehicle Inertial State				
Field	Data Set	Description	Type	Units
2	1	Vehicle_ID	uint_16	
3	2	Longitude	float_32	rad
4	2	Latitude	float_32	rad
5	2	Altitude	float_32	m
6	2	Roll	float_32	rad
7	2	Pitch	float_32	rad
8	2	Heading	float_32	rad
9	3	North_Speed	float_32	m/s
10	3	East_Speed	float_32	m/s
11	3	Vertical_Speed	float_32	m/s
12	3	Roll_Rate	float_32	rad/s
13	3	Pitch_Rate	float_32	rad/s
14	3	Yaw_Rate	float_32	rad/s
15	4	North_Accel	float_32	m/s ²
16	4	East_Accel	float_32	m/s ²
17	4	Vertical_Accel	float_32	m/s ²

#2002 Vehicle Global Position				
Field	Data Set	Description	Type	Units
2	1	Vehicle_ID	uint_16	
3	2	Longitude	float_32	rad
4	2	Latitude	float_32	rad
5	2	Altitude	float_32	m
6	3	X_Speed	int_16	m/s*100
7	3	Y_Speed	int_16	m/s*100
8	3	Z_Speed	int_16	m/s*100

#2003 Vehicle Body Sensed State				
Field	Data Set	Description	Type	Units
2	1	Vehicle_ID	uint_16	
3	2	X_Accel	int_16	g/1000
4	2	Y_Accel	int_16	g/1000
5	2	Z_Accel	int_16	g/1000
6	3	Roll_Rate	int_16	millirad/s
7	3	Pitch_Rate	int_16	millirad/s
8	3	Yaw_Rate	int_16	millirad/s

#2004 Vehicle Attitude				
Field	Data Set	Description	Type	Units
2	1	Vehicle_ID	uint_16	
3	2	Roll	float_32	rad
4	2	Pitch	float_32	rad
5	2	Yaw	float_32	rad

#2005 Air Vehicle Ground Relative State				
Field	Data Set	Description	Type	Units
2	1	Vehicle_ID	uint_16	
3	2	Angle_of_Attack	float_32	rad
4	2	Angle_of_Sideslip	float_32	rad
5	2	True_Airspeed	float_32	m/s
6	2	Indicated_Airspeed	float_32	m/s
7	3	North_Wind_Speed	float_32	m/s
8	3	East_Wind_Speed	float_32	m/s
9	3	North_Ground_Speed	float_32	m/s
10	3	East_Ground_Speed	float_32	m/s
11	4	Barometric_Pressure	float_32	Pascal
12	4	Barometric_Altitude	float_32	m

#2006 Vehicle Waypoint Command				
Field	Data Set	Description	Type	Units
2	1	Vehicle_ID	uint_16	
3	2	Longitude	float_32	rad
4	2	Latitude	float_32	rad
5	2	Altitude	float_32	m

#6003 Battery				
Field	Data Set	Description	Type	Units
2	2	Battery_Percentage	uint_32	enum

#5000 Target Status				
Field	Data Set	Description	Type	Units
2	2	Target_Radius	float_64	km
3	2	Target_Angle	float_64	degrees
4	2	Target_Altitude	float_64	m

#5001 Target Acknowledgement				
Field	Data Set	Description	Type	Units
2	1	Target_Status	uint_8	enum

#5000 Target Designation Command				
Field	Data Set	Description	Type	Units
1	1	dest_id	uint6_t	enum
3	2	Vehicle_ID	uint16_t	enum
4	3	Payload_ID	uint8_t	enum
5	4	Target_ID	uint8_t	enum
6	5	Target_Type	uint8_t	enum
7	6	Longitude	float_32	rad
8	6	Latitude	float_32	rad
9	6	Altitude	float_32	m