

Data ID	Description	Unit	Offset	Bits	Comments
800	GPS LATLNG (1Hz)				Alternating transmission of latitude and longitude
	Latitude	degrees	0	32	
	Longitude	degrees	0	32	
5000	Text messages			32	Sending 4 characters at a time
	severity	N/A			Severity on MSB of the last three bytes of the last chunk ((bit32.extract(VALUE,7,1) * 1) + (bit32.extract(VALUE,15,1) * 2) + (bit32.extract(VALUE,23,1) * 4))
	text	N/A	0	32	MSB of each character is ignored, we use 7 bit ASCII
5001	AP STATUS (2Hz)				
	Flight mode	N/A	0	5	
	Simple & supersimple	N/A	5	2	
	Land_complete flag	N/A	7	1	
	Armed flag	N/A	8	1	
	Battery failsafe flag	N/A	9	1	
	EKF Failsafe	N/A	10	2	
	failsafe	N/A	12	1	
	Fence enabled	N/A	13	1	
	Fence breach	N/A	14	1	
	FREE		15	4	
	Throttle	%	19	7	signed throttle [-100,100] encoded as [-63,63], 7 bits, MSB is sign + 6 bits 0-63 (scale is 0.63)
	IMU Temp	deg C	26	6	0 means temp =< 19°, 63 means temp => 82°
5002	GPS STATUS (1Hz)				
	Num sats	# of sats	0	4	Limit to 15 max
	GPS fix	N/A	4	2	NO_GPS = 0, NO_FIX = 1, GPS_OK_FIX_2D = 2, GPS_OK_FIX_3D or GPS_OK_FIX_3D_DGPS or GPS_OK_FIX_3D_RTK_FLOAT or GPS_OK_FIX_3D_RTK_FIXED = 3
		10^x	6	1	
	Horizontal dilution of precision	decimeters	7	7	
	GPS extended status fix	N/A	14	2	0: no advanced fix, 1: GPS_OK_FIX_3D_DGPS, 2: GPS_OK_FIX_3D_RTK_FLOAT, 3: GPS_OK_FIX_3D_RTK_FIXED
	FREE		16	6	
		10^x	22	2	
		decimeters	24	7	
	Altitude MSL	sign	31	1	
5003	BATT 1 (1Hz)				
	Batt voltage	deci Volts (Vx10)	0	9	
		10^x	9	1	
	Current draw	deci Amps (Ax10)	10	7	
	Total current draw since start-up	mAh	17	15	limit to 32767 (0x7FFF) since value is stored on 15 bits
5004	HOME (2Hz)				
		10^x	0	2	
	Distance between home loc and copter	meters	2	10	
		10^x	12	2	
		decimeters	14	10	
	Altitude between home loc and copter	sign	24	1	
	Angle from front of vehicle to the direction of home	3 degrees	25	7	
5005	VELANDYAW (2Hz)				
		10^x	0	1	
		decimeters/s	1	7	
	Vertical velocity	sign	8	1	5
		10^x	9	1	
	Horizontal velocity	decimeters/s	10	7	
	Yaw	.2 degrees	17	11	
	frame contains airspeed	flag	28	1	
	FREE		29	4	
5006	ATTIANDRNG (Max Hz)				
	Roll	.2 degrees	0	11	
	Pitch	.2 degrees	11	10	
		10^x	21	1	
	Rangefinder distance	centimeters	22	10	

5007	PARAMS (sent 3x each at init)	N/A		8	Reserve first 8 bits for param ID
	1. MAV_TYPE	N/A	0	8	
	2. battery 1 pack capacity	mAh	8	24	
	4. battery 2 pack capacity	mAh	8	24	
	5. capabilities	bitmask	8	24	
5008	BATT 2 (1Hz)				
	Batt voltage	deci Volts (Vx10)	0	9	
		10 [^] x	9	1	
	Current draw	deci Amps (Ax10)	10	7	
	Total current draw since start-up	mAh	17	15	limit to 32767 (0x7FFF) since value is stored on 15 bits
5009	CURRENT WAYPOINT INFO 1Hz				Note:only implemented via scripting or MavToPT
	Current waypoint number		0	10	
		10 [^] x	10	2	
	Waypoint distance	meters	12	10	
		10 [^] x	22	1	
		meters	23	4	
	Crosstrack error	sign	27	1	
	FREE		28	1	
	Waypoint bearing	45° sectors from COG	29	3	
500A	RPM 2Hz				only sent if RPM sensor is present
	rpm1	int16_t	0	16	
	rpm2	int16_t	16	16	
500B	TERRAIN DATA 2Hz				only sent if terrain is enabled
		10 [^] x	0	2	
		decimeters	2	10	
	Vehicle height above terrain	sign	12	1	
	terrain unhealthy (no data available)		13	1	
	FREE		14	18	
500C	Wind estimate 2Hz				
	true wind direction	3 degrees	0	7	
		10 [^] x	7	1	
	true wind speed	decimeters/s	8	7	
	apparent wind direction	3 degrees	15	7	signed [-63,63], 7 bits, MSB is sign + 6 bits 0-63, 3 deg increments is -180,180
		10 [^] x	22	1	
	apparent wind speed	decimeters/s	23	7	
	FREE		30	2	
500D	CURRENT WAYPOINT INFO 1Hz				
	number		0	11	max 2048 waypoints
		10 [^] x	11	2	102Km max distance
	distance	meters	13	10	
	bearing	3 degrees	23	7	
			30	2	