Error codes

Upon detection of an error, the controller enters the Fault task. The Fault task will remain active until a zero setpoint is received; however, if the underlying cause of the fault is not removed, the controller may re-enter the Fault task immediately again.

UAVCAN VSSC (binary)	Failed task	Exit code (decimal)	Description	Comments
10100000_00000001	Idle	160	Observer parameters are invalid	
11000000_00000001	Idle	192	Motor model parameters are invalid	Check the motor parameters and perform the motor identification procedure.
10000000_00000001	Idle	128	Some other parameters are invalid	
00000010_00000001	Idle	2	Hardware test failed	The last run of the task "Hardware Test" has been unsuccessful. Rerun the test to resolve.
00000011_00000001 00000001_00000001	Idle	3 1	Hardware fault	May appear in the following cases: • overcurrent; • overheating of the power stage; • low-voltage power supply (LVPS) failure. Send a zero setpoint to reset the error.
00000001_01000001	Beep	1	Hardware fault	
00000001_01100001	Run	1	Too many stalls	The motor could not be started. Check if the rotor is blocked. If not, check the motor spinup parameters.
00000010_01100001	Run	2	Hardware fault	Refer to the Hardware fault of the Idle task.
00000110_01100001 00000100_01100001	Run	6 4	DC voltage is out of range	Check the the power supply voltage. Check if the voltage is within the allowed range.
00000001_10000001	Hardware Test	1	Hardware fault	Refer to the Hardware fault of the Idle task. This bit is usually set together with other bits. Check the other failures listed below.
00000010_10000001	Hardware Test	2	DC voltage error	This error is similar to the "DC voltage is out of range" error of the Run task.
00000011_10000001	Hardware Test	3	Phase current zero bias error A	The current measurement circuits of the phase A are malfunctioning.
00000100_10000001	Hardware Test	4	Phase current zero bias error B	The current measurement circuits of the phase B are malfunctioning.
00000101_10000001	Hardware Test	5	Phase current error A	Phase A is malfunctioning.
00000110_10000001	Hardware Test	6	Phase current error B	Phase B is malfunctioning.
00000111_10000001	Hardware Test	7	Phase current error C	Phase C is malfunctioning.
00001000_10000001	Hardware Test	8	Phase voltage error A	Phase A is malfunctioning.
00001001_10000001	Hardware Test	9	Phase voltage error B	Phase B is malfunctioning.
00001010_10000001	Hardware Test	10	Phase voltage error C	Phase C is malfunctioning.

00000001_10100001	Motor Identification	1	Resistance subtask failed in R_L or R_L_Flux identification procedure or Flux linkage subtask failed in Flux identification procedure	
00000101_10100001	Motor Identification	3	Inductance subtask failed	
00000101_10100001	Motor Identification	5	Flux linkage subtask failed	
11111111_10100001	Motor Identification	255	Invalid parameters	
11111110_10100001	Motor Identification	254	Invalid sequence	
11111101_10100001	Motor Identification	253	Hardware test failed	The last run of the Hardware Test task has been unsuccessful. Rerun the test to resolve.
11111100_10100001	Motor Identification	252	Sequence not applicable	Check if the parameters `m.resistance`, `m.induct_quad`, and `m.induct_direct` are valid.
11111011_10100001	Motor Identification	251	Hardware fault	
11111010_10100001	Motor Identification	250	Hardware overload	
11111001_10100001	Motor Identification	249	LVPS malfunction	Low-voltage power supply malfunction during motor identification
11111000_10100001	Motor Identification	248	DC voltage is out of range	
11111111_11000001	Low Level Manipulation	255	LVPS malfunction	Low-voltage power supply malfunction
11111110_11000001	Low Level Manipulation	254	Hardware fault	Refer to the Hardware fault of the Idle task.
11111101_11000001	Low Level Manipulation	253	Invalid sub-task	

Alert codes

The following are possible alerts that may appear during normal Telega operation.

UAVCAN VSSC (binary)	Task	Description	Comments
00110000_00000011	Run	Hardware overload flag set (from the VSI driver IC)	If this flag is set below the maximum allowable phase current, the hardware protection operation threshold should be reduced.
00110000_00000001	Run	LVPS malfunction	
00110000_00000010	Run	Phase current measurement malfunction	Check the motor terminal's connection.
00110000_00000011	Run	Hardware test failed	The last run of the task "Hardware Test" has been unsuccessful. Rerun the test to resolve.
00110000_00010000	Run	MCU overheating	Check the heat sink thermal contact or airflow way. It may set if the ESC is overloaded for a long period of time as well.
00110000_00110000	Run	Power stage PCB overheating	
00110000_01010000	Run	Motor overheating	

00110000_10000000	Run	DC link overvoltage	It can appear during braking if the power supply does not allow energy recovery. Use a battery or other bi-directional power source.
00110001_00000000	Run	DC link undervoltage	It can appear during acceleration or load increase, if the power of the source is insufficient or the source has a large value of internal resistance.