|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Parameter** | **Message Fields in BAT** | | **Type** | **Continuous vs One-Time status** | |
|  |  | **Fields** | **Example** |  |  | |
|  |  |  |  |  |  | |
| 1 | **Linear Velocity** | header |  |  | Continuous | |
|  |  | status.values.value | "0.0" | string |
|  |  | status.level | 0=OK(GREEN)  1= WARM(YELLOW)  2 = ERROR(RED)  3 = STALE/NO DATA | byte |
|  |  | status.message | "CONTINUE MAPPING"  OR  "SLOW DOWN"  OR  "ABORT MAPPING and RE-MAP. WALKING TOO FAST"  OR  "NO MOTION DETECTED" | string |
|  |  |  |  |  |  | |
| 2 | **Angular Velocity** | header |  |  | Continuous | |
|  |  | status.values.value | "0.0" | string |
|  |  | status.level | 0=OK(GREEN)  1= WARM(YELLOW)  2 = ERROR(RED)  3 = STALE/NO DATA | byte |
|  |  | status.message | "CONTINUE MAPPING"  OR  "YAW SLOWLY"  OR  "ABORT MAPPING and RE-MAP. YAWING TOO FAST"  OR  "NO DATA" | string |
|  |  |  |  |  |  | |
| 3 | **ToF Complexity** | header |  |  | Continuous | |
|  |  | status.values.value | "0.0" | string |
|  |  | status.level | 0=OK(GREEN)  1= WARM(YELLOW)  2 = ERROR(RED)  3 = STALE/NO DATA | byte |
|  |  | status.message | "CONTINUE MAPPING"  OR  "CONTINUE MAPPING - ENVIRONMENT NOT GOOD ENOUGH, RE-MAP MAY BE REQUIRED"  OR  "ABORT MAPPING and RE-MAP AVOIDING RED MARKED REGIONS" | string |
|  |  |  |  |  |  | |
| 4 | **ToF Density** | header |  |  | Continuous | |
|  |  | status.values.value | "0.0" % | string |
|  |  | status.level | 0=OK(GREEN)  1= WARM(YELLOW)  2 = ERROR(RED)  3 = STALE/NO DATA | byte |
|  |  | status.message | "Continue Mapping" | string |
|  |  |  |  |  |  | |
| 5 | **Vio blowup** | header |  |  |  | |
|  |  | status.level | 0=OK(GREEN)  2 = ERROR(RED)  3 = STALE/NO DATA | byte | Continuous | |
|  |  | status.message | "CONTINUE MAPPING - NO SPIKE OBSERVED IN ODOM"  OR  "ABORT MAPPING. SPIKE DETECTED IN ODOM. RE-MAPPING IS REQUIRED" | string |
|  |  |  |  |  |  | |
| 6 | **Percent Drift** | header |  |  |  | |
|  |  | status.values.value | "0.0" % | string | One-Time  At the end | |
|  |  | status.level | 0=OK(GREEN)  1= WARM(YELLOW)  2 = ERROR(RED)  3 = STALE/NO DATA | byte |
|  |  | status.message | "START-END DRIFT IS GOOD ENOUGH"  OR  "START-END DRIFT SLIGHTLY OFF, MAY REQUIRE REMAPPING"  OR  "START-END DRIFT NOT GOOD ENOUGH, RE-MAPPING REQUIRED"  OR  "NOT YET COMPUTED" | string |
|  |  |  |  |  |  | |
| 7 | **WiFi Strength** | header |  |  |  | |
|  |  | status.values.value | "0.0" | string | Continuous | |
|  |  | status.level | 0=OK(GREEN)  1= WARM(YELLOW)  2 = ERROR(RED)  3 = STALE/NO DATA | byte |
|  |  | status.message | "GOOD WIFI STRENGTH"  OR  "AVG WIFI STRENGTH"  OR  "POOR WIFI STRENGTH"  OR  "NO DATA" | string |
|  |  |  |  |  |  | |
| 8 | **ON GS Bottom Lidar Ambient Rate status** | header |  |  |  | |
|  |  | status.level | 0=OK(GREEN)  2 = ERROR(RED)  3 = STALE/NO DATA | byte | One-Time  At the beginning | |
|  |  | status.message | "CONTINUE MAPPING. ON GS LIDAR AMBIENT RATE IS GOOD."  OR  "ABORT MAPPING. ON GS LIDAR AMBIENT RATE NOT GOOD. CHANGE GS LOCATION"  OR  "NO DATA" | string |
|  |  |  |  |  |  | |
| 9. | **Bottom Lidar Ambient Rate status** | header |  |  |  | |
|  |  | status.level | 0=OK(GREEN)  2 = ERROR(RED)  3 = STALE/NO DATA | byte | Continuous | |
|  |  | status.message | "CONTINUE MAPPING. ON GS LIDAR AMBIENT RATE IS GOOD."  OR  "ABORT MAPPING. ON GS LIDAR AMBIENT RATE NOT GOOD. CHANGE GS LOCATION"  OR  "NO DATA" | string |
|  |  |  |  |  |  | |
| 10 | **Height** | header |  |  |  | |
|  |  | status.values.value | "0.0" | string | Continuous | |
|  |  | status.level | 0=OK(GREEN)  1= WARM(YELLOW)  2 = ERROR(RED)  3 = STALE/NO DATA | byte |
|  |  | status.message | "CONTINUE MAPPING"  OR  "WARNING DRONE HEIGHT IS DECREASING. INCREASE THE HEIGHT"  OR  "WARNING DRONE HEIGHT IS INCREASING. DECREASE THE HEIGHT"  OR  "DRONE HEIGHT NOT ACCEPTABLE. ABORT MAPPING. RE-MAPPING REQUIRED"  OR  "NO DATA" | string |
|  |  |  |  |  |  | |
| 11 | **Tilt(Roll)** | header |  |  |  | |
|  |  | status.values.value | "0.0" | string | Continuous | |
|  |  | status.level | 0=OK(GREEN)  1= WARM(YELLOW)  2 = ERROR(RED)  3 = STALE/NO DATA | byte |
|  |  | status.message | "CONTINUE MAPPING"  OR  "WARNING DRONE IS TILTING LEFT. TILT BACK TO RIGHT"  OR  "WARNING DRONE IS TILTING RIGHT. TILT BACK TO LEFT"  OR  "DRONE TILT NOT ACCEPTABLE. ABORT MAPPING. RE-MAPPING REQUIRED"  OR  "NO DATA" | string |
|  |  |  |  |  |  | |
| 12 | **Tilt(Pitch)** | header |  |  |  | |
|  |  | status.values.value | "0.0" | string | Continuous | |
|  |  | status.level | 0=OK(GREEN)  1= WARM(YELLOW)  2 = ERROR(RED)  3 = STALE/NO DATA | byte |
|  |  | status.message | "CONTINUE MAPPING"  OR  "WARNING DRONE IS TILTING UPWARD. TILT DOWNWARDS"  OR  "WARNING DRONE IS TILTING DOWN. TILT UPWARDS"  OR  "DRONE TILT NOT ACCEPTABLE. ABORT MAPPING. RE-MAPPING REQUIRED"  OR  "NO DATA" | string |