



-  _____
-  _____



XXXXXXXXXXXX XXXXX

```
[XXXXXXXX = "copter" ].
    XXXXX , XXXX , XXXX , XXXX , , , , ..... ,
    , , , XXXX ( A) XXXXX < XXXXX > XXXXX < common-baro- temp-
    comp > Baro XXXX < common baro thrust XX > XXX < XXX > bootloader XX <
    common-bootloader- update >
```

```
[/ ] [XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
XX peanut
XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
XXXXXXXXXXXXXXXXXXXX
```

```
“ XXXXX < common- rcoutput- mapping > XXXXX “XXXXX ”
    XXXXX bootloader XX < common-bootloader- up XX :
```

```
[XX [XX ] [XXXX = "XX "].
```

```
“ XXXX < XXXXX > XXXXX < common- rcoutput- mapping >
    XXXXX “XXXXX ” XXXXX <XXXXXX > bootloader XX <
    common-bootloader- up XX :
```

```
[/ ] [XXXX = "sub"].
```

```
“ XXXXXXX < common- XXXX > XXXX < XXXXX > XX <
    actuator > bootloader XX < common-bootloader- update >
```

```
[/ ]
BLHELI ESXXXX : XX -XXX 32-passthru ( ( compass XX (Advanced)XXXXXX
compass XX (Advanced)
[XXXX = "XX ,copter,rover"].
Compass-less Operation<common-compassless>

[/site] [site wiki="copter"]
```

“ Current Limiting and Voltage Scaling <current-limiting-and-voltage-scaling>

[/site] [site wiki="plane"]

“ Crash Detection <crash-detect>

[/site] [site wiki="plane,copter"]

“ Damaged Motor/Prop RPM Checks <common-tkoff-rpm-min>

[/site]

DisplayPort <common-displayport> DroneCAN Setup <common-uavcan-setup-advanced>
EKF (Extended Kalman Filter) <common-apm-navigation-extended-kalman-filter-overview>
EKF Affinity & Lane Switching <common-ek3-affinity-lane-switching> EKF Sources and
Selection <common-ekf-sources> Ethernet/Network Setup <common-network> Network
Capture <common-network-capture>

[site wiki="copter,rover,sub"]

Fence Failsafes <common-geofencing-landing-page>

[/site] [site wiki="copter"]

“ Flight Options <flight-options>

[/site]

Flight Time Recorder <common-flight-time-recorder>

[site wiki="plane"]

Flight Options <flight-options> Fly-By-Wire Low Altitude Limit <fly-by-wire-low-altitude-limit>

[/site]

FPort Setup <common-FPort-receivers>

[site wiki="plane"]

GeoFencing Failsafe <common-geofencing-landing-page>

[/site]

GPIOs <common-gpios>

[site wiki="plane,copter,rover"]

GPS for Yaw (aka Moving Baseline) <common-gps-for-yaw> GPS for Altitude <common-gps-for-alt>

[/site] [site wiki="copter,plane,rover,blimp,sub"]

“ GPS/Non-GPS Transitions <common-non-gps-to-gps>

[/site]

Ground Control Station Only Operation <common-gcs-only-operation>

[site wiki="copter"]

Ground Effect Compensation <ground-effect-compensation> In-Flight FTT and filter control
<common-imu-fft>

[/site]

IMU Temperature Calibration <common-imutempcal> Independent Watchdog <common-
watchdog>

[site wiki="plane"]

In-Flight FTT and filter control <common-imu-fft>

[/site] [site wiki="plane,rover"]

“ Limiting Maximum Power Draw <common-batt-watt-max>

[/site] [site wiki="rover"]

“ Limiting Maximum Power Draw <batt-watt-max>

[/site]

Limit Cycle Prevention <common-servo-limit-cycle-detection> LUA Scripting <common-lua-
scripts> Magnetic Interference <common-magnetic-interference> Magnetometer GeoPhys
Array <common-hires-mag-array> MAVLink <common-mavlink-configuration> MAVLink2
Packet Signing (Security) <common-MAVLink2-signing>

[site wiki="rover"]

Motor Thrust Scaling <rover-motor-thrust-scaling>

[/site] [site wiki="copter"]

“ Motor Thrust Scaling <motor-thrust-scaling>

[/site]

Moving Vehicle Initialization <common-moving-vehicle-initialization> Multiple Radio Control
Receivers <common-multiple-rx> Multi-Vehicle Flying <common-multi-vehicle-flying>

[site wiki="copter,plane,rover,blimp,sub"]

Non-GPS Navigation <common-non-gps-navigation-landing-page>

[/site]

Notification Devices (LEDs,Buzzer,etc.) <common-ntf-devices>

[site wiki="copter,plane"]

Notch Filter Configuration <common-imu-notch-filtering>

[/site] [site wiki="copter,plane,rover"]

“ Object Avoidance <common-object-avoidance-landing-page> Optical Flow Sensor <common-optical-flow-sensors-landingpage>

[/site]

On Screen Displays (OSD) <common-osd-overview> OSD Parameter Editor <common-paramosd> Parameter List (Full) <parameters> Parameter Lockdown <common-parameter-lockdown> Parameter Name Changes <common-param-name-changes> Parameter Reset <common-parameter-reset>

[site wiki="copter"]

Precision Landing and Loiter <precision-landing-and-loiter>

[/site]

RC Input Channel Mapping (RCMAP) <common-rcmap> RC Options <common-rc-options> Received Signal Strength Indication (RSSI) <common-rssi-received-signal-strength-indication> Redundant Telemetry <common-redundant-telemetry>

[site wiki="plane"]

Reverse Thrust Setup<reverse-thrust-setup>

[/site]

RunCam Camera Configuration and Control <common-camera-runcam> Safety Switch <common-safety-switch-pixhawk> Sensor Position Offset Compensation <common-sensor-offset-compensation> Sensor Testing <common-sensor-testing> Serial Forwarding to DroneCAN <common-serial-over-DroneCAN> Serial Port to Port Passthrough <common-serial-passthrough> Serial Port Configuration <common-serial-options>

[site wiki="plane"]

Ship(Moving Vehicle) Takeoff/Landing <common-ship-landing>

[/site] [site wiki="copter"]

“ Slung Payload <slung-payload> Surface Tracking <terrain-following-manual-modes>

[/site] [site wiki="rover"]

“ Steering Input Type and Reversing Behaviour <rover-steering-input-type-and-reversing-behaviour>

[/site]

Telemetry Port Setup <common-telemetry-port-setup>

[site wiki="copter,planner"]

Terrain Following (Autonomous modes) <terrain-following> Tuning <common-tuning>

[/site] [site wiki="plane"]

- “Terrain Following <common-terrain-following> Transmitter Based Tuning <common-transmitter-tuning>

[/site]

Video Stabilization (Gyroflow) <common-gyroflow> Video Transmitter Control <common-vtx>

```
[site wiki="copter,plane,rover,sub,planner"]
```

UBlox GPS Configuration <common-ublox-gps>

```
[/site] [site wiki="plane,planner,rover,sub"]
```

“ Vibration Damping <common-vibration-damping>

```
[/site] [site wiki="copter"]
```

“ Weathervaning <weathervaning> Windspeed Estimation and Baro Compensation <airspeed-estimation>

[/site]



The last three lines define inputs used internally on the board to monitor various board supply voltages. The first two lines define the voltage and current sense inputs, the next define user analog inputs and the RSSI input. In order to determine which pins numbers are used in ArduPilot parameters, one more lookup step is required:

- After determining which cpu is used in the autopilot, the pin numbers corresponding to the cpu pins can be determined from the [cpu's definition table here](#). In the above example, the cpu is STM32H743, and looking at the bottom of its [definition file](#), you can find its cpu to ardupilot pin tables:

```
ADC1_map = {
# format is PIN : ADC1_CHAN
"PF11" : 2,
"PA6" : 3,
"PC4" : 4,
"PB1" : 5,
"PF12" : 6,
"PA7" : 7,
"PC5" : 8,
"PB0" : 9,
"PC0" : 10,
"PC1" : 11,
"PC2" : 12,
"PC3" : 13,
"PA2" : 14,
"PA3" : 15,
"PA0" : 16,
"PA1" : 17,
"PA4" : 18,
"PA5" : 19,
}
```

and for ADC1, the power monitor voltage input, PA0, would be ArduPilot pin "16", the RSSI input, PF12, would correspond to ArduPilot pin "6", etc. and these pin values would be used in the appropriate `_PIN` parameter.

