XML Files Configuration:

|  |  |
| --- | --- |
| Parent | Chile Elements |
| Aircraft(conf/conf.xml) | Airframe(conf/airframes.xml) |
| Radios(conf/radios.xml) |
| Telemetry(conf/telemetry.xml) |
| Flight\_plan(conf/flight\_plans.xml) |
| Settings(conf/settings.xml) |

|  |  |  |  |
| --- | --- | --- | --- |
| Parent | Chile Elements | Value | Generates |
| airframe(conf/airframes.xml) | Firmware | Fixedwing/rotorcraft | airframe.h |
| Modules | ADC/Openlog/Servo Switch |
| Section | Simu/Failsafe/Horizontal\_control  /Vertical\_Control |
| Command\_laws | For creating variables based upon rc\_commands |
| rc\_commands | Value of Commands |
| Commands | Throttle,Roll,Pitch,Shutter |
| Servos |  |

|  |  |  |
| --- | --- | --- |
| Parent Element | Child Elements | Value |
| Firmware(fixedwing) | Subsystem | (Radio/Telemetry/imu/ahrs/gps) |
| Target | (ap/sim) |

Makefiles and Configurations

|  |  |
| --- | --- |
| MakeFileName | FirmwareName |
| firmwareName.makefile | Fixedwing.makefile |
| Rotorcraft.makefile |

|  |  |  |
| --- | --- | --- |
| Board Types | MakeFIleName | MakeFile Contents |
|  |  | Board\_Name |
| Board\_Version |
| Board\_Configuration : configuration.h |
| ARCH=stm32 or lpc21xx |
| PORTS on Board= Default |

|  |  |
| --- | --- |
| SubSytems | MakefileName |
| Gps,IMU,AHRS,Radio\_control,  Telemetry,Actuators, Stablization | name.makefile |
|
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|
|
|

Example Configuration:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Configutaion** | **SubSystems** | | |  |
| Board=PC | **radio\_control\_ppm** | **telemetry\_xbee\_api** | **Control** | **imu\_analog** |
| Arch=Sim | subsystem/radio\_control.c | subsystems/datalink/downlink.c | $(SRC\_FIRMWARE)/stabilization/stabilization\_attitude.c | $(SRC\_SUBSYSTEMS)/imu.c-For LPC-21 |
| Board\_CFg=boards\tiny\_sim.h | subsystem/radio\_control/ppm.c | subsystems/datalink/xbee.c | $(SRC\_FIRMWARE)/guidance/guidance\_v.c | $(SRC\_SUBSYSTEMS)/imu/imu\_analog.c-For LPC-21 |
|  | src\_Arch/radio\_control/ppm\_arch.c | $(SRC\_FIRMWARE)/datalink.c | \"firmwares/fixedwing/guidance/guidance\_v.h\" | $(imu\_srcs) |
|  | subsystem/radio\_control/ppm.h |  |  |  |

|  |  |  |
| --- | --- | --- |
| **AHRS\_INFRARED** | **gps\_ublox\_utm** | **Navigation** |
| subsystems/ahrs/ahrs\_infrared.h\" | Taget ap=\"subsystems/gps/gps\_ubx.h\" | $(SRC\_SUBSYSTEMS)/navigation/nav\_line.c |
| $(SRC\_SUBSYSTEMS)/ahrs.c | ap.srcs += $(SRC\_SUBSYSTEMS)/gps/gps\_ubx.c | $(TARGET).srcs += $(SRC\_SUBSYSTEMS)/navigation/nav\_survey\_rectangle.c |
| $(SRC\_SUBSYSTEMS)/ahrs/ahrs\_infrared.c | $(TARGET).srcs += $(SRC\_SUBSYSTEMS)/gps.c | $(TARGET).srcs += $(SRC\_SUBSYSTEMS)/navigation/traffic\_info.c |
|  | sim.CFLAGS ="subsystems/gps/gps\_sim.h\" | $(TARGET).srcs += $(SRC\_SUBSYSTEMS)/navigation/common\_flight\_plan.c |
|  | sim.srcs += $(SRC\_SUBSYSTEMS)/gps/gps\_sim.c | $(TARGET).srcs += $(SRC\_SUBSYSTEMS)/nav.c |