

```
Willy@17-04-2014-MEDI MINGW64 ~
$ cd Documents/GitHub/ardupilot
```

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Willy@17-04-2014-MEDI MINGW64 ~/Documents/GitHub/ardupilot (MisRel_3)
```

```
$ git checkout master
Updating files: 100% (1519/1519), done.
Switched to branch 'master'
M      modules/mavlink
Your branch is up to date with 'origin/master'.
```

```
Willy@17-04-2014-MEDI MINGW64 ~/Documents/GitHub/ardupilot (master)
```

```
$ git pull upstream master
remote: Enumerating objects: 239, done.
remote: Counting objects: 100% (239/239), done.
remote: Compressing objects: 100% (11/11), done.
remote: Total 312 (delta 228), reused 238 (delta 228), pack-reused 73
Receiving objects: 100% (312/312), 891.47 KiB | 3.19 MiB/s, done.
Resolving deltas: 100% (236/236), completed with 97 local objects.
From https://github.com/ArduPilot/ardupilot
```

```
* branch      master      -> FETCH_HEAD
   908b348c31..0bf0fbe687 master  -> upstream/master
Updating files: 100% (1556/1556), done.
Updating 9d6a138680..0bf0fbe687
```

```
Fast-forward
 .dockerignore                | 2 +-
 .github/CONTRIBUTING.md     | 16 +-
 .github/workflows/test_chibios.yml | 72 +
 .github/workflows/test_linux_sbc.yml | 66 +
 .github/workflows/test_replay.yml | 65 +
 .github/workflows/test_sitl_copter.yml | 220 +
 .github/workflows/test_sitl_periph.yml | 114 +
 .github/workflows/test_sitl_plane.yml | 117 +
 .github/workflows/test_sitl_rover.yml | 117 +
 .github/workflows/test_sitl_sub.yml | 116 +
 .github/workflows/test_sitl_tracker.yml | 116 +
 .github/workflows/test_unit_tests.yml | 65 +
 .gitignore                   | 7 +
 .travis.yml                  | 31 +-
 AntennaTracker/Parameters.cpp | 45 +-
 AntennaTracker/Parameters.h   | 7 +-
 AntennaTracker/mode_auto.cpp  | 2 +-
 AntennaTracker/system.cpp     | 11 +-
 AntennaTracker/version.h      | 2 +
 ArduCopter/APM_Config.h       | 1 -
 ArduCopter/AP_Arming.cpp      | 120 +-
 ArduCopter/AP_Arming.h        | 2 +
 ArduCopter/AP_State.cpp       | 13 +-
 ArduCopter/Attitude.cpp      | 18 -
 ArduCopter/Copter.cpp        | 104 +-
 ArduCopter/Copter.h          | 65 +-
 ArduCopter/GCS_Copter.cpp     | 4 +-
 ArduCopter/GCS_Mavlink.cpp    | 210 +-
 ArduCopter/GCS_Mavlink.h      | 5 +
 ArduCopter/Log.cpp            | 27 +-
 ArduCopter/Parameters.cpp     | 114 +-
 ArduCopter/Parameters.h       | 33 +-
 ArduCopter/RC_Channel.cpp     | 224 +-
 ArduCopter/RC_Channel.h       | 9 +-
 ArduCopter/ReleaseNotes.txt   | 117 +
 ArduCopter/autoyaw.cpp        | 10 +-
 ArduCopter/avoidance_adsb.cpp | 12 +-
 ArduCopter/avoidance_adsb.h   | 2 +-
 ArduCopter/baro_ground_effect.cpp | 18 +-
 ArduCopter/config.h           | 32 +-
 ArduCopter/crash_check.cpp    | 40 +-
 ArduCopter/defines.h          | 22 +-
 ArduCopter/ekf_check.cpp      | 20 +-
 ArduCopter/events.cpp         | 23 +-
 ArduCopter/heli.cpp           | 14 +-
 ArduCopter/land_detector.cpp  | 7 +-
 ArduCopter/landing_gear.cpp   | 14 -
 ArduCopter/mode.cpp           | 47 +-
 ArduCopter/mode.h             | 130 +-
 ArduCopter/mode_acro.cpp      | 29 +-
 ArduCopter/mode_acro_heli.cpp | 6 +-
 ArduCopter/mode_auto.cpp      | 98 +-
 ArduCopter/mode_autotune.cpp  | 2 +-
 ArduCopter/mode_flowhold.cpp  | 10 +-
 ArduCopter/mode_guided.cpp    | 184 +-
 ArduCopter/mode_poshold.cpp   | 26 +-

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ArduCopter/mode_rtl.cpp	36	+-
ArduCopter/mode_smart_rtl.cpp	23	+-
ArduCopter/mode_throw.cpp	8	+-
ArduCopter/mode_zigzag.cpp	288	+-
ArduCopter/motor_test.cpp	8	+-
ArduCopter/motors.cpp	2	+
ArduCopter/precision_landing.cpp	2	+-
ArduCopter/radio.cpp	2	+-
ArduCopter/sensors.cpp	20	+-
ArduCopter/system.cpp	85	+-
ArduCopter/takeoff.cpp	9	+-
ArduCopter/toy_mode.cpp	4	+-
ArduCopter/tuning.cpp	10	-
ArduCopter/version.cpp	49	-
ArduCopter/version.h	10	+-
ArduPlane/AP_Arming.cpp	44	+-
ArduPlane/AP_Arming.h	5	+
ArduPlane/ArduPlane.cpp	201	+-
ArduPlane/Attitude.cpp	52	+-
ArduPlane/GCS_Mavlink.cpp	223	+-
ArduPlane/GCS_Mavlink.h	1	+
ArduPlane/GCS_Plane.cpp	1	+
ArduPlane/Log.cpp	208	+-
ArduPlane/Parameters.cpp	125	+-
ArduPlane/Parameters.h	17	+-
ArduPlane/Plane.h	340	+-
ArduPlane/RC_Channel.cpp	184	+-
ArduPlane/RC_Channel.h	15	+-
ArduPlane/altitude.cpp	44	+-
ArduPlane/avoidance_adsb.cpp	17	+-
ArduPlane/avoidance_adsb.h	2	+-
ArduPlane/commands_logic.cpp	46	+-
ArduPlane/config.h	17	+-
ArduPlane/control_modes.cpp	8	+
ArduPlane/defines.h	26	+
ArduPlane/ekf_check.cpp	178	+
ArduPlane/events.cpp	2	+
ArduPlane/geofence.cpp	28	+-
ArduPlane/is_flying.cpp	2	+
ArduPlane/mode.cpp	23	+-
ArduPlane/mode.h	78	+
ArduPlane/mode_auto.cpp	9	+-
ArduPlane/mode_avoidADSB.cpp	10	+
ArduPlane/mode_cruise.cpp	49	+-
ArduPlane/mode_fbwb.cpp	2	+-
ArduPlane/mode_guided.cpp	6	+
ArduPlane/mode_loiter.cpp	14	+-
ArduPlane/mode_rtl.cpp	72	+
ArduPlane/mode_takeoff.cpp	14	+-
ArduPlane/mode_thermal.cpp	151	+
ArduPlane/navigation.cpp	111	+-
ArduPlane/parachute.cpp	1	+
ArduPlane/quadplane.cpp	521	+-
ArduPlane/quadplane.h	73	+-
ArduPlane/radio.cpp	18	+-
ArduPlane/release-notes.txt	325	+-
ArduPlane/reverse_thrust.cpp	4	+
ArduPlane/servos.cpp	152	+-
ArduPlane/soaring.cpp	173	+-
ArduPlane/system.cpp	58	+-
ArduPlane/tailsitter.cpp	138	+-
ArduPlane/takeoff.cpp	6	+-
ArduPlane/tiltrotor.cpp	215	+-
ArduPlane/version.cpp	49	-
ArduPlane/version.h	1	+
ArduSub/AP_Arming_Sub.cpp	9	+-
ArduSub/ArduSub.cpp	61	+-
ArduSub/GCS_Mavlink.cpp	3	+-
ArduSub/GCS_Mavlink.h	2	-
ArduSub/Log.cpp	10	+-
ArduSub/Parameters.cpp	19	+-
ArduSub/Parameters.h	5	+-
ArduSub/ReleaseNotes.txt	31	+
ArduSub/Sub.h	15	+-
ArduSub/commands_logic.cpp	2	+-
ArduSub/config.h	14	-
ArduSub/control_althold.cpp	10	+-
ArduSub/control_auto.cpp	8	+-
ArduSub/control_guided.cpp	6	+-
ArduSub/control_poshold.cpp	67	+-

ArduSub/failsafe.cpp	3	+-
ArduSub/flight_mode.cpp	4	+-
ArduSub/joystick.cpp	2	+-
ArduSub/sensors.cpp	8	+
ArduSub/system.cpp	51	+-
ArduSub/version.cpp	49	-
ArduSub/version.h	8	+-
BUILD.md	9	+-
Dockerfile	8	+-
README.md	10	+-
Rover/AP_Arming.cpp	27	+-
Rover/AP_MotorsUGV.cpp	43	+-
Rover/AP_MotorsUGV.h	23	+-
Rover/GCS_Mavlink.cpp	81	+-
Rover/GCS_Mavlink.h	1	+
Rover/Parameters.cpp	20	+-
Rover/Parameters.h	2	+-
Rover/RC_Channel.cpp	40	+-
Rover/RC_Channel.h	8	+-
Rover/Rover.cpp	111	+-
Rover/Rover.h	20	+-
Rover/commands.cpp	2	+-
Rover/config.h	7	-
Rover/defines.h	6	+-
Rover/ekf_check.cpp	10	+-
Rover/mode.cpp	100	+-
Rover/mode.h	28	+-
Rover/mode_auto.cpp	2	+-
Rover/mode_guided.cpp	43	+
Rover/mode_loiter.cpp	6	+-
Rover/mode_manual.cpp	8	+
Rover/radio.cpp	17	+
Rover/system.cpp	14	+-
Rover/version.cpp	49	-
Rover/version.h	2	+
Tools/AP_Bootloader/AP_Bootloader.cpp	13	+-
Tools/AP_Bootloader/README.md	5	+-
Tools/AP_Bootloader/bl_protocol.cpp	62	+-
Tools/AP_Bootloader/bl_protocol.h	2	-
Tools/AP_Bootloader/board_types.txt	105	+
Tools/AP_Bootloader/can.cpp	96	+-
Tools/AP_Bootloader/support.cpp	65	+-
Tools/AP_Bootloader/support.h	3	+
Tools/AP_Periph/AP_Periph.cpp	173	+-
Tools/AP_Periph/AP_Periph.h	48	+-
Tools/AP_Periph/Parameters.cpp	22	+-
Tools/AP_Periph/Parameters.h	11	+-
Tools/AP_Periph/README.md	75	+
Tools/AP_Periph/adsb.cpp	20	+-
Tools/AP_Periph/can.cpp	363	+-
Tools/AP_Periph/hwing_esc.cpp	7	+-
Tools/AP_Periph/msp.cpp	207	+
Tools/AP_Periph/release-notes.txt	46	+
Tools/AP_Periph/version.cpp	49	+-
Tools/AP_Periph/version.h	11	+-
Tools/AP_Periph/wscript	5	+-
Tools/CodeStyle/ardupilot-astyle.sh	8	+-
Tools/CodeStyle/xmlpretty.py	88	-
Tools/Frame_params/Parrot_Disco/rcS_mode_default	4	+-
Tools/Frame_params/Solo_Copter-3.6_GreenCube.param	1	-
Tools/Frame_params/Sub/bluerov2-3_5.params	5	-
Tools/Frame_params/Sub/bluerov2-3_5_2.params	5	-
Tools/Frame_params/Sub/bluerov2-heavy-3_5_2.params	5	-
Tools/Frame_params/boogie-board-boat.param	23	+
Tools/Frame_params/eLAB_LAB445_AC34.param	1	-
Tools/Frame_params/hexsoon-edu450.param	2	-
Tools/GIT_Test/GIT_Success.txt	11	+
Tools/IO_Firmware/iofirmware_highpolh.bin	Bin 38264	-> 41436 bytes
Tools/IO_Firmware/iofirmware_lowpolh.bin	Bin 38264	-> 41436 bytes
Tools/Linux_HAL_Essentials/pru/aiopru/Makefile	7	+-
Tools/Linux_HAL_Essentials/pru/aiopru/RCAioPRU.p	82	+-
.../Linux_HAL_Essentials/pru/aiopru/RCAioPRUTest.c	158	+-
.../pru/aiopru/RCAioPRU_BBBLUE_bin.h	31	+-
.../pru/aiopru/RCAioPRU_BBMINI_bin.h	39	+-
.../pru/aiopru/RCAioPRU_POCKET_bin.h	27	+-
Tools/Linux_HAL_Essentials/pru/aiopru/start_test	12	+
Tools/LogAnalyzer/DataflashLog.py	42	+-
Tools/LogAnalyzer/tests/TestAutotune.py	2	+-
Tools/LogAnalyzer/tests/TestDupeLogData.py	2	+-
Tools/LogAnalyzer/tests/TestMotorBalance.py	7	+-

Tools/LogAnalyzer/tests/TestParams.py	2	+-	
Tools/LogAnalyzer/tests/TestPitchRollCoupling.py	2	+-	
Tools/Replay/DataFlashFileReader.cpp	33	+-	
Tools/Replay/DataFlashFileReader.h	2	+-	
Tools/Replay/LR_MsgHandler.cpp	546	+-	
Tools/Replay/LR_MsgHandler.h	428	+-	
Tools/Replay/LogReader.cpp	494	+-	
Tools/Replay/LogReader.h	72	+-	
Tools/Replay/Makefile	6	+-	
Tools/Replay/MsgHandler.cpp	62	+-	
Tools/Replay/MsgHandler.h	7	+-	
Tools/Replay/Parameters.h	3	+-	
Tools/Replay/Replay.cpp	852	+-	
Tools/Replay/Replay.h	173	+-	
Tools/Replay/check_replay.py	98	+	
Tools/Replay/check_replay_branch.py	191	+	
Tools/Replay/wscript	6	+-	
Tools/ardupilotwaf/ap_library.py	36	+	
Tools/ardupilotwaf/ardupilotwaf.py	15	+-	
Tools/ardupilotwaf/boards.py	127	+-	
Tools/ardupilotwaf/build_summary.py	2	+-	
Tools/ardupilotwaf/chibios.py	26	+-	
Tools/ardupilotwaf/gbenchmark.py	5	+-	
.../CANGPSCopterMission/copter_mission.txt	14	+	
.../ArduPlane_Tests/Deadreckoning/flaps.txt	13	+	
.../ArduPlane_Tests/Terrain/ap-terrain.txt	9	+	
.../MAVProxy_SetModeUsingSwitch/test_arming.txt	4	+	
.../Generic_Missions/CMAC-copter-circuit.txt	8	+	
.../Generic_Missions/CMAC-loiter-to-alt.txt	6	+	
Tools/autotest/arducopter.py	2276	+++++--	
Tools/autotest/arduplane.py	363	+-	
Tools/autotest/ardusub.py	108	+-	
Tools/autotest/autotest.py	208	+-	
Tools/autotest/balancebot.py	7	+-	
Tools/autotest/bisect-helper.py	99	+-	
Tools/autotest/build-with-disabled-features.py	4	+-	
Tools/autotest/common.py	3476	+++++++--	
Tools/autotest/default_params/copter-deca.parm	1	+	
Tools/autotest/default_params/copter.parm	20	+-	
Tools/autotest/default_params/msposd.parm	3	+	
Tools/autotest/default_params/plane-soaring.parm	5	+-	
Tools/autotest/default_params/quadplane.parm	11	+-	
Tools/autotest/default_params/sub.parm	16	+-	
Tools/autotest/default_params/vee-gull 005.parm	8	-	
Tools/autotest/examples.py	17	+	
Tools/autotest/fg_plane_view.bat	1	-	
Tools/autotest/fg_plane_view.sh	1	-	
Tools/autotest/fg_quad_view.bat	1	-	
Tools/autotest/fg_quad_view.sh	1	-	
Tools/autotest/locations.txt	3	+	
Tools/autotest/logger_metadata/parse.py	1	+	
Tools/autotest/models/Callisto.json	58	+	
Tools/autotest/models/Callisto.param	54	+	
Tools/autotest/param_metadata/param.py	6	+-	
Tools/autotest/param_metadata/param_parse.py	80	+-	
Tools/autotest/param_metadata/xmlemit.py	49	+-	
Tools/autotest/param_metadata/xmlemit_mp.py	93	+	
Tools/autotest/pysim/util.py	83	+-	
Tools/autotest/pysim/vehicleinfo.py	18	+	
Tools/autotest/quadplane.py	263	+-	
Tools/autotest/rover.py	510	+-	
Tools/autotest/sim_vehicle.py	127	+-	
Tools/autotest/web-firmware/index.html	15	+-	
Tools/autotest/web/css/main.css	22	+-	
Tools/autotest/web/index.html	36	+-	
Tools/bootloaders/CUAV-Nora_bl.bin	Bin	17452	-> 17452 bytes
Tools/bootloaders/CUAV-Nora_bl.elf	Bin	511056	-> 511168 bytes
Tools/bootloaders/CUAV-Nora_bl.hex	12	+-	
Tools/bootloaders/CUAV_GPS_bl.bin	Bin	17984	-> 18188 bytes
Tools/bootloaders/CUAV_GPS_bl.elf	Bin	389252	-> 390556 bytes
Tools/bootloaders/CUAV_GPS_bl.hex	2003	+++---	
Tools/bootloaders/CubeOrange_bl.bin	Bin	17388	-> 17372 bytes
Tools/bootloaders/CubeOrange_bl.elf	Bin	511092	-> 512200 bytes
Tools/bootloaders/CubeOrange_bl.hex	315	+-	
Tools/bootloaders/HitecMosaic_bl.bin	Bin	0	-> 17548 bytes
Tools/bootloaders/HitecMosaic_bl.elf	Bin	0	-> 376284 bytes
Tools/bootloaders/HitecMosaic_bl.hex	1099	+++	
Tools/bootloaders/KakuteF7Mini_bl.bin	Bin	14536	-> 14536 bytes
Tools/bootloaders/KakuteF7Mini_bl.elf	Bin	423408	-> 421816 bytes
Tools/bootloaders/KakuteF7Mini_bl.hex	4	+-	

Tools/bootloaders/KakuteF7_bl.bin	Bin 14528 -> 14528 bytes
Tools/bootloaders/KakuteF7_bl.elf	Bin 423404 -> 421808 bytes
Tools/bootloaders/KakuteF7_bl.hex	4 +-
Tools/bootloaders/MambaF405v2_bl.bin	Bin 0 -> 13920 bytes
Tools/bootloaders/MambaF405v2_bl.hex	872 +++
Tools/bootloaders/Pix32v5_bl.bin	Bin 0 -> 16448 bytes
Tools/bootloaders/Pix32v5_bl.elf	Bin 0 -> 494436 bytes
Tools/bootloaders/Pix32v5_bl.hex	1030 +++
Tools/bootloaders/QioTekZealotF427_bl.bin	Bin 0 -> 16064 bytes
.../{fmuv4_bl.elf => QioTekZealotF427_bl.elf}	Bin 486452 -> 486568 bytes
Tools/bootloaders/QioTekZealotF427_bl.hex	1006 +++
Tools/bootloaders/f103-ADSB_bl.bin	Bin 16744 -> 16948 bytes
Tools/bootloaders/f103-ADSB_bl.elf	Bin 365912 -> 366704 bytes
Tools/bootloaders/f103-ADSB_bl.hex	1865 +++----
Tools/bootloaders/f103-Airspeed_bl.bin	Bin 0 -> 16940 bytes
Tools/bootloaders/f103-Airspeed_bl.elf	Bin 0 -> 366704 bytes
Tools/bootloaders/f103-Airspeed_bl.hex	1061 +++
Tools/bootloaders/f103-GPS_bl.bin	Bin 16736 -> 16940 bytes
Tools/bootloaders/f103-GPS_bl.hex	1863 +++----
Tools/bootloaders/f103-HWESC_bl.bin	Bin 16744 -> 16948 bytes
Tools/bootloaders/f103-HWESC_bl.hex	1865 +++----
Tools/bootloaders/f103-RangeFinder_bl.bin	Bin 16744 -> 16948 bytes
Tools/bootloaders/f103-RangeFinder_bl.elf	Bin 365920 -> 366712 bytes
Tools/bootloaders/f103-RangeFinder_bl.hex	1865 +++----
Tools/bootloaders/f103-Trigger_bl.bin	Bin 16744 -> 16948 bytes
Tools/bootloaders/f103-Trigger_bl.elf	Bin 365916 -> 366708 bytes
Tools/bootloaders/f103-Trigger_bl.hex	1865 +++----
Tools/bootloaders/f103-periph_bl.bin	Bin 16728 -> 16932 bytes
Tools/bootloaders/f103-periph_bl.elf	Bin 365916 -> 366708 bytes
Tools/bootloaders/f103-periph_bl.hex	1861 +++----
Tools/bootloaders/f303-GPS_bl.bin	Bin 17272 -> 17476 bytes
Tools/bootloaders/f303-GPS_bl.hex	1913 +++----
Tools/bootloaders/f303-HWESC_bl.bin	Bin 17272 -> 17476 bytes
Tools/bootloaders/f303-HWESC_bl.hex	1911 +++----
Tools/bootloaders/f303-M10025_bl.bin	Bin 17272 -> 17476 bytes
Tools/bootloaders/f303-M10025_bl.hex	1913 +++----
Tools/bootloaders/f303-M10070_bl.bin	Bin 0 -> 17476 bytes
Tools/bootloaders/f303-M10070_bl.elf	Bin 0 -> 376040 bytes
Tools/bootloaders/f303-M10070_bl.hex	1095 +++
Tools/bootloaders/f303-MatekGPS_bl.bin	Bin 0 -> 17476 bytes
Tools/bootloaders/f303-MatekGPS_bl.elf	Bin 0 -> 376044 bytes
Tools/bootloaders/f303-MatekGPS_bl.hex	1095 +++
Tools/bootloaders/f303-Universal_bl.bin	Bin 17280 -> 17484 bytes
Tools/bootloaders/f303-Universal_bl.elf	Bin 375284 -> 376044 bytes
Tools/bootloaders/f303-Universal_bl.hex	1911 +++----
Tools/bootloaders/f303-periph_bl.bin	Bin 17256 -> 17460 bytes
Tools/bootloaders/f303-periph_bl.hex	1905 +++----
Tools/bootloaders/fmuv4_bl.bin	Bin 16048 -> 0 bytes
Tools/bootloaders/fmuv4_bl.hex	1005 ---
Tools/bootloaders/mRoControlZeroOEMH7_bl.bin	Bin 0 -> 15548 bytes
Tools/bootloaders/mRoControlZeroOEMH7_bl.elf	Bin 0 -> 487692 bytes
Tools/bootloaders/mRoControlZeroOEMH7_bl.hex	974 +++
Tools/bootloaders/mRoPixracerPro_bl.bin	Bin 0 -> 17292 bytes
Tools/bootloaders/mRoPixracerPro_bl.elf	Bin 0 -> 571764 bytes
Tools/bootloaders/mRoPixracerPro_bl.hex	1083 +++
Tools/bootloaders/mRoX21-777_bl.bin	Bin 16560 -> 16568 bytes
Tools/bootloaders/mRoX21-777_bl.elf	Bin 495292 -> 495400 bytes
Tools/bootloaders/mRoX21-777_bl.hex	1343 +++--
Tools/bootloaders/omnibusf4pro_bl.bin	Bin 14104 -> 14104 bytes
Tools/bootloaders/omnibusf4pro_bl.elf	Bin 418596 -> 417004 bytes
Tools/bootloaders/omnibusf4pro_bl.hex	4 +-
Tools/completion/bash/_ap_bin	1 +
Tools/completion/bash/_sim_vehicle	11 +-
Tools/completion/zsh/_ap_autotest	59 +-
Tools/completion/zsh/_ap_bin	1 +
Tools/completion/zsh/_sim_vehicle	25 +-
.../environment_install/install-prereqs-ubuntu.sh	81 +-
.../install-prereqs-windows.ps1	2 +-
Tools/mavproxy_modules/sitl_calibration.py	10 +-
Tools/scripts/bin2hex.py	2 +-
Tools/scripts/build_binaries.py	28 +-
Tools/scripts/build_binaries_history.py	10 +-
Tools/scripts/build_ci.sh	76 +-
Tools/scripts/build_log_message_documentation.sh	2 +
Tools/scripts/build_parameters.sh	2 +
Tools/scripts/configure-ci.sh	21 +-
Tools/scripts/decode-ICSR.py	87 -
Tools/scripts/decode_ICSR.py	157 +
Tools/scripts/decode_devid.py	23 +-
Tools/scripts/decode_watchdog.py	252 +

Tools/scripts/firmware_version_decoder.py	231	+
Tools/scripts/generate_manifest.py	21	+ -
Tools/scripts/generate_mp_paramfile.sh	45	+
Tools/scripts/runcoptertest.py	58	+
Tools/scripts/runfliptest.py	2	+ -
Tools/scripts/runplanetest.py	21	+ -
Tools/scripts/tfminiplus.py	2	+ -
Tools/scripts/uploader.py	60	+ -
Tools/vagrant/initvagrant.sh	12	-
Vagrantfile	36	+ -
.../AC_AttitudeControl/AC_AttitudeControl.cpp	9	+ -
.../AC_AttitudeControl/AC_AttitudeControl_Heli.cpp	24	+
.../AC_AttitudeControl_Multi.cpp	24	+
.../AC_AttitudeControl/AC_AttitudeControl_Sub.cpp	24	+
libraries/AC_AttitudeControl/AC_PosControl.cpp	52	+ -
libraries/AC_AutoTune/AC_AutoTune.cpp	20	+
libraries/AC_AutoTune/AC_AutoTune.h	6	+ -
libraries/AC_Autorotation/AC_Autorotation.cpp	19	+ -
libraries/AC_Autorotation/AC_Autorotation.h	8	+ -
libraries/AC_Avoidance/AC_Avoid.cpp	348	+ -
libraries/AC_Avoidance/AC_Avoid.h	39	+ -
libraries/AC_Avoidance/AP_OABendyRuler.cpp	364	+ -
libraries/AC_Avoidance/AP_OABendyRuler.h	54	+ -
libraries/AC_Avoidance/AP_OADatabase.cpp	43	+ -
libraries/AC_Avoidance/AP_OADatabase.h	5	+ -
libraries/AC_Avoidance/AP_OADijkstra.cpp	48	+ -
libraries/AC_Avoidance/AP_OADijkstra.h	3	+
libraries/AC_Avoidance/AP_OAPathPlanner.cpp	106	+ -
libraries/AC_Avoidance/AP_OAPathPlanner.h	21	+ -
libraries/AC_Fence/AC_Fence.cpp	23	+ -
libraries/AC_Fence/AC_PolyFence_loader.cpp	20	+ -
libraries/AC_Fence/AC_PolyFence_loader.h	3	+
libraries/AC_PID/AC_HELI_PID.cpp	8	+
libraries/AC_PID/AC_HELI_PID.h	2	+ -
libraries/AC_PID/AC_PID.cpp	41	+ -
libraries/AC_PID/AC_PID.h	16	+ -
libraries/AC_PrecLand/AC_PrecLand.cpp	2	+ -
libraries/AC_WPNav/AC_Circle.cpp	28	+ -
libraries/AC_WPNav/AC_Circle.h	10	+ -
libraries/AC_WPNav/AC_WPNav.h	3	-
libraries/AC_WPNav/AC_WPNav_OA.cpp	10	+ -
libraries/AC_WPNav/AC_WPNav_OA.h	1	+
libraries/APM_Control/AP_PitchController.cpp	60	+ -
libraries/APM_Control/AP_PitchController.h	12	+ -
libraries/APM_Control/AP_RollController.cpp	55	+ -
libraries/APM_Control/AP_RollController.h	10	+
libraries/APM_Control/AP_SteerController.cpp	10	+ -
libraries/APM_Control/AP_AttitudeControl.cpp	63	+ -
libraries/AP_ADSB/AP_ADSB.cpp	510	+ -
libraries/AP_ADSB/AP_ADSB.h	133	+ -
libraries/AP_ADSB/AP_ADSB_Backend.cpp	30	+
libraries/AP_ADSB/AP_ADSB_Backend.h	41	+
libraries/AP_ADSB/AP_ADSB_uAvionix_MAVLink.cpp	259	+
libraries/AP_ADSB/AP_ADSB_uAvionix_MAVLink.h	44	+
libraries/AP_AHRS/AP_AHRS.cpp	26	+ -
libraries/AP_AHRS/AP_AHRS.h	91	+ -
libraries/AP_AHRS/AP_AHRS_DCM.cpp	72	+ -
libraries/AP_AHRS/AP_AHRS_DCM.h	16	+
libraries/AP_AHRS/AP_AHRS_NavEKF.cpp	434	+ -
libraries/AP_AHRS/AP_AHRS_NavEKF.h	67	+ -
libraries/AP_AHRS/AP_AHRS_View.cpp	4	+ -
libraries/AP_AHRS/AP_AHRS_View.h	4	+ -
.../AP_AdvancedFailsafe/AP_AdvancedFailsafe.cpp	2	+ -
libraries/AP_Airspeed/AP_Airspeed.cpp	134	+ -
libraries/AP_Airspeed/AP_Airspeed.h	32	+ -
libraries/AP_Airspeed/AP_Airspeed_Backend.h	21	+ -
libraries/AP_Airspeed/AP_Airspeed_Health.cpp	85	+ -
libraries/AP_Airspeed/AP_Airspeed_MSP.cpp	68	+
libraries/AP_Airspeed/AP_Airspeed_MSP.h	35	+
libraries/AP_Airspeed/AP_Airspeed_NMEA.cpp	218	+
libraries/AP_Airspeed/AP_Airspeed_NMEA.h	67	+
libraries/AP_Airspeed/AP_Airspeed_SDP3X.cpp	6	+ -
libraries/AP_Airspeed/AP_Airspeed_SDP3X.h	2	+ -
libraries/AP_Airspeed/AP_Airspeed_UAVCAN.cpp	19	+ -
libraries/AP_Airspeed/Airspeed_Calibration.cpp	3	+ -
libraries/AP_Airspeed/models/NMEA_Sensor.m	55	+
libraries/AP_Arming/AP_Arming.cpp	140	+ -
libraries/AP_Arming/AP_Arming.h	14	+
libraries/AP_Avoidance/AP_Avoidance.cpp	14	+ -
libraries/AP_Avoidance/AP_Avoidance.h	19	+ -

libraries/AP_BLHeli/AP_BLHeli.cpp	61	+-
libraries/AP_BLHeli/AP_BLHeli.h	21	+-
libraries/AP_Baro/AP_Baro.cpp	164	+-
libraries/AP_Baro/AP_Baro.h	55	+-
libraries/AP_Baro/AP_Baro_BMP085.cpp	3	+
libraries/AP_Baro/AP_Baro_BMP280.cpp	3	+
libraries/AP_Baro/AP_Baro_BMP388.cpp	3	+
libraries/AP_Baro/AP_Baro_Backend.h	32	+
libraries/AP_Baro/AP_Baro_DPS280.cpp	5	+-
libraries/AP_Baro/AP_Baro_FBM320.cpp	3	+
libraries/AP_Baro/AP_Baro_ICM20789.cpp	3	+
libraries/AP_Baro/AP_Baro_KellerLD.cpp	5	+-
libraries/AP_Baro/AP_Baro_LPS2XH.cpp	3	+
libraries/AP_Baro/AP_Baro_MS5611.cpp	3	+
libraries/AP_Baro/AP_Baro_MSP.cpp	36	+
libraries/AP_Baro/AP_Baro_MSP.h	27	+
libraries/AP_Baro/AP_Baro_SITL.cpp	56	+-
libraries/AP_Baro/AP_Baro_SITL.h	9	+-
libraries/AP_Baro/AP_Baro_SPL06.cpp	3	+
libraries/AP_Baro/AP_Baro_UAVCAN.cpp	37	+-
libraries/AP_Baro/AP_Baro_UAVCAN.h	4	-
libraries/AP_Baro/AP_Baro_wind.cpp	86	+
.../AP_Baro/examples/BARO_generic/BARO_generic.cpp	5	+
libraries/AP_BattMonitor/AP_BattMonitor.cpp	84	+-
libraries/AP_BattMonitor/AP_BattMonitor.h	65	+-
libraries/AP_BattMonitor/AP_BattMonitor_Analog.cpp	2	+-
.../AP_BattMonitor/AP_BattMonitor_Backend.cpp	18	+-
libraries/AP_BattMonitor/AP_BattMonitor_Backend.h	2	+-
.../AP_BattMonitor/AP_BattMonitor_FuelFlow.cpp	2	+-
.../AP_BattMonitor_FuelLevel_PWM.cpp	42	+-
.../AP_BattMonitor/AP_BattMonitor_FuelLevel_PWM.h	10	+-
.../AP_BattMonitor/AP_BattMonitor_Generator.cpp	159	+
.../AP_BattMonitor/AP_BattMonitor_Generator.h	50	+
libraries/AP_BattMonitor/AP_BattMonitor_Params.cpp	8	+-
libraries/AP_BattMonitor/AP_BattMonitor_Params.h	19	-
libraries/AP_BattMonitor/AP_BattMonitor_SMBus.cpp	6	+-
libraries/AP_BattMonitor/AP_BattMonitor_SMBus.h	12	+-
...Maxell.cpp => AP_BattMonitor_SMBus_Generic.cpp}	60	+-
.../AP_BattMonitor/AP_BattMonitor_SMBus_Generic.h	33	+
.../AP_BattMonitor/AP_BattMonitor_SMBus_Maxell.h	30	+-
.../AP_BattMonitor/AP_BattMonitor_SMBus_Rotoye.cpp	25	+
.../AP_BattMonitor/AP_BattMonitor_SMBus_Rotoye.h	14	+
.../AP_BattMonitor/AP_BattMonitor_SMBus_SUI.h	3	-
.../AP_BattMonitor/AP_BattMonitor_SMBus_Solo.h	4	-
libraries/AP_BattMonitor/AP_BattMonitor_UAVCAN.cpp	25	+-
libraries/AP_BattMonitor/AP_BattMonitor_UAVCAN.h	7	+-
libraries/AP_Beacon/AP_Beacon.cpp	9	+-
libraries/AP_Beacon/AP_Beacon.h	5	+-
libraries/AP_Beacon/AP_Beacon_Backend.cpp	10	+-
libraries/AP_Beacon/AP_Beacon_Backend.h	10	+-
libraries/AP_Beacon/AP_Beacon_Nooploop.cpp	259	+
libraries/AP_Beacon/AP_Beacon_Nooploop.h	58	+
libraries/AP_Beacon/AP_Beacon_SITL.cpp	5	+-
libraries/AP_BoardConfig/AP_BoardConfig.cpp	57	+-
libraries/AP_BoardConfig/AP_BoardConfig.h	19	+-
libraries/AP_BoardConfig/AP_BoardConfig_CAN.cpp	226	-
libraries/AP_BoardConfig/AP_BoardConfig_CAN.h	163	-
libraries/AP_BoardConfig/board_drivers.cpp	73	+-
libraries/AP_BoardConfig/canbus_driver.cpp	55	-
libraries/AP_BoardConfig/canbus_slcan.cpp	47	-
libraries/AP_Button/AP_Button.cpp	174	+-
libraries/AP_Button/AP_Button.h	36	+
libraries/AP_CANManager/AP_CANDriver.cpp	65	+
libraries/AP_CANManager/AP_CANDriver.h	38	+
.../AP_CANInterfaceParams.cpp}	20	+-
libraries/AP_CANManager/AP_CANManager.cpp	338	+
libraries/AP_CANManager/AP_CANManager.h	160	+
libraries/AP_CANManager/AP_CANTester.cpp	900	+++
libraries/AP_CANManager/AP_CANTester.h	109	+
libraries/AP_CANManager/AP_CANTester_KDECAN.cpp	230	+
libraries/AP_CANManager/AP_CANTester_KDECAN.h	82	+
libraries/AP_CANManager/AP_SLCANInterface.cpp	700	++
libraries/AP_CANManager/AP_SLCANInterface.h	133	+
libraries/AP_Camera/AP_Camera.cpp	15	+-
libraries/AP_Camera/AP_Camera.h	8	+-
libraries/AP_Camera/AP_Camera_SoloGimbal.cpp	4	+
libraries/AP_Camera/AP_Camera_SoloGimbal.h	5	+
libraries/AP_Camera/AP_RunCam.cpp	144	+-
libraries/AP_Camera/AP_RunCam.h	27	+-
libraries/AP_Common/AP_Common.cpp	13	+

libraries/AP_Common/AP_Common.h	23	+-
libraries/AP_Common/AP_ExpandingArray.h	16	+-
libraries/AP_Common/AP_FwVersion.h	28	+-
../AP_Common/AP_FwVersionDefine.h	30	+-
libraries/AP_Common/Location.cpp	11	+
libraries/AP_Common/Location.h	3	+
libraries/AP_Common/TSIndex.h	7	+-
libraries/AP_Common/missing/string.h	15	+
libraries/AP_Compass/AP_Compass.cpp	306	+-
libraries/AP_Compass/AP_Compass.h	53	+-
libraries/AP_Compass/AP_Compass_Backend.cpp	18	+-
libraries/AP_Compass/AP_Compass_Backend.h	10	+-
libraries/AP_Compass/AP_Compass_Calibration.cpp	215	+-
libraries/AP_Compass/AP_Compass_HIL.cpp	1	+
libraries/AP_Compass/AP_Compass_LIS3MDL.cpp	11	+-
libraries/AP_Compass/AP_Compass_MSP.cpp	47	+
libraries/AP_Compass/AP_Compass_MSP.h	22	+
libraries/AP_Compass/AP_Compass_RM3100.cpp	20	+-
libraries/AP_Compass/AP_Compass_RM3100.h	5	+-
libraries/AP_Compass/AP_Compass_SITL.cpp	64	+-
libraries/AP_Compass/AP_Compass_SITL.h	3	+-
libraries/AP_Compass/AP_Compass_UAVCAN.cpp	31	+-
libraries/AP_Compass/AP_Compass_UAVCAN.h	6	+-
libraries/AP_Compass/CompassCalibrator.cpp	290	+-
libraries/AP_Compass/CompassCalibrator.h	116	+-
libraries/AP_DAL/AP_DAL.cpp	510	++
libraries/AP_DAL/AP_DAL.h	370	+
libraries/AP_DAL/AP_DAL_Airspeed.cpp	34	+
libraries/AP_DAL/AP_DAL_Airspeed.h	65	+
libraries/AP_DAL/AP_DAL_Baro.cpp	35	+
libraries/AP_DAL/AP_DAL_Baro.h	55	+
libraries/AP_DAL/AP_DAL_Beacon.cpp	48	+
libraries/AP_DAL/AP_DAL_Beacon.h	77	+
libraries/AP_DAL/AP_DAL_Compass.cpp	40	+
libraries/AP_DAL/AP_DAL_Compass.h	72	+
libraries/AP_DAL/AP_DAL_GPS.cpp	65	+
libraries/AP_DAL/AP_DAL_GPS.h	140	+
libraries/AP_DAL/AP_DAL_InertialSensor.cpp	70	+
libraries/AP_DAL/AP_DAL_InertialSensor.h	79	+
libraries/AP_DAL/AP_DAL_RangeFinder.cpp	146	+
libraries/AP_DAL/AP_DAL_RangeFinder.h	72	+
libraries/AP_DAL/AP_DAL_VisualOdom.cpp	38	+
libraries/AP_DAL/AP_DAL_VisualOdom.h	47	+
libraries/AP_DAL/LogStructure.h	418	++
../AP_DAL/examples/AP_DAL_Standalone/main.cpp	66	+
../AP_DAL/examples/AP_DAL_Standalone/wscript	26	+
libraries/AP_EFI/AP_EFI_Serial_MS.cpp	6	+-
libraries/AP_ESC_Telem/AP_ESC_Telem.cpp	8	+-
libraries/AP_FileSystem/AP_FileSystem.cpp	25	+-
libraries/AP_FileSystem/AP_FileSystem.h	11	+
libraries/AP_FileSystem/AP_FileSystem_FATFS.cpp	65	+-
libraries/AP_FileSystem/AP_FileSystem_FATFS.h	6	+
libraries/AP_FileSystem/AP_FileSystem_ROMFS.cpp	24	+
libraries/AP_FileSystem/AP_FileSystem_ROMFS.h	8	+
libraries/AP_FileSystem/AP_FileSystem_Sys.cpp	137	+-
libraries/AP_FileSystem/AP_FileSystem_Sys.h	9	+
libraries/AP_FileSystem/AP_FileSystem_backend.cpp	73	+
libraries/AP_FileSystem/AP_FileSystem_backend.h	29	+
libraries/AP_FileSystem/AP_FileSystem_posix.cpp	3	+-
../AP_FileSystem/examples/File_IO/File_IO.cpp	108	+
../examples/File_IO/wscript	0	
libraries/AP_FileSystem/posix_compat.cpp	5	+-
../examples/FlashTest/FlashTest.cpp	12	+-
libraries/AP_Frsky_Telem/AP_Frsky_Backend.cpp	142	+
libraries/AP_Frsky_Telem/AP_Frsky_Backend.h	121	+
libraries/AP_Frsky_Telem/AP_Frsky_D.cpp	82	+
libraries/AP_Frsky_Telem/AP_Frsky_D.h	31	+
libraries/AP_Frsky_Telem/AP_Frsky_MAVlite.h	32	+
../AP_Frsky_Telem/AP_Frsky_MAVliteMsgHandler.cpp	288	+
../AP_Frsky_Telem/AP_Frsky_MAVliteMsgHandler.h	39	+
../AP_Frsky_MAVlite_MAVliteToSPort.cpp	100	+
../AP_Frsky_MAVlite_MAVliteToSPort.h	54	+
../AP_Frsky_Telem/AP_Frsky_MAVlite_Message.cpp	57	+
../AP_Frsky_Telem/AP_Frsky_MAVlite_Message.h	48	+
../AP_Frsky_MAVlite_SPortToMAVlite.cpp	106	+
../AP_Frsky_MAVlite_SPortToMAVlite.h	50	+
libraries/AP_Frsky_Telem/AP_Frsky_Parameters.cpp	49	+
libraries/AP_Frsky_Telem/AP_Frsky_Parameters.h	41	+
libraries/AP_Frsky_Telem/AP_Frsky_SPort.cpp	345	+
libraries/AP_Frsky_Telem/AP_Frsky_SPort.h	49	+

libraries/AP_Frsky_Telem/AP_Frsky_SPortParser.h	49	+
.../AP_Frsky_Telem/AP_Frsky_SPort_Passthrough.cpp	728	++
.../AP_Frsky_Telem/AP_Frsky_SPort_Passthrough.h	149	+
libraries/AP_Frsky_Telem/AP_Frsky_Telem.cpp	981	+--
libraries/AP_Frsky_Telem/AP_Frsky_Telem.h	237	+--
libraries/AP_GPS/AP_GPS.cpp	230	+--
libraries/AP_GPS/AP_GPS.h	48	+--
libraries/AP_GPS/AP_GPS_ERB.h	2	+--
libraries/AP_GPS/AP_GPS_MSP.cpp	100	+
libraries/AP_GPS/AP_GPS_MSP.h	45	+
libraries/AP_GPS/AP_GPS_NMEA.cpp	121	+--
libraries/AP_GPS/AP_GPS_NMEA.h	37	+--
libraries/AP_GPS/AP_GPS_SBF.cpp	112	+--
libraries/AP_GPS/AP_GPS_SBF.h	44	+--
libraries/AP_GPS/AP_GPS_SBP.h	2	+--
libraries/AP_GPS/AP_GPS_UAVCAN.cpp	22	+--
libraries/AP_GPS/AP_GPS_UBLOX.cpp	102	+--
libraries/AP_GPS/AP_GPS_UBLOX.h	32	+--
libraries/AP_GPS/GPS_Backend.cpp	136	+--
libraries/AP_GPS/GPS_Backend.h	28	+--
libraries/AP_GPS/MovingBase.cpp	43	+
libraries/AP_GPS/MovingBase.h	24	+
libraries/AP_GPS/RTCM3_Parser.cpp	28	+--
libraries/AP_GPS/RTCM3_Parser.h	2	-
.../GPS_UBLOX_passthrough.cpp	8	+--
libraries/AP_GPS/wscript	4	+
libraries/AP_Generator/AP_Generator.cpp	175	+
libraries/AP_Generator/AP_Generator.h	106	+
libraries/AP_Generator/AP_Generator_Backend.cpp	36	+
libraries/AP_Generator/AP_Generator_Backend.h	53	+
libraries/AP_Generator/AP_Generator_IE_2400.cpp	206	+
libraries/AP_Generator/AP_Generator_IE_2400.h	56	+
libraries/AP_Generator/AP_Generator_IE_650_800.cpp	125	+
libraries/AP_Generator/AP_Generator_IE_650_800.h	98	+
.../AP_Generator/AP_Generator_IE_FuelCell.cpp	192	+
libraries/AP_Generator/AP_Generator_IE_FuelCell.h	106	+
.../AP_Generator/AP_Generator_RichenPower.cpp	490	++
libraries/AP_Generator/AP_Generator_RichenPower.h	208	+
libraries/AP_GyroFFT/AP_GyroFFT.cpp	900	++-
libraries/AP_GyroFFT/AP_GyroFFT.h	228	+--
libraries/AP_HAL/AP_HAL.h	5	+
libraries/AP_HAL/AP_HAL_Boards.h	18	+--
libraries/AP_HAL/AP_HAL_Macros.h	6	+--
libraries/AP_HAL/AP_HAL_Namespace.h	8	+--
libraries/AP_HAL/AnalogIn.h	4	+
libraries/AP_HAL/CAN.h	134	-
libraries/AP_HAL/CANInterface.cpp	53	+
libraries/AP_HAL/CANInterface.h	215	+
libraries/AP_HAL/DSP.cpp	267	+--
libraries/AP_HAL/DSP.h	61	+--
libraries/AP_HAL/Device.cpp	21	+--
libraries/AP_HAL/Device.h	100	+--
libraries/AP_HAL/EventHandle.cpp	33	+
libraries/AP_HAL/EventHandle.h	44	+
libraries/AP_HAL/GPIO.cpp	108	+
libraries/AP_HAL/GPIO.h	28	+
libraries/AP_HAL/HAL.cpp	13	+
libraries/AP_HAL/HAL.h	40	+--
libraries/AP_HAL/Semaphores.h	7	+
libraries/AP_HAL/UARTDriver.h	25	+--
libraries/AP_HAL/Util.cpp	1	+
libraries/AP_HAL/Util.h	11	+--
libraries/AP_HAL/board/chibios.h	11	+--
libraries/AP_HAL/board/linux.h	18	+--
libraries/AP_HAL/board/sitl.h	7	+
libraries/AP_HAL/examples/DSP_test/DSP_test.cpp	175	+
libraries/AP_HAL/examples/DSP_test/GyroFrame.cpp	75	+
libraries/AP_HAL/examples/DSP_test/GyroFrame.h	11	+
.../AP_HAL/examples/DSP_test/gyro_isb_reader.py	133	+
libraries/AP_HAL/examples/DSP_test/wscript	7	+
.../AP_HAL/examples/UART_chargen/UART_chargen.cpp	98	+
libraries/AP_HAL/examples/UART_chargen/wscript	7	+
libraries/AP_HAL/examples/UART_test/UART_test.cpp	20	+--
libraries/AP_HAL/system.h	6	+
libraries/AP_HAL/utility/BetterStream.cpp	12	+
libraries/AP_HAL/utility/BetterStream.h	14	+--
libraries/AP_HAL/utility/RCOutput_Tap_Linux.cpp	1	+
libraries/AP_HAL/utility/RingBuffer.cpp	11	+--
libraries/AP_HAL/utility/RingBuffer.h	90	+--
libraries/AP_HAL/utility/getopt_cpp.cpp	5	+--

libraries/AP_HAL/utility/sparse-endian.h	11	+
.../AP_HAL_ChibiOS/AP_HAL_ChibiOS_Namespace.h	3	+-
libraries/AP_HAL_ChibiOS/AnalogIn.cpp	112	+-
libraries/AP_HAL_ChibiOS/AnalogIn.h	5	+-
libraries/AP_HAL_ChibiOS/CAN.h	77	-
libraries/AP_HAL_ChibiOS/CANClock.cpp	412	--
libraries/AP_HAL_ChibiOS/CANClock.h	165	-
libraries/AP_HAL_ChibiOS/CANFDIFace.cpp	972	++-
libraries/AP_HAL_ChibiOS/CANFDIFace.h	490	+-
libraries/AP_HAL_ChibiOS/CANIFace.h	507	+-
libraries/AP_HAL_ChibiOS/CANInternal.h	105	-
libraries/AP_HAL_ChibiOS/CANManager.cpp	58	-
libraries/AP_HAL_ChibiOS/CANSerialRouter.cpp	157	-
libraries/AP_HAL_ChibiOS/CANSerialRouter.h	68	-
libraries/AP_HAL_ChibiOS/CANThread.cpp	122	-
libraries/AP_HAL_ChibiOS/CANThread.h	97	-
libraries/AP_HAL_ChibiOS/CanIFace.cpp	1243	++--
libraries/AP_HAL_ChibiOS/DSP.cpp	44	+-
libraries/AP_HAL_ChibiOS/DSP.h	24	+-
libraries/AP_HAL_ChibiOS/EventSource.cpp	36	+
libraries/AP_HAL_ChibiOS/EventSource.h	28	+
libraries/AP_HAL_ChibiOS/GPIO.cpp	101	+-
libraries/AP_HAL_ChibiOS/GPIO.h	24	+-
libraries/AP_HAL_ChibiOS/HAL_ChibiOS_Class.cpp	19	+-
libraries/AP_HAL_ChibiOS/HAL_ChibiOS_Class.h	4	+-
libraries/AP_HAL_ChibiOS/I2CDevice.cpp	26	+-
libraries/AP_HAL_ChibiOS/SPIDevice.cpp	1	+
libraries/AP_HAL_ChibiOS/SPIDevice.h	23	+-
libraries/AP_HAL_ChibiOS/Scheduler.cpp	122	+-
libraries/AP_HAL_ChibiOS/Scheduler.h	11	+-
libraries/AP_HAL_ChibiOS/SoftSigReader.h	2	+-
libraries/AP_HAL_ChibiOS/Storage.cpp	86	+-
libraries/AP_HAL_ChibiOS/UARTDriver.cpp	101	+-
libraries/AP_HAL_ChibiOS/UARTDriver.h	20	+-
libraries/AP_HAL_ChibiOS/Util.cpp	60	+-
libraries/AP_HAL_ChibiOS/Util.h	11	+-
libraries/AP_HAL_ChibiOS/bxcan.hpp	43	+-
libraries/AP_HAL_ChibiOS/fdcan.hpp	90	-
.../AP_HAL_ChibiOS/hwdef/CUAV-Nora/defaults.parm	6	+
.../AP_HAL_ChibiOS/hwdef/CUAV-Nora/hwdef-bl.dat	8	+-
libraries/AP_HAL_ChibiOS/hwdef/CUAV-Nora/hwdef.dat	29	+-
libraries/AP_HAL_ChibiOS/hwdef/CUAV-X7/hwdef.dat	10	+-
libraries/AP_HAL_ChibiOS/hwdef/CUAV_GPS/hwdef.dat	4	+-
.../AP_HAL_ChibiOS/hwdef/CubeBlack+/hwdef.dat	7	+
.../hwdef/CubeBlack-periph/hwdef-bl.dat	70	+
.../hwdef/CubeBlack-periph/hwdef.dat	72	+
.../hwdef/CubeOrange-periph/hwdef-bl.dat	70	+
.../hwdef/CubeOrange-periph/hwdef.dat	75	+
.../AP_HAL_ChibiOS/hwdef/CubeOrange/defaults.parm	2	+-
.../AP_HAL_ChibiOS/hwdef/CubeOrange/hwdef-bl.dat	4	+
.../AP_HAL_ChibiOS/hwdef/CubeOrange/hwdef.dat	26	+-
.../AP_HAL_ChibiOS/hwdef/CubeYellow/hwdef.dat	11	+-
.../AP_HAL_ChibiOS/hwdef/DrotekP3Pro/hwdef.dat	12	+-
libraries/AP_HAL_ChibiOS/hwdef/Durandal/hwdef.dat	12	+-
.../AP_HAL_ChibiOS/hwdef/F35Lightning/hwdef.dat	10	+-
.../AP_HAL_ChibiOS/hwdef/HitecMosaic/hwdef-bl.dat	105	+
.../AP_HAL_ChibiOS/hwdef/HitecMosaic/hwdef.dat	175	+
libraries/AP_HAL_ChibiOS/hwdef/KakuteF4/hwdef.dat	4	-
.../AP_HAL_ChibiOS/hwdef/KakuteF7/hwdef-bl.dat	2	+
libraries/AP_HAL_ChibiOS/hwdef/KakuteF7/hwdef.dat	16	+-
.../AP_HAL_ChibiOS/hwdef/KakuteF7Mini/hwdef.dat	6	+-
.../AP_HAL_ChibiOS/hwdef/MambaF405v2/README.md	84	+
.../AP_HAL_ChibiOS/hwdef/MambaF405v2/hwdef-bl.dat	39	+
.../AP_HAL_ChibiOS/hwdef/MambaF405v2/hwdef.dat	159	+
.../hwdef/MambaF405v2/mamba_f405mk2_board.jpg	Bin 0	-> 58934 bytes
.../hwdef/MambaF405v2/mamba_f405mk2_pinout.png	Bin 0	-> 202508 bytes
.../AP_HAL_ChibiOS/hwdef/MatekF405-wing/hwdef.dat	5	+-
libraries/AP_HAL_ChibiOS/hwdef/MatekF405/hwdef.dat	3	-
.../AP_HAL_ChibiOS/hwdef/MatekF765-wing/hwdef.dat	13	+-
.../AP_HAL_ChibiOS/hwdef/MatekH743/hwdef-bl.dat	3	+-
libraries/AP_HAL_ChibiOS/hwdef/MatekH743/hwdef.dat	28	+-
.../AP_HAL_ChibiOS/hwdef/MazzyStarDrone/README.md	5	+
.../hwdef/MazzyStarDrone/hwdef-bl.dat	47	+
.../AP_HAL_ChibiOS/hwdef/MazzyStarDrone/hwdef.dat	179	+
.../AP_HAL_ChibiOS/hwdef/OMNIBUSF7V2/hwdef.dat	27	+-
.../AP_HAL_ChibiOS/hwdef/OmnibusNanov6/hwdef.dat	23	+-
libraries/AP_HAL_ChibiOS/hwdef/PH4-mini/README.md	4	+-
.../AP_HAL_ChibiOS/hwdef/Pix32v5/hwdef-bl.dat	9	+
libraries/AP_HAL_ChibiOS/hwdef/Pix32v5/hwdef.dat	9	+
.../AP_HAL_ChibiOS/hwdef/Pixracer/hwdef-bl.dat	52	+-

libraries/AP_HAL_ChibiOS/hwdef/Pixracer/hwdef.dat	229	+-
.../hwdef/QioTekZealotF427/README.md	50	+
.../hwdef/QioTekZealotF427/hwdef-bl.dat	49	+
.../hwdef/QioTekZealotF427/hwdef.dat	229	+
.../hwdef/STM32CubeConf/F3-8MHz/F3-8MHz.ioc	143	+
.../hwdef/STM32CubeConf/F3-no-xtal/F3-no-xtal.ioc	134	+
.../hwdef/STM32CubeConf/H7-no-xtal/H7-no-xtal.ioc	640	++
libraries/AP_HAL_ChibiOS/hwdef/SuccexF4/hwdef.dat	3	-
.../AP_HAL_ChibiOS/hwdef/ZubaxGNSS/hwdef-bl.dat	7	+-
libraries/AP_HAL_ChibiOS/hwdef/ZubaxGNSS/hwdef.dat	9	+-
libraries/AP_HAL_ChibiOS/hwdef/airbotf4/hwdef.dat	3	-
libraries/AP_HAL_ChibiOS/hwdef/common/chconf.h	1	+
.../AP_HAL_ChibiOS/hwdef/common/chibios_board.mk	5	+
libraries/AP_HAL_ChibiOS/hwdef/common/flash.c	26	+
libraries/AP_HAL_ChibiOS/hwdef/common/flash.h	3	+
libraries/AP_HAL_ChibiOS/hwdef/common/malloc.c	182	+-
libraries/AP_HAL_ChibiOS/hwdef/common/stdio.h	2	+-
libraries/AP_HAL_ChibiOS/hwdef/common/stm32_util.c	16	+
libraries/AP_HAL_ChibiOS/hwdef/common/stm32_util.h	14	+-
.../AP_HAL_ChibiOS/hwdef/common/stm32f3_mcuconf.h	39	+-
.../AP_HAL_ChibiOS/hwdef/common/stm32h7_mcuconf.h	68	+-
.../AP_HAL_ChibiOS/hwdef/crazyflie2/defaults.parm	37	+
.../AP_HAL_ChibiOS/hwdef/crazyflie2/hwdef.dat	10	+-
libraries/AP_HAL_ChibiOS/hwdef/f103-ADSB/hwdef.dat	2	+-
.../hwdef/f103-Airspeed/hwdef-bl.dat	7	+
.../AP_HAL_ChibiOS/hwdef/f103-Airspeed/hwdef.dat	14	+
libraries/AP_HAL_ChibiOS/hwdef/f103-GPS/hwdef.dat	4	-
.../hwdef/f103-RangeFinder/hwdef.dat	3	+-
.../AP_HAL_ChibiOS/hwdef/f103-periph/hwdef-bl.dat	5	+-
.../AP_HAL_ChibiOS/hwdef/f103-periph/hwdef.dat	25	+-
.../AP_HAL_ChibiOS/hwdef/f303-M10025/hwdef.dat	2	+-
.../AP_HAL_ChibiOS/hwdef/f303-M10070/hwdef.dat	10	+-
.../hwdef/f303-MatekGPS/hwdef-bl.dat	104	+
.../AP_HAL_ChibiOS/hwdef/f303-MatekGPS/hwdef.dat	165	+
.../AP_HAL_ChibiOS/hwdef/f303-Universal/hwdef.dat	3	+-
.../AP_HAL_ChibiOS/hwdef/f303-periph/hwdef-bl.dat	12	+-
.../AP_HAL_ChibiOS/hwdef/f303-periph/hwdef.dat	31	+-
libraries/AP_HAL_ChibiOS/hwdef/fmuv2/hwdef.dat	3	-
libraries/AP_HAL_ChibiOS/hwdef/fmuv3/hwdef.dat	10	+-
.../AP_HAL_ChibiOS/hwdef/fmuv4-beta/hwdef.dat	19	-
libraries/AP_HAL_ChibiOS/hwdef/fmuv4/hwdef-bl.dat	54	-
libraries/AP_HAL_ChibiOS/hwdef/fmuv4/hwdef.dat	231	-
libraries/AP_HAL_ChibiOS/hwdef/fmuv5/hwdef.dat	10	+-
.../AP_HAL_ChibiOS/hwdef/luminousbee4/hwdef.dat	2	+-
.../hwdef/mRoControlZeroClassic/hwdef-bl.dat	64	+
.../hwdef/mRoControlZeroClassic/hwdef.dat	299	+
.../hwdef/mRoControlZeroF7/defaults.parm	7	+
.../hwdef/mRoControlZeroF7/hwdef-bl.dat	24	+-
.../hwdef/mRoControlZeroF7/hwdef.dat	105	+-
.../hwdef/mRoControlZeroH7/defaults.parm	7	+
.../hwdef/mRoControlZeroH7/hwdef-bl.dat	65	+
.../hwdef/mRoControlZeroH7/hwdef.dat	265	+
.../hwdef/mRoControlZeroEMH7/defaults.parm	8	+
.../hwdef/mRoControlZeroEMH7/hwdef-bl.dat	66	+
.../hwdef/mRoControlZeroEMH7/hwdef.dat	279	+
.../hwdef/mRoPixracerPro/defaults.parm	7	+
.../hwdef/mRoPixracerPro/hwdef-bl.dat	66	+
.../AP_HAL_ChibiOS/hwdef/mRoPixracerPro/hwdef.dat	282	+
.../AP_HAL_ChibiOS/hwdef/mRox21-777/hwdef-bl.dat	2	+-
.../AP_HAL_ChibiOS/hwdef/mRox21-777/hwdef.dat	10	+-
libraries/AP_HAL_ChibiOS/hwdef/mini-pix/hwdef.dat	11	+-
libraries/AP_HAL_ChibiOS/hwdef/omnibusf4/hwdef.dat	1	-
.../AP_HAL_ChibiOS/hwdef/omnibusf4pro/hwdef-bl.dat	1	+
.../AP_HAL_ChibiOS/hwdef/omnibusf4pro/hwdef.dat	18	+-
.../AP_HAL_ChibiOS/hwdef/omnibusf4v6/hwdef.dat	3	-
libraries/AP_HAL_ChibiOS/hwdef/revo-mini/hwdef.dat	3	-
.../AP_HAL_ChibiOS/hwdef/scripts/STM32F100xB.py	4	+-
.../AP_HAL_ChibiOS/hwdef/scripts/STM32F103xB.py	4	+-
.../AP_HAL_ChibiOS/hwdef/scripts/STM32F303xC.py	10	+-
.../AP_HAL_ChibiOS/hwdef/scripts/STM32F405xx.py	4	+-
.../AP_HAL_ChibiOS/hwdef/scripts/STM32F427xx.py	4	+-
.../AP_HAL_ChibiOS/hwdef/scripts/STM32F745xx.py	2	+
.../AP_HAL_ChibiOS/hwdef/scripts/STM32F767xx.py	2	+
.../AP_HAL_ChibiOS/hwdef/scripts/STM32F777xx.py	2	+
.../AP_HAL_ChibiOS/hwdef/scripts/STM32H743xx.py	2	+
libraries/AP_HAL_ChibiOS/hwdef/scripts/af_parse.py	3	+-
.../hwdef/scripts/af_parse_cubemx.py	90	+
.../AP_HAL_ChibiOS/hwdef/scripts/chibios_hwdef.py	120	+-
.../AP_HAL_ChibiOS/hwdef/speedybeef4/hwdef.dat	3	-
libraries/AP_HAL_ChibiOS/sdcard.cpp	10	+-

libraries/AP_HAL_ChibiOS/shared_dma.cpp	63	+
libraries/AP_HAL_ChibiOS/shared_dma.h	9	+
libraries/AP_HAL_ChibiOS/stdio.cpp	13	+--
libraries/AP_HAL_ChibiOS/system.cpp	46	+--
libraries/AP_HAL_Empty/DSP.h	8	+--
libraries/AP_HAL_Empty/HAL_Empty_Class.cpp	3	+--
libraries/AP_HAL_Empty/RCInput.h	2	+
libraries/AP_HAL_Empty/Semaphores.h	2	+--
libraries/AP_HAL_Empty/UARTDriver.cpp	1	+
libraries/AP_HAL_Empty/UARTDriver.h	1	+
libraries/AP_HAL_Linux/CAN.cpp	595	--
libraries/AP_HAL_Linux/CAN.h	221	-
libraries/AP_HAL_Linux/CANSocketIface.cpp	611	++
libraries/AP_HAL_Linux/CANSocketIface.h	197	+
libraries/AP_HAL_Linux/ConsoleDevice.cpp	2	+--
libraries/AP_HAL_Linux/HAL_Linux_Class.cpp	38	+--
libraries/AP_HAL_Linux/HAL_Linux_Class.h	7	+
libraries/AP_HAL_Linux/RCInput_RPI.cpp	16	+--
libraries/AP_HAL_Linux/RCInput_UART.h	2	+--
libraries/AP_HAL_Linux/RCInput_UDP.cpp	4	+--
libraries/AP_HAL_Linux/RCOutput_PCA9685.cpp	10	+--
libraries/AP_HAL_Linux/RCOutput_PCA9685.h	4	+--
libraries/AP_HAL_Linux/Scheduler.cpp	31	+--
libraries/AP_HAL_Linux/Scheduler.h	1	+
libraries/AP_HAL_Linux/Thread.cpp	4	+--
libraries/AP_HAL_Linux/ToneAlarm.cpp	6	+--
libraries/AP_HAL_Linux/UARTDriver.cpp	9	+
libraries/AP_HAL_Linux/UARTDriver.h	2	+
libraries/AP_HAL_Linux/system.cpp	39	+
libraries/AP_HAL_SITL/AP_HAL_SITL_Namespace.h	5	+--
libraries/AP_HAL_SITL/AP_HAL_SITL_Private.h	1	+
libraries/AP_HAL_SITL/CANSocketIface.cpp	616	++
libraries/AP_HAL_SITL/CANSocketIface.h	197	+
libraries/AP_HAL_SITL/DSP.cpp	44	+--
libraries/AP_HAL_SITL/DSP.h	17	+--
libraries/AP_HAL_SITL/GPIO.cpp	21	+--
libraries/AP_HAL_SITL/GPIO.h	4	+
libraries/AP_HAL_SITL/HAL_SITL_Class.cpp	44	+--
libraries/AP_HAL_SITL/HAL_SITL_Class.h	4	+
libraries/AP_HAL_SITL/I2CDevice.cpp	217	+
libraries/AP_HAL_SITL/I2CDevice.h	130	+
libraries/AP_HAL_SITL/RCInput.cpp	29	+--
libraries/AP_HAL_SITL/RCInput.h	2	+--
libraries/AP_HAL_SITL/RCOutput.cpp	7	+--
libraries/AP_HAL_SITL/RCOutput.h	2	+--
libraries/AP_HAL_SITL/SITL_Periph_State.cpp	50	+
libraries/AP_HAL_SITL/SITL_Periph_State.h	75	+
libraries/AP_HAL_SITL/SITL_State.cpp	144	+--
libraries/AP_HAL_SITL/SITL_State.h	35	+--
libraries/AP_HAL_SITL/SITL_cmdline.cpp	60	+--
libraries/AP_HAL_SITL/Scheduler.cpp	27	+--
libraries/AP_HAL_SITL/Semaphores.cpp	28	+--
libraries/AP_HAL_SITL/Semaphores.h	8	+
libraries/AP_HAL_SITL/Storage.cpp	13	+--
libraries/AP_HAL_SITL/Storage.h	4	-
libraries/AP_HAL_SITL/UARTDriver.cpp	49	+--
libraries/AP_HAL_SITL/UARTDriver.h	3	+
libraries/AP_HAL_SITL/Util.cpp	20	+
libraries/AP_HAL_SITL/Util.h	16	+
libraries/AP_HAL_SITL/sitl_airspeed.cpp	39	+--
libraries/AP_HAL_SITL/sitl_gps.cpp	130	+--
libraries/AP_HAL_SITL/sitl_rangefinder.cpp	7	+--
libraries/AP_HAL_SITL/system.cpp	42	+
libraries/AP_Hott_Telem/AP_Hott_Telem.cpp	5	+--
libraries/AP_ICEngine/AP_ICEngine.cpp	48	+--
libraries/AP_ICEngine/AP_ICEngine.h	7	+
libraries/AP_IOMCU/AP_IOMCU.cpp	31	+--
libraries/AP_IOMCU/AP_IOMCU.h	2	+
libraries/AP_IOMCU/iofirmware/iofirmware.cpp	9	+
libraries/AP_IOMCU/iofirmware/ioprotocol.h	1	+
libraries/AP_IOMCU/iofirmware/rc.cpp	11	+--
libraries/AP_InertialSensor/AP_InertialSensor.cpp	112	+--
libraries/AP_InertialSensor/AP_InertialSensor.h	62	+--
.../AP_InertialSensor/AP_InertialSensor_BMI088.cpp	10	+--
.../AP_InertialSensor_Backend.cpp	47	+--
.../AP_InertialSensor/AP_InertialSensor_Backend.h	23	+--
.../AP_InertialSensor_Invensense.cpp	123	+--
.../AP_InertialSensor_Invensense.h	28	+--
.../AP_InertialSensor_Invensensev2.cpp	117	+--
.../AP_InertialSensor_Invensensev2.h	23	+--

.../AP_InertialSensor_L3G4200D.cpp	210	+-
.../AP_InertialSensor/AP_InertialSensor_L3G4200D.h	31	+-
.../AP_InertialSensor/AP_InertialSensor_SITL.cpp	8	+-
libraries/AP_InertialSensor/examples/coning.py	2	+-
libraries/AP_InternalError/AP_InternalError.cpp	18	+-
libraries/AP_InternalError/AP_InternalError.h	6	+-
libraries/AP_KDECAN/AP_KDECAN.cpp	291	+-
libraries/AP_KDECAN/AP_KDECAN.h	14	+-
.../examples/KDECAN_sniffer/KDECAN_sniffer.cpp	358	-
.../AP_KDECAN/examples/KDECAN_sniffer/README.md	13	-
.../AP_KDECAN/examples/KDECAN_sniffer/nobuild.txt	0	
libraries/AP_L1_Control/AP_L1_Control.cpp	6	+-
libraries/AP_LTM_Telem/AP_LTM_Telem.cpp	2	+-
libraries/AP_Landing/AP_Landing.cpp	17	+-
libraries/AP_Landing/AP_Landing.h	8	+
libraries/AP_Landing/AP_Landing_Slope.cpp	14	+-
libraries/AP_LandingGear/AP_LandingGear.cpp	2	+
libraries/AP_LeakDetector/AP_LeakDetector.cpp	15	+-
libraries/AP_LeakDetector/AP_LeakDetector.h	6	-
.../AP_LeakDetector/AP_LeakDetector_Digital.cpp	2	+-
libraries/AP_Logger/AP_Logger.cpp	194	+-
libraries/AP_Logger/AP_Logger.h	98	+-
libraries/AP_Logger/AP_Logger_Backend.cpp	147	+-
libraries/AP_Logger/AP_Logger_Backend.h	73	+-
libraries/AP_Logger/AP_Logger_Block.cpp	551	+-
libraries/AP_Logger/AP_Logger_Block.h	113	+-
libraries/AP_Logger/AP_Logger_DataFlash.cpp	4	+-
libraries/AP_Logger/AP_Logger_File.cpp	288	+-
libraries/AP_Logger/AP_Logger_File.h	63	+-
libraries/AP_Logger/AP_Logger_MAVLink.cpp	32	+-
libraries/AP_Logger/AP_Logger_MAVLink.h	14	+-
.../AP_Logger/AP_Logger_MAVLinkLogTransfer.cpp	32	+-
libraries/AP_Logger/AP_Logger_SITL.cpp	23	+-
libraries/AP_Logger/LogFile.cpp	296	+-
libraries/AP_Logger/LogStructure.h	1108	+-
libraries/AP_Logger/LoggerMessageWriter.cpp	66	+-
libraries/AP_Logger/LoggerMessageWriter.h	6	+
.../examples/AP_Logger_test/AP_Logger_test.cpp	9	+-
libraries/AP_MSP/AP_MSP.cpp	213	+
libraries/AP_MSP/AP_MSP.h	95	+
libraries/AP_MSP/AP_MSP_Telem_Backend.cpp	1056	+++
libraries/AP_MSP/AP_MSP_Telem_Backend.h	199	+
libraries/AP_MSP/AP_MSP_Telem_DJI.cpp	107	+
libraries/AP_MSP/AP_MSP_Telem_DJI.h	71	+
libraries/AP_MSP/AP_MSP_Telem_Generic.cpp	50	+
libraries/AP_MSP/AP_MSP_Telem_Generic.h	36	+
libraries/AP_MSP/Tools/msposd.py	277	+
libraries/AP_MSP/Tools/osdtest.parm	138	+
libraries/AP_MSP/Tools/pymsp.py	510	++
libraries/AP_MSP/msp.cpp	321	+
libraries/AP_MSP/msp.h	132	+
libraries/AP_MSP/msp_osd.h	145	+
libraries/{AP_BLHeli => AP_MSP}/msp_protocol.h	63	+-
libraries/AP_MSP/msp_sbuf.cpp	71	+
libraries/AP_MSP/msp_sbuf.h	28	+
libraries/AP_MSP/msp_sensors.h	64	+
libraries/AP_MSP/msp_version.h	14	+
libraries/AP_Math/AP_GeodesicGrid.cpp	4	+-
libraries/AP_Math/AP_Math.cpp	62	+-
libraries/AP_Math/AP_Math.h	26	+-
.../AP_Math/benchmarks/benchmark_geodesic_grid.cpp	2	+-
libraries/AP_Math/benchmarks/benchmark_matrix.cpp	2	+-
libraries/AP_Math/crc.cpp	65	+
libraries/AP_Math/crc.h	7	+
libraries/AP_Math/definitions.h	4	+-
libraries/AP_Math/matrix3.cpp	6	+-
libraries/AP_Math/matrix_alg.cpp	16	+-
libraries/AP_Math/tests/test_perpendicular.cpp	3	+-
libraries/AP_Math/tests/test_vector2.cpp	6	+
.../AP_Math/tools/geodesic_grid/geodesic_grid.py	2	+-
libraries/AP_Math/vector2.cpp	13	+
libraries/AP_Math/vector2.h	13	+-
libraries/AP_Math/vector3.cpp	28	+-
libraries/AP_Math/vector3.h	27	+-
libraries/AP_Mission/AP_Mission.cpp	236	+-
libraries/AP_Mission/AP_Mission.h	117	+-
libraries/AP_Motors/AP_Motors.h	1	-
libraries/AP_Motors/AP_MotorsCoax.cpp	10	+-
libraries/AP_Motors/AP_MotorsHeli.cpp	23	+-
libraries/AP_Motors/AP_MotorsHeli.h	4	+

libraries/AP_Motors/AP_MotorsHeli_Dual.cpp	129	+-
libraries/AP_Motors/AP_MotorsHeli_Dual.h	8	+-
libraries/AP_Motors/AP_MotorsHeli_Quad.cpp	21	+-
libraries/AP_Motors/AP_MotorsHeli_RSC.cpp	37	+-
libraries/AP_Motors/AP_MotorsHeli_RSC.h	9	+
libraries/AP_Motors/AP_MotorsHeli_Single.cpp	43	+-
libraries/AP_Motors/AP_MotorsHeli_Single.h	1	+
libraries/AP_Motors/AP_MotorsMatrix.cpp	66	+-
libraries/AP_Motors/AP_MotorsMatrix.h	4	+
libraries/AP_Motors/AP_MotorsMatrixTS.cpp	153	-
libraries/AP_Motors/AP_MotorsMatrixTS.h	28	-
libraries/AP_Motors/AP_MotorsMulticopter.cpp	14	+-
libraries/AP_Motors/AP_MotorsMulticopter.h	10	+-
libraries/AP_Motors/AP_MotorsSingle.cpp	10	+-
libraries/AP_Motors/AP_MotorsTailsitter.cpp	4	+-
libraries/AP_Motors/AP_MotorsTri.cpp	14	+-
libraries/AP_Motors/AP_MotorsTri.h	1	-
libraries/AP_Motors/AP_Motors_Class.cpp	12	+-
libraries/AP_Motors/AP_Motors_Class.h	25	+-
libraries/AP_Mount/AP_Mount.cpp	39	+-
libraries/AP_Mount/AP_Mount.h	18	+
libraries/AP_Mount/AP_Mount_Alexmos.cpp	3	+-
libraries/AP_Mount/AP_Mount_Alexmos.h	2	+
libraries/AP_Mount/AP_Mount_Backend.cpp	3	+
libraries/AP_Mount/AP_Mount_Backend.h	3	+
libraries/AP_Mount/AP_Mount_STORM32.cpp	3	+-
libraries/AP_Mount/AP_Mount_STORM32.h	2	+
libraries/AP_Mount/AP_Mount_STORM32_serial.cpp	3	+-
libraries/AP_Mount/AP_Mount_STORM32_serial.h	2	+
libraries/AP_Mount/AP_Mount_Servo.cpp	3	+-
libraries/AP_Mount/AP_Mount_Servo.h	2	+
libraries/AP_Mount/AP_Mount_SoloGimbal.cpp	7	+-
libraries/AP_Mount/AP_Mount_SoloGimbal.h	6	+-
libraries/AP_Mount/SoloGimbal.cpp	13	+-
libraries/AP_Mount/SoloGimbal.h	5	+-
libraries/AP_Mount/SoloGimbalEKF.cpp	2	+
libraries/AP_Mount/SoloGimbalEKF.h	4	+-
libraries/AP_Mount/SoloGimbal_Parameters.cpp	3	+
libraries/AP_Mount/SoloGimbal_Parameters.h	4	+
libraries/AP_NavEKF/AP_NavEKF_Source.cpp	532	++
libraries/AP_NavEKF/AP_NavEKF_Source.h	127	+
libraries/AP_NavEKF/AP_Nav_Common.cpp	42	-
libraries/AP_NavEKF/AP_Nav_Common.h	1	-
libraries/AP_NavEKF/EKFGSF_yaw.cpp	142	+-
libraries/AP_NavEKF/EKFGSF_yaw.h	29	+-
libraries/AP_NavEKF/EKF_Buffer.cpp	213	+
libraries/AP_NavEKF/EKF_Buffer.h	197	+
libraries/AP_NavEKF2/AP_NavEKF2.cpp	331	+-
libraries/AP_NavEKF2/AP_NavEKF2.h	124	+-
libraries/AP_NavEKF2/AP_NavEKF2_AirDataFusion.cpp	23	+-
libraries/AP_NavEKF2/AP_NavEKF2_Buffer.h	196	-
libraries/AP_NavEKF2/AP_NavEKF2_Control.cpp	86	+-
libraries/AP_NavEKF2/AP_NavEKF2_Logging.cpp	393	+-
libraries/AP_NavEKF2/AP_NavEKF2_MagFusion.cpp	772	+-
libraries/AP_NavEKF2/AP_NavEKF2_Measurements.cpp	223	+-
libraries/AP_NavEKF2/AP_NavEKF2_OptFlowFusion.cpp	19	+-
libraries/AP_NavEKF2/AP_NavEKF2_Outputs.cpp	119	+-
libraries/AP_NavEKF2/AP_NavEKF2_PosVelFusion.cpp	186	+-
libraries/AP_NavEKF2/AP_NavEKF2_RngBcnFusion.cpp	9	-
libraries/AP_NavEKF2/AP_NavEKF2_VehicleStatus.cpp	74	+-
libraries/AP_NavEKF2/AP_NavEKF2_core.cpp	117	+-
libraries/AP_NavEKF2/AP_NavEKF2_core.h	266	+-
libraries/AP_NavEKF2/AP_NavEKF_GyroBias.cpp	3	-
libraries/AP_NavEKF2/LogStructure.h	372	++
libraries/AP_NavEKF3/AP_NavEKF3.cpp	679	+-
libraries/AP_NavEKF3/AP_NavEKF3.h	184	+-
libraries/AP_NavEKF3/AP_NavEKF3_AirDataFusion.cpp	315	+-
libraries/AP_NavEKF3/AP_NavEKF3_Buffer.h	197	-
libraries/AP_NavEKF3/AP_NavEKF3_Control.cpp	264	+-
libraries/AP_NavEKF3/AP_NavEKF3_GyroBias.cpp	7	-
libraries/AP_NavEKF3/AP_NavEKF3_Logging.cpp	491	+-
libraries/AP_NavEKF3/AP_NavEKF3_MagFusion.cpp	654	+-
libraries/AP_NavEKF3/AP_NavEKF3_Measurements.cpp	550	+-
libraries/AP_NavEKF3/AP_NavEKF3_OptFlowFusion.cpp	34	+-
libraries/AP_NavEKF3/AP_NavEKF3_Outputs.cpp	191	+-
libraries/AP_NavEKF3/AP_NavEKF3_PosVelFusion.cpp	555	+-
libraries/AP_NavEKF3/AP_NavEKF3_RngBcnFusion.cpp	49	+-
libraries/AP_NavEKF3/AP_NavEKF3_VehicleStatus.cpp	143	+-
libraries/AP_NavEKF3/AP_NavEKF3_core.cpp	1269	++--
libraries/AP_NavEKF3/AP_NavEKF3_core.h	530	+-

libraries/AP_NavEKF3/LogStructure.h	519	++
libraries/AP_NavEKF3/derivation/code_gen.py	46	+
.../derivation/generated/acc_bf_generated.cpp	182	+
.../derivation/generated/covariance_generated.cpp	492	++
.../derivation/generated/yaw_generated.cpp	156	+
libraries/AP_NavEKF3/derivation/main.py	687	++
libraries/AP_Notify/AP_BoardLED.h	3	+
libraries/AP_Notify/AP_BoardLED2.h	2	+
libraries/AP_Notify/AP_Notify.cpp	13	+ -
libraries/AP_Notify/AP_Notify.h	1	+
libraries/AP_Notify/MMLPlayer.cpp	6	+ -
libraries/AP_Notify/RGBLed.cpp	14	+ -
libraries/AP_Notify/RGBLed.h	13	+ -
libraries/AP_Notify/ScriptingLED.cpp	39	+
libraries/AP_Notify/ScriptingLED.h	47	+
libraries/AP_Notify/UAVCAN_RGB_LED.cpp	4	+ -
libraries/AP_OLC/AP_OLC.cpp	205	+
libraries/AP_OLC/AP_OLC.h	55	+
libraries/AP_OSD/AP_OSD.cpp	120	+ -
libraries/AP_OSD/AP_OSD.h	303	+ -
libraries/AP_OSD/AP_OSD_Backend.cpp	31	+
libraries/AP_OSD/AP_OSD_Backend.h	13	+
libraries/AP_OSD/AP_OSD_MAX7456.cpp	47	+ -
libraries/AP_OSD/AP_OSD_MAX7456.h	5	+
libraries/AP_OSD/AP_OSD_MSP.cpp	188	+
libraries/AP_OSD/AP_OSD_MSP.h	27	+
libraries/AP_OSD/AP_OSD_ParamScreen.cpp	671	++
libraries/AP_OSD/AP_OSD_ParamSetting.cpp	469	++
libraries/AP_OSD/AP_OSD_SITL.cpp	16	+ -
libraries/AP_OSD/AP_OSD_Screen.cpp	349	+ -
libraries/AP_OSD/fonts/mcm_all.py	2	+ -
libraries/AP_OpticalFlow/AP_OpticalFlow.h	2	+ -
.../AP_OpticalFlow/AP_OpticalFlow_HereFlow.cpp	8	+ -
libraries/AP_OpticalFlow/AP_OpticalFlow_HereFlow.h	4	+ -
libraries/AP_OpticalFlow/AP_OpticalFlow_MSP.cpp	108	+
libraries/AP_OpticalFlow/AP_OpticalFlow_MSP.h	37	+
libraries/AP_OpticalFlow/OpticalFlow.cpp	24	+ -
libraries/AP_OpticalFlow/OpticalFlow.h	14	+ -
libraries/AP_OpticalFlow/OpticalFlow_backend.h	5	+
libraries/AP_Parachute/AP_Parachute.cpp	57	+ -
libraries/AP_Parachute/AP_Parachute.h	15	+ -
libraries/AP_Param/AP_Param.cpp	55	+ -
libraries/AP_Param/AP_Param.h	39	+ -
libraries/AP_PiccoloCAN/AP_PiccoloCAN.cpp	307	+ -
libraries/AP_PiccoloCAN/AP_PiccoloCAN.h	59	+ -
.../AP_PiccoloCAN/piccolo_protocol/ESCCommands.c	575	++
.../AP_PiccoloCAN/piccolo_protocol/ESCCommands.h	182	+
.../AP_PiccoloCAN/piccolo_protocol/ESCDefines.c	442	+ -
.../AP_PiccoloCAN/piccolo_protocol/ESCDefines.h	188	+ -
.../AP_PiccoloCAN/piccolo_protocol/ESCPackets.c	2350	+++++ - -
.../AP_PiccoloCAN/piccolo_protocol/ESCPackets.h	448	+ -
.../piccolo_protocol/ESCvelocityProtocol.c	525	+ -
.../piccolo_protocol/ESCvelocityProtocol.h	299	+ -
.../piccolo_protocol/ESCvelocity_source.xml	606	++
.../piccolo_protocol/LegacyESCDefines.c	281	+
.../piccolo_protocol/LegacyESCDefines.h	119	+
.../piccolo_protocol/LegacyESCPackets.c	134	+
.../piccolo_protocol/LegacyESCPackets.h	67	+
.../AP_PiccoloCAN/piccolo_protocol/fielddecode.c	34	+ -
.../AP_PiccoloCAN/piccolo_protocol/fielddecode.h	65	+ -
.../AP_PiccoloCAN/piccolo_protocol/fieldencode.c	70	+ -
.../AP_PiccoloCAN/piccolo_protocol/fieldencode.h	69	+ -
.../AP_PiccoloCAN/piccolo_protocol/license.txt	27	+ -
.../piccolo_protocol/protocol_esc_velocity.xml	278	-
.../AP_PiccoloCAN/piccolo_protocol/scaleddecode.c	904	++ -
.../AP_PiccoloCAN/piccolo_protocol/scaleddecode.h	213	+ -
.../AP_PiccoloCAN/piccolo_protocol/scaledencode.c	1377	+++ -
.../AP_PiccoloCAN/piccolo_protocol/scaledencode.h	220	+ -
libraries/AP_Proximity/AP_Proximity.cpp	19	+ -
libraries/AP_Proximity/AP_Proximity.h	2	+ -
libraries/AP_Proximity/AP_Proximity_Backend.cpp	93	+ -
libraries/AP_Proximity/AP_Proximity_Backend.h	8	+ -
.../AP_Proximity/AP_Proximity_LightwareSF40C.cpp	11	+ -
.../AP_Proximity_LightwareSF40C_v09.cpp	2	+ -
.../AP_Proximity/AP_Proximity_LightwareSF45B.cpp	201	+
.../AP_Proximity/AP_Proximity_LightwareSF45B.h	102	+
.../AP_Proximity/AP_Proximity_LightwareSerial.cpp	140	+
.../AP_Proximity/AP_Proximity_LightwareSerial.h	50	+
libraries/AP_Proximity/AP_Proximity_MAV.cpp	35	+ -
libraries/AP_Proximity/AP_Proximity_MAV.h	4	-

libraries/AP_Proximity/AP_Proximity_MorseSITL.cpp	90	-
libraries/AP_Proximity/AP_Proximity_MorseSITL.h	30	-
.../AP_Proximity/AP_Proximity_TeraRangerTowerEvo.h	10	+ -
libraries/AP_RCProtocol/AP_RCProtocol.cpp	113	+ -
libraries/AP_RCProtocol/AP_RCProtocol.h	24	+ -
libraries/AP_RCProtocol/AP_RCProtocol_Backend.cpp	27	+ -
libraries/AP_RCProtocol/AP_RCProtocol_Backend.h	33	+
libraries/AP_RCProtocol/AP_RCProtocol_CRSF.cpp	400	++
libraries/AP_RCProtocol/AP_RCProtocol_CRSF.h	200	+
libraries/AP_RCProtocol/AP_RCProtocol_DSM.cpp	77	+ -
libraries/AP_RCProtocol/AP_RCProtocol_DSM.h	2	+ -
libraries/AP_RCProtocol/AP_RCProtocol_FPort.cpp	75	+ -
libraries/AP_RCProtocol/AP_RCProtocol_FPort2.cpp	296	+
libraries/AP_RCProtocol/AP_RCProtocol_FPort2.h	60	+
libraries/AP_RCProtocol/AP_RCProtocol_SBUS.cpp	80	+ -
libraries/AP_RCProtocol/AP_RCProtocol_SBUS.h	1	+
libraries/AP_RCProtocol/AP_RCProtocol_SRXL2.cpp	198	+ -
libraries/AP_RCProtocol/AP_RCProtocol_SRXL2.h	23	+ -
.../examples/RCProtocolTest/RCProtocolTest.cpp	164	+ -
libraries/AP_RCProtocol/spm_srxl_config.h	1	+
libraries/AP_RCTelemetry/AP_CRSF_Telem.cpp	890	+++
libraries/AP_RCTelemetry/AP_CRSF_Telem.h	273	+
libraries/AP_RCTelemetry/AP_RCTelemetry.cpp	13	+ -
libraries/AP_RCTelemetry/AP_RCTelemetry.h	6	+ -
libraries/AP_RCTelemetry/AP_Spektrum_Telem.cpp	4	+ -
libraries/AP_RCTelemetry/AP_VideoTX.cpp	233	+
libraries/AP_RCTelemetry/AP_VideoTX.h	131	+
libraries/AP_RSSI/AP_RSSI.cpp	80	+ -
libraries/AP_RSSI/AP_RSSI.h	19	+ -
libraries/AP_RTC/AP_RTC.cpp	43	+
libraries/AP_RTC/AP_RTC.h	3	+
libraries/AP_RangeFinder/AP_RangeFinder.cpp	163	+ -
libraries/AP_RangeFinder/AP_RangeFinder.h	33	+ -
libraries/AP_RangeFinder/AP_RangeFinder_Backend.h	3	+
.../AP_RangeFinder_Benewake_TFMiniPlus.cpp	25	+ -
.../AP_RangeFinder_Benewake_TFMiniPlus.h	2	+ -
.../AP_RangeFinder/AP_RangeFinder_GYUS42v2.cpp	72	+
libraries/AP_RangeFinder/AP_RangeFinder_GYUS42v2.h	34	+
.../AP_RangeFinder/AP_RangeFinder_HC_SR04.cpp	142	+
libraries/AP_RangeFinder/AP_RangeFinder_HC_SR04.h	39	+
.../AP_RangeFinder/AP_RangeFinder_LeddarOne.cpp	12	+ -
.../AP_RangeFinder/AP_RangeFinder_LightwareI2C.cpp	24	+ -
.../AP_RangeFinder_LightwareSerial.cpp	71	+ -
.../AP_RangeFinder_LightwareSerial.h	17	+ -
libraries/AP_RangeFinder/AP_RangeFinder_MSP.cpp	72	+
libraries/AP_RangeFinder/AP_RangeFinder_MSP.h	42	+
libraries/AP_RangeFinder/AP_RangeFinder_NMEA.cpp	6	+
libraries/AP_RangeFinder/AP_RangeFinder_NMEA.h	3	+ -
libraries/AP_RangeFinder/AP_RangeFinder_PWM.cpp	80	+ -
libraries/AP_RangeFinder/AP_RangeFinder_PWM.h	15	+ -
libraries/AP_RangeFinder/AP_RangeFinder_Params.cpp	4	+ -
libraries/AP_RangeFinder/AP_RangeFinder_SITL.cpp	52	+
libraries/AP_RangeFinder/AP_RangeFinder_SITL.h	44	+
libraries/AP_RangeFinder/AP_RangeFinder_UAVCAN.cpp	27	+ -
libraries/AP_RangeFinder/AP_RangeFinder_UAVCAN.h	4	+ -
libraries/AP_Relay/AP_Relay.cpp	19	+ -
libraries/AP_Scheduler/AP_Scheduler.cpp	105	+ -
libraries/AP_Scheduler/AP_Scheduler.h	18	+ -
libraries/AP_Scheduler/PerfInfo.cpp	48	+
libraries/AP_Scheduler/PerfInfo.h	32	+ -
libraries/AP_Scripting/.gitignore	3	+
libraries/AP_Scripting/AP_Scripting.cpp	40	+
libraries/AP_Scripting/AP_Scripting.h	10	+
libraries/AP_Scripting/README.md	5	+ -
.../AP_Scripting/applets/Heli_IM_COL_Tune.lua	172	+
libraries/AP_Scripting/applets/Heli_IM_Col_Tune.md	77	+
libraries/AP_Scripting/applets/README.md	5	+
libraries/AP_Scripting/applets/SmartAudio.lua	95	+
libraries/AP_Scripting/applets/SmartAudio.md	25	+
libraries/AP_Scripting/examples/NMEA-decode.lua	13	+ -
libraries/AP_Scripting/examples/RCIN_test.lua	20	+
libraries/AP_Scripting/examples/Serial_Dump.lua	47	+
libraries/AP_Scripting/examples/UART_log.lua	114	+
.../examples/ahrs-print-angle-and-rates.lua	21	+
.../AP_Scripting/examples/ahrs-print-variances.lua	17	+
.../examples/ahrs-source-gps-wheelencoders.lua	143	+
libraries/AP_Scripting/examples/ahrs-source.lua	165	+
.../examples/arming-check-batt-temp.lua	1	-
.../{button_test.lua.lua => button_test.lua}	0	
.../AP_Scripting/examples/copter-wall-climber.lua	238	+

libraries/AP_Scripting/examples/get_notify_RGB.lua	26	+
libraries/AP_Scripting/examples/logging.lua	68	+
.../AP_Scripting/examples/mission-edit-demo.lua	283	+
libraries/AP_Scripting/examples/mission-load.lua	59	+
libraries/AP_Scripting/examples/mission-save.lua	58	+
libraries/AP_Scripting/examples/opendog_demo.lua	23	+
libraries/AP_Scripting/examples/plane-wind-fs.lua	21	+ -
libraries/AP_Scripting/examples/proximity_test.lua	27	+
libraries/AP_Scripting/examples/quadruped.lua	335	+
.../AP_Scripting/examples/rangefinder_test.lua	31	+
.../AP_Scripting/examples/rover-motor-driver.lua	40	+
.../examples/rover-set-steering-and-throttle.lua	60	+
libraries/AP_Scripting/examples/serial_test.lua	4	+ -
libraries/AP_Scripting/examples/servo_set_get.lua	25	+
libraries/AP_Scripting/examples/set-angle.lua	24	+
libraries/AP_Scripting/examples/wp_test.lua	50	+
libraries/AP_Scripting/generator/.gitignore	2	-
libraries/AP_Scripting/generator/Makefile	35	-
.../generator/description/bindings.desc	70	+ -
libraries/AP_Scripting/generator/src/main.c	273	+ -
libraries/AP_Scripting/lua/src/lbaselib.c	2	+ -
libraries/AP_Scripting/lua/src/lcode.c	3	+
libraries/AP_Scripting/lua/src/ldebug.c	3	+ -
libraries/AP_Scripting/lua/src/ldo.c	3	+ -
libraries/AP_Scripting/lua/src/llex.c	2	+
libraries/AP_Scripting/lua/src/lstate.c	3	+
libraries/AP_Scripting/lua/src/lstrib.c	3	+
libraries/AP_Scripting/lua/src/ltable.c	3	+
libraries/AP_Scripting/lua/src/ltm.c	2	+
libraries/AP_Scripting/lua/src/lundump.c	3	+
libraries/AP_Scripting/lua_bindings.cpp	216	+ -
libraries/AP_Scripting/lua_boxed_numerics.cpp	4	+ -
libraries/AP_Scripting/lua_generated_bindings.cpp	2822	- - - - -
libraries/AP_Scripting/lua_generated_bindings.h	43	-
libraries/AP_Scripting/lua_repl.cpp	2	+ -
libraries/AP_Scripting/lua_scripts.cpp	29	+ -
libraries/AP_Scripting/lua_scripts.h	8	+
libraries/AP_Scripting/wscript	50	+
libraries/AP_SerialManager/AP_SerialManager.cpp	214	+ -
libraries/AP_SerialManager/AP_SerialManager.h	22	+ -
.../examples/SmartRTL_test/SmartRTL_test.cpp	3	+
libraries/AP_Soaring/AP_Soaring.cpp	69	+ -
libraries/AP_Soaring/AP_Soaring.h	27	+ -
libraries/AP_Soaring/Variometer.h	5	-
libraries/AP_TECS/AP_TECS.cpp	36	+ -
libraries/AP_Terrain/AP_Terrain.cpp	11	+ -
libraries/AP_Terrain/AP_Terrain.h	8	+
libraries/AP_Terrain/TerrainGCS.cpp	32	+ -
libraries/AP_Terrain/TerrainIO.cpp	23	+ -
libraries/AP_Terrain/tools/create_terrain.py	258	+ -
libraries/AP_ToshibaCAN/AP_ToshibaCAN.cpp	187	+ -
libraries/AP_ToshibaCAN/AP_ToshibaCAN.h	57	+ -
libraries/AP_UAVCAN/AP_UAVCAN.cpp	283	+ -
libraries/AP_UAVCAN/AP_UAVCAN.h	97	+ -
libraries/AP_UAVCAN/AP_UAVCAN_Clock.h	59	+
libraries/AP_UAVCAN/AP_UAVCAN_DNA_Server.cpp	66	+ -
libraries/AP_UAVCAN/AP_UAVCAN_DNA_Server.h	6	+ -
libraries/AP_UAVCAN/AP_UAVCAN_IfaceMgr.cpp	259	+
libraries/AP_UAVCAN/AP_UAVCAN_IfaceMgr.h	73	+
libraries/AP_UAVCAN/AP_UAVCAN_SLCAN.cpp	572	- -
libraries/AP_UAVCAN/AP_UAVCAN_SLCAN.h	240	-
.../examples/UAVCAN_sniffer/UAVCAN_sniffer.cpp	89	+ -
.../AP_UAVCAN/examples/UAVCAN_sniffer/nobuild.txt	0	
libraries/AP_Vehicle/AP_Vehicle.cpp	164	+ -
libraries/AP_Vehicle/AP_Vehicle.h	87	+ -
libraries/AP_Vehicle/AP_Vehicle_Type.h	10	+ -
libraries/AP_Vehicle/ModeReason.h	4	+
libraries/AP_VisualOdom/AP_VisualOdom.cpp	65	+ -
libraries/AP_VisualOdom/AP_VisualOdom.h	26	+ -
libraries/AP_VisualOdom/AP_VisualOdom_Backend.cpp	1	+
libraries/AP_VisualOdom/AP_VisualOdom_Backend.h	8	+ -
.../AP_VisualOdom/AP_VisualOdom_IntelT265.cpp	115	+ -
libraries/AP_VisualOdom/AP_VisualOdom_IntelT265.h	29	+ -
libraries/AP_VisualOdom/AP_VisualOdom_MAV.cpp	21	+ -
libraries/AP_VisualOdom/AP_VisualOdom_MAV.h	5	+ -
libraries/AP_Volz_Protocol/AP_Volz_Protocol.cpp	6	+ -
libraries/AP_Volz_Protocol/AP_Volz_Protocol.h	3	+
libraries/AP_wheelEncoder/AP_wheelEncoder.cpp	14	+
libraries/AP_wheelEncoder/AP_wheelEncoder.h	13	+
libraries/AP_wheelEncoder/AP_wheelRateControl.cpp	15	+

libraries/AP_winch/AP_winch.cpp	150	+-
libraries/AP_winch/AP_winch.h	71	+-
libraries/AP_winch/AP_winch_Backend.cpp	67	+
libraries/AP_winch/AP_winch_Backend.h	28	+-
libraries/AP_winch/AP_winch_Daiwa.cpp	222	+
libraries/AP_winch/AP_winch_Daiwa.h	108	+
libraries/AP_winch/AP_winch_PWM.cpp	105	+
../AP_winch/{AP_winch_Servo.h => AP_winch_PWM.h}	28	+-
libraries/AP_winch/AP_winch_Servo.cpp	75	-
libraries/AP_windVane/AP_windVane.cpp	18	+-
libraries/AP_windVane/AP_windVane.h	6	+-
libraries/AP_windVane/AP_windVane_NMEA.cpp	6	+
libraries/AP_windVane/AP_windVane_NMEA.h	1	+
libraries/AP_windVane/AP_windVane_SITL.cpp	57	+-
libraries/AR_WPNV/AR_WPNV.cpp	107	+-
libraries/AR_WPNV/AR_WPNV.h	12	+-
libraries/Filter/HarmonicNotchFilter.cpp	72	+-
libraries/Filter/HarmonicNotchFilter.h	8	+-
libraries/Filter/LowPassFilter.cpp	8	+-
libraries/Filter/SlewLimiter.cpp	62	+
libraries/Filter/SlewLimiter.h	27	+
libraries/GCS_MAVLink/GCS.cpp	19	+-
libraries/GCS_MAVLink/GCS.h	61	+-
libraries/GCS_MAVLink/GCS_Common.cpp	417	+-
libraries/GCS_MAVLink/GCS_DeviceOp.cpp	14	+-
libraries/GCS_MAVLink/GCS_Dummy.cpp	24	+
libraries/GCS_MAVLink/GCS_Dummy.h	26	+-
libraries/GCS_MAVLink/GCS_FTP.cpp	75	+-
libraries/GCS_MAVLink/GCS_MAVLink.cpp	1	-
libraries/GCS_MAVLink/GCS_MAVLink.h	4	+-
libraries/GCS_MAVLink/GCS_Param.cpp	9	+
libraries/GCS_MAVLink/GCS_Signing.cpp	31	+-
libraries/GCS_MAVLink/GCS_serial_control.cpp	17	+-
libraries/GCS_MAVLink/MAVLink_routing.cpp	31	+-
../GCS_MAVLink/MissionItemProtocol_Rally.cpp	1	+
libraries/GCS_MAVLink/ap_message.h	2	+
libraries/RC_Channel/RC_Channel.cpp	367	+-
libraries/RC_Channel/RC_Channel.h	112	+-
libraries/RC_Channel/RC_Channels.cpp	13	+-
libraries/RC_Channel/RC_Channels_VarInfo.h	14	+-
libraries/RC_Channel/examples/RC_UART/RC_UART.cpp	6	+-
libraries/SITL/SIM_ADSB.cpp	9	+-
libraries/SITL/SIM_AirSim.cpp	88	+-
libraries/SITL/SIM_AirSim.h	19	+-
libraries/SITL/SIM_Aircraft.cpp	219	+-
libraries/SITL/SIM_Aircraft.h	73	+-
libraries/SITL/SIM_BattMonitor_SMBus.cpp	76	+
libraries/SITL/SIM_BattMonitor_SMBus.h	38	+
libraries/SITL/SIM_BattMonitor_SMBus_Generic.cpp	61	+
libraries/SITL/SIM_BattMonitor_SMBus_Generic.h	35	+
libraries/SITL/SIM_BattMonitor_SMBus_Maxell.cpp	7	+
libraries/SITL/SIM_BattMonitor_SMBus_Maxell.h	26	+
libraries/SITL/SIM_BattMonitor_SMBus_Rotoye.cpp	21	+
libraries/SITL/SIM_BattMonitor_SMBus_Rotoye.h	35	+
libraries/SITL/SIM_Battery.cpp	158	+
libraries/SITL/SIM_Battery.h	51	+
libraries/SITL/SIM_CRSF.cpp	82	+
libraries/SITL/SIM_CRSF.h	60	+
libraries/SITL/SIM_Calibration.cpp	4	+-
libraries/SITL/SIM_FlightAxis.cpp	148	+-
libraries/SITL/SIM_FlightAxis.h	15	+-
libraries/SITL/SIM_Frame.cpp	283	+-
libraries/SITL/SIM_Frame.h	102	+-
libraries/SITL/SIM_Frsky_D.cpp	4	+-
libraries/SITL/SIM_Gimbal.cpp	2	+-
libraries/SITL/SIM_Helicopter.cpp	5	+-
libraries/SITL/SIM_I2C.cpp	108	+
libraries/SITL/SIM_I2C.h	59	+
libraries/SITL/SIM_I2CDevice.cpp	161	+
libraries/SITL/SIM_I2CDevice.h	81	+
libraries/SITL/SIM_IntelligentEnergy.cpp	28	+
libraries/SITL/SIM_IntelligentEnergy.h	39	+
libraries/SITL/SIM_IntelligentEnergy24.cpp	128	+
libraries/SITL/SIM_IntelligentEnergy24.h	72	+
libraries/SITL/SIM_JSON.cpp	425	++
libraries/SITL/SIM_JSON.h	137	+
libraries/SITL/SIM_MaxSonarI2CXL.h	31	+
libraries/SITL/SIM_Motor.cpp	114	+-
libraries/SITL/SIM_Motor.h	48	+-
libraries/SITL/SIM_Multicopter.cpp	20	+-

libraries/SITL/SIM_PS_LightWare.h	37	+	
libraries/SITL/SIM_PS_LightWare_SF45B.cpp	222	+	
libraries/SITL/SIM_PS_LightWare_SF45B.h	259	+	
libraries/SITL/SIM_PS_RPLidarA2.cpp	231	+	
libraries/SITL/SIM_PS_RPLidarA2.h	129	+	
libraries/SITL/SIM_PS_TeraRangerTower.cpp	76	+	
libraries/SITL/SIM_PS_TeraRangerTower.h	67	+	
libraries/SITL/SIM_Parachute.cpp	2	+--	
libraries/SITL/SIM_Plane.cpp	11	+--	
libraries/SITL/SIM_QuadPlane.cpp	14	+--	
libraries/SITL/SIM_RF_GYUS42v2.cpp	43	+	
libraries/SITL/SIM_RF_GYUS42v2.h	48	+	
libraries/SITL/SIM_RF_LightWareSerial.cpp	2	+--	
libraries/SITL/SIM_RF_LightWareSerialBinary.cpp	34	+	
libraries/SITL/SIM_RF_LightWareSerialBinary.h	43	+	
libraries/SITL/SIM_RF_Wasp.cpp	2	+--	
libraries/SITL/SIM_RichenPower.cpp	246	+	
libraries/SITL/SIM_RichenPower.h	145	+	
libraries/SITL/SIM_Rover.cpp	8	+--	
libraries/SITL/SIM_Rover.h	10	+--	
libraries/SITL/SIM_Scimmage.cpp	3	-	
libraries/SITL/SIM_SerialDevice.cpp	9	+--	
libraries/SITL/SIM_SerialDevice.h	6	+--	
libraries/SITL/SIM_SerialProximitySensor.cpp	136	+	
libraries/SITL/SIM_SerialProximitySensor.h	58	+	
libraries/SITL/SIM_SerialRangeFinder.cpp	42	+--	
libraries/SITL/SIM_SerialRangeFinder.h	3	-	
libraries/SITL/SIM_Ship.cpp	213	+	
libraries/SITL/SIM_Ship.h	86	+	
libraries/SITL/SIM_ToshibaLED.cpp	19	+	
libraries/SITL/SIM_ToshibaLED.h	36	+	
libraries/SITL/SIM_Tracker.cpp	5	-	
libraries/SITL/SIM_Tracker.h	5	+--	
libraries/SITL/SIM_Vicon.cpp	152	+--	
libraries/SITL/SIM_Vicon.h	30	+--	
libraries/SITL/SIM_webots.cpp	148	+--	
libraries/SITL/SIM_webots.h	5	+--	
libraries/SITL/SIM_XPlane.cpp	5	+--	
libraries/SITL/SITL.cpp	253	+--	
libraries/SITL/SITL.h	142	+--	
.../SITL/examples/JSON/MATLAB/AP_Conector.slx	Bin 0	->	32088 bytes
libraries/SITL/examples/JSON/MATLAB/AP_receve.m	92	+	
libraries/SITL/examples/JSON/MATLAB/AP_send.m	27	+	
.../SITL/examples/JSON/MATLAB/Copter/Copter.m	132	+	
.../SITL/examples/JSON/MATLAB/Copter/Hexsoon.mat	Bin 0	->	742 bytes
.../examples/JSON/MATLAB/Copter/SIM_multicopter.m	196	+	
.../SITL/examples/JSON/MATLAB/Copter/readme.md	5	+	
libraries/SITL/examples/JSON/MATLAB/Heli/heli.slx	Bin 0	->	55317 bytes
.../SITL/examples/JSON/MATLAB/Heli/heli_init.m	128	+	
libraries/SITL/examples/JSON/MATLAB/Heli/readme.md	3	+	
.../SITL/examples/JSON/MATLAB/Rover/Rover.slx	Bin 0	->	27534 bytes
.../SITL/examples/JSON/MATLAB/Rover/readme.md	1	+	
.../SITL/examples/JSON/MATLAB/SITL_connector.m	120	+	
libraries/SITL/examples/JSON/MATLAB/readme.md	45	+	
.../GNU_General_Public_License.txt	344	+	
.../examples/JSON/MATLAB/tcp_udp_ip_2.0.6/pnet.c	1342	++++	
.../examples/JSON/MATLAB/tcp_udp_ip_2.0.6/pnet.m	234	+	
.../JSON/MATLAB/tcp_udp_ip_2.0.6/pnet.mexa64	Bin 0	->	41200 bytes
.../JSON/MATLAB/tcp_udp_ip_2.0.6/pnet.mexw64	Bin 0	->	30720 bytes
.../JSON/MATLAB/tcp_udp_ip_2.0.6/whatsnew.txt	90	+	
.../examples/JSON/pybullet/models/iris/README.md	3	+	
.../examples/JSON/pybullet/models/iris/iris.urdf	258	+	
.../JSON/pybullet/models/iris/meshes/iris.dae	160	+	
.../pybullet/models/iris/meshes/iris_prop_ccw.dae	160	+	
.../pybullet/models/iris/meshes/iris_prop_cw.dae	160	+	
.../pybullet/models/iris/meshes/propeller_ccw.dae	63	+	
.../pybullet/models/iris/meshes/propeller_cw.dae	63	+	
.../JSON/pybullet/models/opendog/README.md	2	+	
.../pybullet/models/opendog/meshes/base_link.STL	Bin 0	->	1610284 bytes
.../JSON/pybullet/models/opendog/meshes/lb_hip.STL	Bin 0	->	376684 bytes
.../pybullet/models/opendog/meshes/lb_lowerleg.STL	Bin 0	->	125884 bytes
.../pybullet/models/opendog/meshes/lb_upperleg.STL	Bin 0	->	974784 bytes
.../JSON/pybullet/models/opendog/meshes/lf_hip.STL	Bin 0	->	376684 bytes
.../pybullet/models/opendog/meshes/lf_lowerleg.STL	Bin 0	->	125884 bytes
.../pybullet/models/opendog/meshes/lf_upperleg.STL	Bin 0	->	974784 bytes
.../JSON/pybullet/models/opendog/meshes/rb_hip.STL	Bin 0	->	392884 bytes
.../pybullet/models/opendog/meshes/rb_lowerleg.STL	Bin 0	->	126384 bytes
.../pybullet/models/opendog/meshes/rb_upperleg.STL	Bin 0	->	916284 bytes
.../JSON/pybullet/models/opendog/meshes/rf_hip.STL	Bin 0	->	392884 bytes
.../pybullet/models/opendog/meshes/rf_lowerleg.STL	Bin 0	->	126384 bytes

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.../pybullet/models/opendog/meshes/rf_upperleg.STL | Bin 0 -> 916284 bytes
.../JSON/pybullet/models/opendog/opendog.urdf | 660 ++
.../JSON/pybullet/models/quadruped/quadruped.urdf | 375 ++
libraries/SITL/examples/JSON/pybullet/robot.py | 330 +
.../SITL/examples/JSON/pybullet/walking_robot.py | 253 +
libraries/SITL/examples/JSON/readme.md | 81 +
.../Params/Rolladen-Schneider-LS8b.param | 9 -
.../Silentwings/Params/Schleicher-ASW27B.param | 10 -
libraries/SITL/examples/webots/.gitignore | 2 +
libraries/SITL/examples/webots/README.md | 2 +-
.../ardupilot_SITL_QUAD/ardupilot_SITL_QUAD.c | 218 +-
.../ardupilot_SITL_QUAD/ardupilot_SITL_QUAD.h | 9 +-
.../controllers/ardupilot_SITL_QUAD/sensors.c | 33 +-
.../controllers/ardupilot_SITL_QUAD/sensors.h | 14 +-
.../ardupilot_SITL_ROVER/ardupilot_SITL_ROVER.c | 36 +-
.../ardupilot_SITL_ROVER/ardupilot_SITL_ROVER.h | 3 +
.../controllers/ardupilot_SITL_Supervisor/Makefile | 74 +
.../ardupilot_SITL_Supervisor.c | 191 +
.../ardupilot_SITL_TRICOPTER.c | 238 +-
.../ardupilot_SITL_TRICOPTER.h | 9 +-
.../controllers/ardupilot_SITL_TRICOPTER/sensors.c | 33 +-
.../controllers/ardupilot_SITL_TRICOPTER/sensors.h | 14 +-
.../SITL/examples/webots/droneTwoTricopters.sh | 11 +
libraries/SITL/examples/webots/dronex.sh | 2 +-
libraries/SITL/examples/webots/dronex_TwoDrones.sh | 6 +
.../SITL/examples/webots/mission_pyramids.plan | 218 +
.../webots/pyramids_dronePlus_twoDrones.sh | 6 +
libraries/SITL/examples/webots/quadPlus.parm | 1 +
libraries/SITL/examples/webots/quadPlus2.parm | 32 +
libraries/SITL/examples/webots/quadX.parm | 1 +
libraries/SITL/examples/webots/quadX2.parm | 31 +
libraries/SITL/examples/webots/tricopter.parm | 11 +-
libraries/SITL/examples/webots/tricopter2.parm | 14 +
.../examples/webots/worlds/pyramidMapReduced2.wbt | 35 +-
.../webots/worlds/pyramidMapReduced2_two_quads.wbt | 7043 ++++++
.../examples/webots/worlds/webots_quadPlus.wbt | 38 +-
.../SITL/examples/webots/worlds/webots_quadX.wbt | 50 +-
.../examples/webots/worlds/webots_tricopter.wbt | 44 +-
.../examples/webots/worlds/webots_two_quadX.wbt | 744 +++
.../webots/worlds/webots_two_tricopter.wbt | 538 ++
libraries/SITL/picojson.h | 1199 +++++
libraries/SRV_Channel/SRV_Channel.cpp | 27 +-
libraries/SRV_Channel/SRV_Channel.h | 39 +-
libraries/SRV_Channel/SRV_Channel_aux.cpp | 65 +-
libraries/SRV_Channel/SRV_Channels.cpp | 67 +-
modules/gbenchmark | 2 +-
modules/mavlink | 2 +-
reformat.sh | 35 -
tests/AP_gtest.h | 4 +
uncrustify_cpp.cfg | 1434 ----
uncrustify_headers.cfg | 1434 ----
wscript | 36 +-
1548 files changed, 127366 insertions(+), 48042 deletions(-)
create mode 100644 .github/workflows/test_chibios.yml
create mode 100644 .github/workflows/test_linux_sbc.yml
create mode 100644 .github/workflows/test_replay.yml
create mode 100644 .github/workflows/test_sitl_copter.yml
create mode 100644 .github/workflows/test_sitl_periph.yml
create mode 100644 .github/workflows/test_sitl_plane.yml
create mode 100644 .github/workflows/test_sitl_rover.yml
create mode 100644 .github/workflows/test_sitl_sub.yml
create mode 100644 .github/workflows/test_sitl_tracker.yml
create mode 100644 .github/workflows/test_unit_tests.yml
delete mode 100644 ArduCopter/version.cpp
create mode 100644 ArduPlane/ekf_check.cpp
create mode 100644 ArduPlane/mode_thermal.cpp
delete mode 100644 ArduPlane/version.cpp
delete mode 100644 ArduSub/version.cpp
delete mode 100644 Rover/version.cpp
create mode 100644 Tools/AP_Bootloader/board_types.txt
create mode 100644 Tools/AP_Periph/msp.cpp
create mode 100644 Tools/AP_Periph/release-notes.txt
delete mode 100755 Tools/CodeStyle/xmlpretty.py
create mode 100644 Tools/Frame_params/boogie-board-boat.param
create mode 100755 Tools/Linux_HAL_Essentials/pru/aiopru/start_test
create mode 100755 Tools/Replay/check_replay.py
create mode 100755 Tools/Replay/check_replay_branch.py
create mode 100644 Tools/autotest/ArduCopter_Tests/CANGPSCopterMission/copter_mission.txt
create mode 100644 Tools/autotest/ArduPlane_Tests/Deadreckoning/flaps.txt

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create mode 100644 Tools/autotest/ArduPlane_Tests/Terrain/ap-terrain.txt
create mode 100644 Tools/autotest/ArduRover_Tests/MAVProxy_SetModeUsingSwitch/test_arming.txt
create mode 100644 Tools/autotest/Generic_Missions/CMAC-copter-circuit.txt
create mode 100644 Tools/autotest/Generic_Missions/CMAC-loiter-to-alt.txt
create mode 100644 Tools/autotest/default_params/copter-deca.parm
create mode 100644 Tools/autotest/default_params/msposd.parm
create mode 100644 Tools/autotest/models/Callisto.json
create mode 100644 Tools/autotest/models/Callisto.param
create mode 100644 Tools/autotest/param_metadata/xmlemit_mp.py
create mode 100755 Tools/bootloaders/HitecMosaic_bl.bin
create mode 100755 Tools/bootloaders/HitecMosaic_bl.elf
create mode 100644 Tools/bootloaders/HitecMosaic_bl.hex
create mode 100755 Tools/bootloaders/MambaF405v2_bl.bin
create mode 100644 Tools/bootloaders/MambaF405v2_bl.hex
create mode 100755 Tools/bootloaders/Pix32v5_bl.bin
create mode 100755 Tools/bootloaders/Pix32v5_bl.elf
create mode 100644 Tools/bootloaders/Pix32v5_bl.hex
create mode 100755 Tools/bootloaders/QioTekZealotF427_bl.bin
rename Tools/bootloaders/{fmuv4_bl.elf => QioTekZealotF427_bl.elf} (51%)
create mode 100644 Tools/bootloaders/QioTekZealotF427_bl.hex
create mode 100755 Tools/bootloaders/f103-Airspeed_bl.bin
create mode 100755 Tools/bootloaders/f103-Airspeed_bl.elf
create mode 100644 Tools/bootloaders/f103-Airspeed_bl.hex
create mode 100755 Tools/bootloaders/f303-M10070_bl.bin
create mode 100755 Tools/bootloaders/f303-M10070_bl.elf
create mode 100644 Tools/bootloaders/f303-M10070_bl.hex
create mode 100755 Tools/bootloaders/f303-MatekGPS_bl.bin
create mode 100755 Tools/bootloaders/f303-MatekGPS_bl.elf
create mode 100644 Tools/bootloaders/f303-MatekGPS_bl.hex
delete mode 100755 Tools/bootloaders/fmuv4_bl.bin
delete mode 100644 Tools/bootloaders/fmuv4_bl.hex
create mode 100755 Tools/bootloaders/mRoControlZeroOEMH7_bl.bin
create mode 100755 Tools/bootloaders/mRoControlZeroOEMH7_bl.elf
create mode 100644 Tools/bootloaders/mRoControlZeroOEMH7_bl.hex
create mode 100755 Tools/bootloaders/mRoPixracerPro_bl.bin
create mode 100755 Tools/bootloaders/mRoPixracerPro_bl.elf
create mode 100644 Tools/bootloaders/mRoPixracerPro_bl.hex
delete mode 100755 Tools/scripts/decode-ICSR.py
create mode 100755 Tools/scripts/decode-ICSR.py
create mode 100755 Tools/scripts/decode_watchdog.py
create mode 100644 Tools/scripts/firmware_version_decoder.py
create mode 100755 Tools/scripts/generate_mp_paramfile.sh
create mode 100755 Tools/scripts/runcoptertest.py
create mode 100644 libraries/AP_ADSB/AP_ADSB_Backend.cpp
create mode 100644 libraries/AP_ADSB/AP_ADSB_Backend.h
create mode 100644 libraries/AP_ADSB/AP_ADSB_uAvionix_MAVLink.cpp
create mode 100644 libraries/AP_ADSB/AP_ADSB_uAvionix_MAVLink.h
create mode 100644 libraries/AP_Airspeed/AP_Airspeed_MSP.cpp
create mode 100644 libraries/AP_Airspeed/AP_Airspeed_MSP.h
create mode 100644 libraries/AP_Airspeed/AP_Airspeed_NMEA.cpp
create mode 100644 libraries/AP_Airspeed/AP_Airspeed_NMEA.h
create mode 100644 libraries/AP_Airspeed/models/NMEA_Sensor.m
create mode 100644 libraries/AP_Baro/AP_Baro_MSP.cpp
create mode 100644 libraries/AP_Baro/AP_Baro_MSP.h
create mode 100644 libraries/AP_Baro/AP_Baro_Wind.cpp
create mode 100644 libraries/AP_BattMonitor/AP_BattMonitor_Generator.cpp
create mode 100644 libraries/AP_BattMonitor/AP_BattMonitor_Generator.h
rename libraries/AP_BattMonitor/{AP_BattMonitor_SMBus_Maxell.cpp =>
AP_BattMonitor_SMBus_Generic.cpp} (68%)
mode change 100755 => 100644 libraries/AP_BattMonitor/AP_BattMonitor_SMBus_Generic.h
create mode 100644 libraries/AP_BattMonitor/AP_BattMonitor_SMBus_Maxell.h
mode change 100755 => 100644 libraries/AP_BattMonitor/AP_BattMonitor_SMBus_Maxell.h
create mode 100644 libraries/AP_BattMonitor/AP_BattMonitor_SMBus_Rotoye.cpp
create mode 100644 libraries/AP_BattMonitor/AP_BattMonitor_SMBus_Rotoye.h
create mode 100644 libraries/AP_Beacon/AP_Beacon_Nooploop.cpp
create mode 100644 libraries/AP_Beacon/AP_Beacon_Nooploop.h
delete mode 100644 libraries/AP_BoardConfig/AP_BoardConfig_CAN.cpp
delete mode 100644 libraries/AP_BoardConfig/AP_BoardConfig_CAN.h
delete mode 100644 libraries/AP_BoardConfig/canbus_driver.cpp
delete mode 100644 libraries/AP_BoardConfig/canbus_slcan.cpp
create mode 100644 libraries/AP_CANManager/AP_CANDriver.cpp
create mode 100644 libraries/AP_CANManager/AP_CANDriver.h
rename libraries/{AP_BoardConfig/canbus_interface.cpp =>
AP_CANManager/AP_CANInterfaceParams.cpp} (64%)
create mode 100644 libraries/AP_CANManager/AP_CANManager.cpp
create mode 100644 libraries/AP_CANManager/AP_CANManager.h
create mode 100644 libraries/AP_CANManager/AP_CANTester.cpp
create mode 100644 libraries/AP_CANManager/AP_CANTester.h
create mode 100644 libraries/AP_CANManager/AP_CANTester_KDECAN.cpp

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create mode 100644 libraries/AP_CANManager/AP_CANTester_KDECAN.h
create mode 100644 libraries/AP_CANManager/AP_SLCANInterface.cpp
create mode 100644 libraries/AP_CANManager/AP_SLCANInterface.h
rename AntennaTracker/version.cpp => libraries/AP_Common/AP_FWVersionDefine.h (62%)
create mode 100644 libraries/AP_Common/missing/string.h
create mode 100644 libraries/AP_Compass/AP_Compass_MSP.cpp
create mode 100644 libraries/AP_Compass/AP_Compass_MSP.h
create mode 100644 libraries/AP_DAL/AP_DAL.cpp
create mode 100644 libraries/AP_DAL/AP_DAL.h
create mode 100644 libraries/AP_DAL/AP_DAL_Airspeed.cpp
create mode 100644 libraries/AP_DAL/AP_DAL_Airspeed.h
create mode 100644 libraries/AP_DAL/AP_DAL_Baro.cpp
create mode 100644 libraries/AP_DAL/AP_DAL_Baro.h
create mode 100644 libraries/AP_DAL/AP_DAL_Beacon.cpp
create mode 100644 libraries/AP_DAL/AP_DAL_Beacon.h
create mode 100644 libraries/AP_DAL/AP_DAL_Compass.cpp
create mode 100644 libraries/AP_DAL/AP_DAL_Compass.h
create mode 100644 libraries/AP_DAL/AP_DAL_GPS.cpp
create mode 100644 libraries/AP_DAL/AP_DAL_GPS.h
create mode 100644 libraries/AP_DAL/AP_DAL_InertialSensor.cpp
create mode 100644 libraries/AP_DAL/AP_DAL_InertialSensor.h
create mode 100644 libraries/AP_DAL/AP_DAL_RangeFinder.cpp
create mode 100644 libraries/AP_DAL/AP_DAL_RangeFinder.h
create mode 100644 libraries/AP_DAL/AP_DAL_VisualOdom.cpp
create mode 100644 libraries/AP_DAL/AP_DAL_VisualOdom.h
create mode 100644 libraries/AP_DAL/LogStructure.h
create mode 100644 libraries/AP_DAL/examples/AP_DAL_Standalone/main.cpp
create mode 100644 libraries/AP_DAL/examples/AP_DAL_Standalone/wscript
create mode 100644 libraries/AP_FileSystem/AP_FileSystem_backend.cpp
create mode 100644 libraries/AP_FileSystem/examples/File_IO/File_IO.cpp
rename libraries/{AP_KDECAN/examples/KDECAN_sniffer =>
AP_FileSystem/examples/File_IO}/wscript (100%)
create mode 100644 libraries/AP_Frsky_Telem/AP_Frsky_Backend.cpp
create mode 100644 libraries/AP_Frsky_Telem/AP_Frsky_Backend.h
create mode 100644 libraries/AP_Frsky_Telem/AP_Frsky_D.cpp
create mode 100644 libraries/AP_Frsky_Telem/AP_Frsky_D.h
create mode 100644 libraries/AP_Frsky_Telem/AP_Frsky_MAVlite.h
create mode 100644 libraries/AP_Frsky_Telem/AP_Frsky_MAVliteMsgHandler.cpp
create mode 100644 libraries/AP_Frsky_Telem/AP_Frsky_MAVliteMsgHandler.h
create mode 100644 libraries/AP_Frsky_Telem/AP_Frsky_MAVlite_MAVliteToSport.cpp
create mode 100644 libraries/AP_Frsky_Telem/AP_Frsky_MAVlite_MAVliteToSport.h
create mode 100644 libraries/AP_Frsky_Telem/AP_Frsky_MAVlite_Message.cpp
create mode 100644 libraries/AP_Frsky_Telem/AP_Frsky_MAVlite_Message.h
create mode 100644 libraries/AP_Frsky_Telem/AP_Frsky_MAVlite_SPortToMAVlite.cpp
create mode 100644 libraries/AP_Frsky_Telem/AP_Frsky_MAVlite_SPortToMAVlite.h
create mode 100644 libraries/AP_Frsky_Telem/AP_Frsky_Parameters.cpp
create mode 100644 libraries/AP_Frsky_Telem/AP_Frsky_Parameters.h
create mode 100644 libraries/AP_Frsky_Telem/AP_Frsky_SPort.cpp
create mode 100644 libraries/AP_Frsky_Telem/AP_Frsky_SPort.h
create mode 100644 libraries/AP_Frsky_Telem/AP_Frsky_SPortParser.h
create mode 100644 libraries/AP_Frsky_Telem/AP_Frsky_SPort_Passthrough.cpp
create mode 100644 libraries/AP_Frsky_Telem/AP_Frsky_SPort_Passthrough.h
create mode 100644 libraries/AP_GPS/AP_GPS_MSP.cpp
create mode 100644 libraries/AP_GPS/AP_GPS_MSP.h
create mode 100644 libraries/AP_GPS/MovingBase.cpp
create mode 100644 libraries/AP_GPS/MovingBase.h
create mode 100644 libraries/AP_GPS/wscript
create mode 100644 libraries/AP_Generator/AP_Generator.cpp
create mode 100644 libraries/AP_Generator/AP_Generator.h
create mode 100644 libraries/AP_Generator/AP_Generator_Backend.cpp
create mode 100644 libraries/AP_Generator/AP_Generator_Backend.h
create mode 100644 libraries/AP_Generator/AP_Generator_IE_2400.cpp
create mode 100644 libraries/AP_Generator/AP_Generator_IE_2400.h
create mode 100644 libraries/AP_Generator/AP_Generator_IE_650_800.cpp
create mode 100644 libraries/AP_Generator/AP_Generator_IE_650_800.h
create mode 100644 libraries/AP_Generator/AP_Generator_IE_FuelCell.cpp
create mode 100644 libraries/AP_Generator/AP_Generator_IE_FuelCell.h
create mode 100644 libraries/AP_Generator/AP_Generator_RichenPower.cpp
create mode 100644 libraries/AP_Generator/AP_Generator_RichenPower.h
delete mode 100644 libraries/AP_HAL/CAN.h
create mode 100644 libraries/AP_HAL/CANInterface.cpp
create mode 100644 libraries/AP_HAL/CANInterface.h
create mode 100644 libraries/AP_HAL/EventHandler.cpp
create mode 100644 libraries/AP_HAL/EventHandler.h
create mode 100644 libraries/AP_HAL/GPIO.cpp
create mode 100644 libraries/AP_HAL/examples/DSP_test/DSP_test.cpp
create mode 100644 libraries/AP_HAL/examples/DSP_test/GyroFrame.cpp
create mode 100644 libraries/AP_HAL/examples/DSP_test/GyroFrame.h
create mode 100644 libraries/AP_HAL/examples/DSP_test/gyro_isb_reader.py
create mode 100644 libraries/AP_HAL/examples/DSP_test/wscript

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create mode 100644 libraries/AP\_HAL/examples/UART\_chargen/UART\_chargen.cpp  
create mode 100644 libraries/AP\_HAL/examples/UART\_chargen/wscript  
delete mode 100644 libraries/AP\_HAL\_Chibios/CAN.h  
delete mode 100644 libraries/AP\_HAL\_Chibios/CANClock.cpp  
delete mode 100644 libraries/AP\_HAL\_Chibios/CANClock.h  
delete mode 100644 libraries/AP\_HAL\_Chibios/CANInternal.h  
delete mode 100644 libraries/AP\_HAL\_Chibios/CANManager.cpp  
delete mode 100644 libraries/AP\_HAL\_Chibios/CANSerialRouter.cpp  
delete mode 100644 libraries/AP\_HAL\_Chibios/CANSerialRouter.h  
delete mode 100644 libraries/AP\_HAL\_Chibios/CANThread.cpp  
delete mode 100644 libraries/AP\_HAL\_Chibios/CANThread.h  
create mode 100644 libraries/AP\_HAL\_Chibios/EventSource.cpp  
create mode 100644 libraries/AP\_HAL\_Chibios/EventSource.h  
delete mode 100644 libraries/AP\_HAL\_Chibios/fdcan.hpp  
create mode 100644 libraries/AP\_HAL\_Chibios/hwdef/CubeBlack-periph/hwdef-bl.dat  
create mode 100644 libraries/AP\_HAL\_Chibios/hwdef/CubeBlack-periph/hwdef.dat  
create mode 100644 libraries/AP\_HAL\_Chibios/hwdef/CubeOrange-periph/hwdef-bl.dat  
create mode 100644 libraries/AP\_HAL\_Chibios/hwdef/CubeOrange-periph/hwdef.dat  
create mode 100644 libraries/AP\_HAL\_Chibios/hwdef/HitecMosaic/hwdef-bl.dat  
create mode 100644 libraries/AP\_HAL\_Chibios/hwdef/HitecMosaic/hwdef.dat  
create mode 100644 libraries/AP\_HAL\_Chibios/hwdef/MambaF405v2/README.md  
create mode 100644 libraries/AP\_HAL\_Chibios/hwdef/MambaF405v2/hwdef-bl.dat  
create mode 100644 libraries/AP\_HAL\_Chibios/hwdef/MambaF405v2/hwdef.dat  
create mode 100644 libraries/AP\_HAL\_Chibios/hwdef/MambaF405v2/mamba\_f405mk2\_board.jpg  
create mode 100644 libraries/AP\_HAL\_Chibios/hwdef/MambaF405v2/mamba\_f405mk2\_pinout.png  
create mode 100644 libraries/AP\_HAL\_Chibios/hwdef/MazzyStarDrone/README.md  
create mode 100644 libraries/AP\_HAL\_Chibios/hwdef/MazzyStarDrone/hwdef-bl.dat  
create mode 100644 libraries/AP\_HAL\_Chibios/hwdef/MazzyStarDrone/hwdef.dat  
create mode 100644 libraries/AP\_HAL\_Chibios/hwdef/Pix32v5/hwdef-bl.dat  
create mode 100644 libraries/AP\_HAL\_Chibios/hwdef/Pix32v5/hwdef.dat  
create mode 100644 libraries/AP\_HAL\_Chibios/hwdef/QioTekZealotF427/README.md  
create mode 100644 libraries/AP\_HAL\_Chibios/hwdef/QioTekZealotF427/hwdef-bl.dat  
create mode 100644 libraries/AP\_HAL\_Chibios/hwdef/QioTekZealotF427/hwdef.dat  
create mode 100644 libraries/AP\_HAL\_Chibios/hwdef/STM32CubeConf/F3-8MHz/F3-8MHz.ioc  
create mode 100644 libraries/AP\_HAL\_Chibios/hwdef/STM32CubeConf/F3-no-xtal/F3-no-xtal.ioc  
create mode 100644 libraries/AP\_HAL\_Chibios/hwdef/STM32CubeConf/H7-no-xtal/H7-no-xtal.ioc  
create mode 100644 libraries/AP\_HAL\_Chibios/hwdef/crazyflie2/defaults.parm  
create mode 100644 libraries/AP\_HAL\_Chibios/hwdef/f103-Airspeed/hwdef-bl.dat  
create mode 100644 libraries/AP\_HAL\_Chibios/hwdef/f103-Airspeed/hwdef.dat  
create mode 100644 libraries/AP\_HAL\_Chibios/hwdef/f303-MatekGPS/hwdef-bl.dat  
create mode 100644 libraries/AP\_HAL\_Chibios/hwdef/f303-MatekGPS/hwdef.dat  
delete mode 100644 libraries/AP\_HAL\_Chibios/hwdef/fmuv4-beta/hwdef.dat  
delete mode 100644 libraries/AP\_HAL\_Chibios/hwdef/fmuv4/hwdef-bl.dat  
delete mode 100644 libraries/AP\_HAL\_Chibios/hwdef/fmuv4/hwdef.dat  
create mode 100644 libraries/AP\_HAL\_Chibios/hwdef/mRoControlZeroClassic/hwdef-bl.dat  
create mode 100644 libraries/AP\_HAL\_Chibios/hwdef/mRoControlZeroClassic/hwdef.dat  
create mode 100644 libraries/AP\_HAL\_Chibios/hwdef/mRoControlZeroF7/defaults.parm  
create mode 100644 libraries/AP\_HAL\_Chibios/hwdef/mRoControlZeroH7/defaults.parm  
create mode 100644 libraries/AP\_HAL\_Chibios/hwdef/mRoControlZeroH7/hwdef-bl.dat  
create mode 100644 libraries/AP\_HAL\_Chibios/hwdef/mRoControlZeroH7/hwdef.dat  
create mode 100644 libraries/AP\_HAL\_Chibios/hwdef/mRoControlZeroOEMH7/defaults.parm  
create mode 100644 libraries/AP\_HAL\_Chibios/hwdef/mRoControlZeroOEMH7/hwdef-bl.dat  
create mode 100644 libraries/AP\_HAL\_Chibios/hwdef/mRoControlZeroOEMH7/hwdef.dat  
create mode 100644 libraries/AP\_HAL\_Chibios/hwdef/mRoPixracerPro/defaults.parm  
create mode 100644 libraries/AP\_HAL\_Chibios/hwdef/mRoPixracerPro/hwdef-bl.dat  
create mode 100644 libraries/AP\_HAL\_Chibios/hwdef/mRoPixracerPro/hwdef.dat  
create mode 100644 libraries/AP\_HAL\_Chibios/hwdef/scripts/af\_parse\_cubemx.py  
delete mode 100644 libraries/AP\_HAL\_Linux/CAN.cpp  
delete mode 100644 libraries/AP\_HAL\_Linux/CAN.h  
create mode 100644 libraries/AP\_HAL\_Linux/CANSocketIface.cpp  
create mode 100644 libraries/AP\_HAL\_Linux/CANSocketIface.h  
create mode 100644 libraries/AP\_HAL\_SITL/CANSocketIface.cpp  
create mode 100644 libraries/AP\_HAL\_SITL/CANSocketIface.h  
create mode 100644 libraries/AP\_HAL\_SITL/I2CDevice.cpp  
create mode 100644 libraries/AP\_HAL\_SITL/I2CDevice.h  
create mode 100644 libraries/AP\_HAL\_SITL/SITL\_Periph\_State.cpp  
create mode 100644 libraries/AP\_HAL\_SITL/SITL\_Periph\_State.h  
delete mode 100644 libraries/AP\_KDECAN/examples/KDECAN\_sniffer/KDECAN\_sniffer.cpp  
delete mode 100644 libraries/AP\_KDECAN/examples/KDECAN\_sniffer/README.md  
create mode 100644 libraries/AP\_KDECAN/examples/KDECAN\_sniffer/nobuild.txt  
create mode 100644 libraries/AP\_MSP/AP\_MSP.cpp  
create mode 100644 libraries/AP\_MSP/AP\_MSP.h  
create mode 100644 libraries/AP\_MSP/AP\_MSP\_Telem\_Backend.cpp  
create mode 100644 libraries/AP\_MSP/AP\_MSP\_Telem\_Backend.h  
create mode 100644 libraries/AP\_MSP/AP\_MSP\_Telem\_DJI.cpp  
create mode 100644 libraries/AP\_MSP/AP\_MSP\_Telem\_DJI.h  
create mode 100644 libraries/AP\_MSP/AP\_MSP\_Telem\_Generic.cpp  
create mode 100644 libraries/AP\_MSP/AP\_MSP\_Telem\_Generic.h

```
create mode 100755 libraries/AP_MSP/Tools/msposd.py
create mode 100644 libraries/AP_MSP/Tools/osdtest.parm
create mode 100755 libraries/AP_MSP/Tools/pymsp.py
create mode 100644 libraries/AP_MSP/msp.cpp
create mode 100644 libraries/AP_MSP/msp.h
create mode 100644 libraries/AP_MSP/msp_osd.h
rename libraries/{AP_BLHeli => AP_MSP}/msp_protocol.h (84%)
create mode 100644 libraries/AP_MSP/msp_sbuf.cpp
create mode 100644 libraries/AP_MSP/msp_sbuf.h
create mode 100644 libraries/AP_MSP/msp_sensors.h
create mode 100644 libraries/AP_MSP/msp_version.h
delete mode 100644 libraries/AP_Motors/AP_MotorsMatrixTS.cpp
delete mode 100644 libraries/AP_Motors/AP_MotorsMatrixTS.h
create mode 100644 libraries/AP_NavEKF/AP_NavEKF_Source.cpp
create mode 100644 libraries/AP_NavEKF/AP_NavEKF_Source.h
delete mode 100644 libraries/AP_NavEKF/AP_Nav_Common.cpp
create mode 100644 libraries/AP_NavEKF/EKF_Buffer.cpp
create mode 100644 libraries/AP_NavEKF/EKF_Buffer.h
delete mode 100644 libraries/AP_NavEKF2/AP_NavEKF2_Buffer.h
create mode 100644 libraries/AP_NavEKF2/LogStructure.h
delete mode 100644 libraries/AP_NavEKF3/AP_NavEKF3_Buffer.h
create mode 100644 libraries/AP_NavEKF3/LogStructure.h
create mode 100644 libraries/AP_NavEKF3/derivation/code_gen.py
create mode 100644 libraries/AP_NavEKF3/derivation/generated/acc_bf_generated.cpp
create mode 100644 libraries/AP_NavEKF3/derivation/generated/covariance_generated.cpp
create mode 100644 libraries/AP_NavEKF3/derivation/generated/yaw_generated.cpp
create mode 100644 libraries/AP_NavEKF3/derivation/main.py
create mode 100644 libraries/AP_Notify/ScriptingLED.cpp
create mode 100644 libraries/AP_Notify/ScriptingLED.h
create mode 100644 libraries/AP_OLC/AP_OLC.cpp
create mode 100644 libraries/AP_OLC/AP_OLC.h
create mode 100644 libraries/AP_OSD/AP_OSD_MSP.cpp
create mode 100644 libraries/AP_OSD/AP_OSD_MSP.h
create mode 100644 libraries/AP_OSD/AP_OSD_ParamScreen.cpp
create mode 100644 libraries/AP_OSD/AP_OSD_ParamSetting.cpp
create mode 100644 libraries/AP_OpticalFlow/AP_OpticalFlow_MSP.cpp
create mode 100644 libraries/AP_OpticalFlow/AP_OpticalFlow_MSP.h
create mode 100644 libraries/AP_PiccoloCAN/piccolo_protocol/ESCCommands.c
create mode 100644 libraries/AP_PiccoloCAN/piccolo_protocol/ESCCommands.h
create mode 100644 libraries/AP_PiccoloCAN/piccolo_protocol/ESCVelocitySource.xml
create mode 100644 libraries/AP_PiccoloCAN/piccolo_protocol/LegacyESCDefines.c
create mode 100644 libraries/AP_PiccoloCAN/piccolo_protocol/LegacyESCDefines.h
create mode 100644 libraries/AP_PiccoloCAN/piccolo_protocol/LegacyESCPackets.c
create mode 100644 libraries/AP_PiccoloCAN/piccolo_protocol/LegacyESCPackets.h
delete mode 100644 libraries/AP_PiccoloCAN/piccolo_protocol/protocol/esc_velocity.xml
create mode 100644 libraries/AP_Proximity/AP_Proximity_LightwareSF45B.cpp
create mode 100644 libraries/AP_Proximity/AP_Proximity_LightwareSF45B.h
create mode 100644 libraries/AP_Proximity/AP_Proximity_LightwareSerial.cpp
create mode 100644 libraries/AP_Proximity/AP_Proximity_LightwareSerial.h
delete mode 100644 libraries/AP_Proximity/AP_Proximity_MorseSITL.cpp
delete mode 100644 libraries/AP_Proximity/AP_Proximity_MorseSITL.h
create mode 100644 libraries/AP_RCProtocol/AP_RCProtocol_CRSF.cpp
create mode 100644 libraries/AP_RCProtocol/AP_RCProtocol_CRSF.h
create mode 100644 libraries/AP_RCProtocol/AP_RCProtocol_FPort2.cpp
create mode 100644 libraries/AP_RCProtocol/AP_RCProtocol_FPort2.h
create mode 100644 libraries/AP_RCTelemetry/AP_CRSF_Telem.cpp
create mode 100644 libraries/AP_RCTelemetry/AP_CRSF_Telem.h
create mode 100644 libraries/AP_RCTelemetry/AP_VideoTX.cpp
create mode 100644 libraries/AP_RCTelemetry/AP_VideoTX.h
create mode 100644 libraries/AP_RangeFinder/AP_RangeFinder_GYUS42v2.cpp
create mode 100644 libraries/AP_RangeFinder/AP_RangeFinder_GYUS42v2.h
create mode 100644 libraries/AP_RangeFinder/AP_RangeFinder_HC_SR04.cpp
create mode 100644 libraries/AP_RangeFinder/AP_RangeFinder_HC_SR04.h
create mode 100644 libraries/AP_RangeFinder/AP_RangeFinder_MSP.cpp
create mode 100644 libraries/AP_RangeFinder/AP_RangeFinder_MSP.h
create mode 100644 libraries/AP_RangeFinder/AP_RangeFinder_SITL.cpp
create mode 100644 libraries/AP_RangeFinder/AP_RangeFinder_SITL.h
create mode 100644 libraries/AP_Scripting/.gitignore
create mode 100644 libraries/AP_Scripting/applets/Heli_IM_COL_Tune.lua
create mode 100644 libraries/AP_Scripting/applets/Heli_IM_Col_Tune.md
create mode 100644 libraries/AP_Scripting/applets/README.md
create mode 100644 libraries/AP_Scripting/applets/SmartAudio.lua
create mode 100644 libraries/AP_Scripting/applets/SmartAudio.md
create mode 100644 libraries/AP_Scripting/examples/Serial_Dump.lua
create mode 100644 libraries/AP_Scripting/examples/UART_log.lua
create mode 100644 libraries/AP_Scripting/examples/ahrs-print-angle-and-rates.lua
create mode 100644 libraries/AP_Scripting/examples/ahrs-print-variances.lua
create mode 100644 libraries/AP_Scripting/examples/ahrs-source-gps-wheelencoders.lua
create mode 100644 libraries/AP_Scripting/examples/ahrs-source.lua
rename libraries/AP_Scripting/examples/{button_test.lua.lua => button_test.lua} (100%)
```

```
create mode 100644 libraries/AP_Scripting/examples/copter-wall-climber.lua
create mode 100644 libraries/AP_Scripting/examples/get_notify_RGB.lua
create mode 100644 libraries/AP_Scripting/examples/logging.lua
create mode 100644 libraries/AP_Scripting/examples/mission-edit-demo.lua
create mode 100644 libraries/AP_Scripting/examples/mission-load.lua
create mode 100644 libraries/AP_Scripting/examples/mission-save.lua
create mode 100644 libraries/AP_Scripting/examples/opendog_demo.lua
create mode 100644 libraries/AP_Scripting/examples/proximity_test.lua
create mode 100644 libraries/AP_Scripting/examples/quadruped.lua
create mode 100644 libraries/AP_Scripting/examples/rangefinder_test.lua
create mode 100644 libraries/AP_Scripting/examples/rover-motor-driver.lua
create mode 100644 libraries/AP_Scripting/examples/rover-set-steering-and-throttle.lua
create mode 100644 libraries/AP_Scripting/examples/servo_set_get.lua
create mode 100644 libraries/AP_Scripting/examples/set-angle.lua
create mode 100644 libraries/AP_Scripting/examples/wp_test.lua
delete mode 100644 libraries/AP_Scripting/generator/.gitignore
delete mode 100644 libraries/AP_Scripting/generator/Makefile
delete mode 100644 libraries/AP_Scripting/lua_generated_bindings.cpp
delete mode 100644 libraries/AP_Scripting/lua_generated_bindings.h
create mode 100644 libraries/AP_Scripting/wscript
create mode 100644 libraries/AP_UAVCAN/AP_UAVCAN_Clock.h
create mode 100644 libraries/AP_UAVCAN/AP_UAVCAN_IfaceMgr.cpp
create mode 100644 libraries/AP_UAVCAN/AP_UAVCAN_IfaceMgr.h
delete mode 100644 libraries/AP_UAVCAN/AP_UAVCAN_SLCAN.cpp
delete mode 100644 libraries/AP_UAVCAN/AP_UAVCAN_SLCAN.h
create mode 100644 libraries/AP_UAVCAN/examples/UAVCAN_sniffer/nobuild.txt
create mode 100644 libraries/AP_Winch/AP_Winch_Backend.cpp
create mode 100644 libraries/AP_Winch/AP_Winch_Daiwa.cpp
create mode 100644 libraries/AP_Winch/AP_Winch_Daiwa.h
create mode 100644 libraries/AP_Winch/AP_Winch_PWM.cpp
rename libraries/AP_Winch/{AP_Winch_Servo.h => AP_Winch_PWM.h} (56%)
delete mode 100644 libraries/AP_Winch/AP_Winch_Servo.cpp
create mode 100644 libraries/Filter/SlewLimiter.cpp
create mode 100644 libraries/Filter/SlewLimiter.h
create mode 100644 libraries/GCS_MAVLink/GCS_Dummy.cpp
create mode 100644 libraries/SITL/SIM_BattMonitor_SMBus.cpp
create mode 100644 libraries/SITL/SIM_BattMonitor_SMBus.h
create mode 100644 libraries/SITL/SIM_BattMonitor_SMBus_Generic.cpp
create mode 100644 libraries/SITL/SIM_BattMonitor_SMBus_Generic.h
create mode 100644 libraries/SITL/SIM_BattMonitor_SMBus_Maxell.cpp
create mode 100644 libraries/SITL/SIM_BattMonitor_SMBus_Maxell.h
create mode 100644 libraries/SITL/SIM_BattMonitor_SMBus_Rotoye.cpp
create mode 100644 libraries/SITL/SIM_BattMonitor_SMBus_Rotoye.h
create mode 100644 libraries/SITL/SIM_Battery.cpp
create mode 100644 libraries/SITL/SIM_Battery.h
create mode 100644 libraries/SITL/SIM_CRSF.cpp
create mode 100644 libraries/SITL/SIM_CRSF.h
create mode 100644 libraries/SITL/SIM_I2C.cpp
create mode 100644 libraries/SITL/SIM_I2C.h
create mode 100644 libraries/SITL/SIM_I2CDevice.cpp
create mode 100644 libraries/SITL/SIM_I2CDevice.h
create mode 100644 libraries/SITL/SIM_IntelligentEnergy.cpp
create mode 100644 libraries/SITL/SIM_IntelligentEnergy.h
create mode 100644 libraries/SITL/SIM_IntelligentEnergy24.cpp
create mode 100644 libraries/SITL/SIM_IntelligentEnergy24.h
create mode 100644 libraries/SITL/SIM_JSON.cpp
create mode 100644 libraries/SITL/SIM_JSON.h
create mode 100644 libraries/SITL/SIM_MaxSonarI2CXL.h
create mode 100644 libraries/SITL/SIM_PS_LightWare.h
create mode 100644 libraries/SITL/SIM_PS_LightWare_SF45B.cpp
create mode 100644 libraries/SITL/SIM_PS_LightWare_SF45B.h
create mode 100644 libraries/SITL/SIM_PS_RPLidarA2.cpp
create mode 100644 libraries/SITL/SIM_PS_RPLidarA2.h
create mode 100644 libraries/SITL/SIM_PS_TeraRangerTower.cpp
create mode 100644 libraries/SITL/SIM_PS_TeraRangerTower.h
create mode 100644 libraries/SITL/SIM_RF_GYUS42v2.cpp
create mode 100644 libraries/SITL/SIM_RF_GYUS42v2.h
create mode 100644 libraries/SITL/SIM_RF_LightWareSerialBinary.cpp
create mode 100644 libraries/SITL/SIM_RF_LightWareSerialBinary.h
create mode 100644 libraries/SITL/SIM_RichenPower.cpp
create mode 100644 libraries/SITL/SIM_RichenPower.h
create mode 100644 libraries/SITL/SIM_SerialProximitySensor.cpp
create mode 100644 libraries/SITL/SIM_SerialProximitySensor.h
create mode 100644 libraries/SITL/SIM_Ship.cpp
create mode 100644 libraries/SITL/SIM_Ship.h
create mode 100644 libraries/SITL/SIM_ToshibaLED.cpp
create mode 100644 libraries/SITL/SIM_ToshibaLED.h
create mode 100644 libraries/SITL/examples/JSON/MATLAB/AP_Conector.slx
create mode 100644 libraries/SITL/examples/JSON/MATLAB/AP_receve.m
create mode 100644 libraries/SITL/examples/JSON/MATLAB/AP_send.m
```

```
create mode 100644 libraries/SITL/examples/JSON/MATLAB/Copter/Copter.m
create mode 100644 libraries/SITL/examples/JSON/MATLAB/Copter/Hexsoon.mat
create mode 100644 libraries/SITL/examples/JSON/MATLAB/Copter/SIM_multicopter.m
create mode 100644 libraries/SITL/examples/JSON/MATLAB/Copter/readme.md
create mode 100644 libraries/SITL/examples/JSON/MATLAB/Heli/heli.slx
create mode 100644 libraries/SITL/examples/JSON/MATLAB/Heli/heli_init.m
create mode 100644 libraries/SITL/examples/JSON/MATLAB/Heli/readme.md
create mode 100644 libraries/SITL/examples/JSON/MATLAB/Rover/Rover.slx
create mode 100644 libraries/SITL/examples/JSON/MATLAB/Rover/readme.md
create mode 100644 libraries/SITL/examples/JSON/MATLAB/SITL_connector.m
create mode 100644 libraries/SITL/examples/JSON/MATLAB/readme.md
libraries/SITL/examples/JSON/MATLAB/tcp_udp_ip_2.0.6/GNU_General_Public_License.txt
create mode 100644 libraries/SITL/examples/JSON/MATLAB/tcp_udp_ip_2.0.6/pnet.c
create mode 100644 libraries/SITL/examples/JSON/MATLAB/tcp_udp_ip_2.0.6/pnet.m
create mode 100755 libraries/SITL/examples/JSON/MATLAB/tcp_udp_ip_2.0.6/pnet.mexa64
create mode 100644 libraries/SITL/examples/JSON/MATLAB/tcp_udp_ip_2.0.6/pnet.mexw64
create mode 100644 libraries/SITL/examples/JSON/MATLAB/tcp_udp_ip_2.0.6/whatsnew.txt
create mode 100644 libraries/SITL/examples/JSON/pybullet/models/iris/README.md
create mode 100644 libraries/SITL/examples/JSON/pybullet/models/iris/iris.urdf
create mode 100644 libraries/SITL/examples/JSON/pybullet/models/iris/meshes/iris.dae
create mode 100644
libraries/SITL/examples/JSON/pybullet/models/iris/meshes/iris_prop_ccw.dae
create mode 100644
libraries/SITL/examples/JSON/pybullet/models/iris/meshes/iris_prop_cw.dae
create mode 100644
libraries/SITL/examples/JSON/pybullet/models/iris/meshes/propeller_ccw.dae
create mode 100644
libraries/SITL/examples/JSON/pybullet/models/iris/meshes/propeller_cw.dae
create mode 100644 libraries/SITL/examples/JSON/pybullet/models/opendog/README.md
create mode 100644
libraries/SITL/examples/JSON/pybullet/models/opendog/meshes/base_link.STL
create mode 100644
libraries/SITL/examples/JSON/pybullet/models/opendog/meshes/lb_hip.STL
create mode 100644
libraries/SITL/examples/JSON/pybullet/models/opendog/meshes/lb_lowerleg.STL
create mode 100644
libraries/SITL/examples/JSON/pybullet/models/opendog/meshes/lb_upperleg.STL
create mode 100644
libraries/SITL/examples/JSON/pybullet/models/opendog/meshes/lf_hip.STL
create mode 100644
libraries/SITL/examples/JSON/pybullet/models/opendog/meshes/lf_lowerleg.STL
create mode 100644
libraries/SITL/examples/JSON/pybullet/models/opendog/meshes/lf_upperleg.STL
create mode 100644
libraries/SITL/examples/JSON/pybullet/models/opendog/meshes/rb_hip.STL
create mode 100644
libraries/SITL/examples/JSON/pybullet/models/opendog/meshes/rb_lowerleg.STL
create mode 100644
libraries/SITL/examples/JSON/pybullet/models/opendog/meshes/rb_upperleg.STL
create mode 100644
libraries/SITL/examples/JSON/pybullet/models/opendog/meshes/rf_hip.STL
create mode 100644
libraries/SITL/examples/JSON/pybullet/models/opendog/meshes/rf_lowerleg.STL
create mode 100644
libraries/SITL/examples/JSON/pybullet/models/opendog/meshes/rf_upperleg.STL
create mode 100644 libraries/SITL/examples/JSON/pybullet/models/opendog/opendog.urdf
create mode 100644
libraries/SITL/examples/JSON/pybullet/models/quadruped/quadruped.urdf
create mode 100755 libraries/SITL/examples/JSON/pybullet/robot.py
create mode 100644 libraries/SITL/examples/JSON/pybullet/walking_robot.py
create mode 100644 libraries/SITL/examples/JSON/readme.md
create mode 100644
libraries/SITL/examples/webots/controllers/ardupilot_SITL_Supervisor/Makefile
create mode 100644
libraries/SITL/examples/webots/controllers/ardupilot_SITL_Supervisor/ardupilot_SITL_Supe
rvisor.c
create mode 100755 libraries/SITL/examples/webots/droneTwoTricopters.sh
create mode 100755 libraries/SITL/examples/webots/droneX_TwoDrones.sh
create mode 100644 libraries/SITL/examples/webots/mission_pyramids.plan
create mode 100755 libraries/SITL/examples/webots/pyramids_dronePlus_twoDrones.sh
create mode 100644 libraries/SITL/examples/webots/quadPlus2.parm
create mode 100644 libraries/SITL/examples/webots/quadX2.parm
create mode 100644 libraries/SITL/examples/webots/tricopter2.parm
create mode 100644
libraries/SITL/examples/webots/worlds/pyramidMapReduced2_two_quads.wbt
create mode 100644 libraries/SITL/examples/webots/worlds/webots_two_quadX.wbt
create mode 100644 libraries/SITL/examples/webots/worlds/webots_two_tricopter.wbt
create mode 100644 libraries/SITL/picojson.h
delete mode 100755 reformat.sh
```

```
delete mode 100644 uncrustify_cpp.cfg
delete mode 100644 uncrustify_headers.cfg
```

```
Willy@17-04-2014-MEDI MINGW64 ~/Documents/GitHub/ardupilot (master)
$ git push origin
Total 0 (delta 0), reused 0 (delta 0)
To https://github.com/WillyZehnder/ardupilot.git
 9d6a138680..0bf0f687 master -> master
```

```
Willy@17-04-2014-MEDI MINGW64 ~/Documents/GitHub/ardupilot (master)
$ git remote add amilcar https://github.com/amilcarlucas/ardupilot.git
```

```
Willy@17-04-2014-MEDI MINGW64 ~/Documents/GitHub/ardupilot (master)
$ git remote -v
amilcar https://github.com/amilcarlucas/ardupilot.git (fetch)
amilcar https://github.com/amilcarlucas/ardupilot.git (push)
origin https://github.com/WillyZehnder/ardupilot.git (fetch)
origin https://github.com/WillyZehnder/ardupilot.git (push)
upstream https://github.com/ArduPilot/ardupilot.git (fetch)
upstream https://github.com/ArduPilot/ardupilot.git (push)
```

```
Willy@17-04-2014-MEDI MINGW64 ~/Documents/GitHub/ardupilot (master)
$ git fetch amilcar MisRelDec
remote: Enumerating objects: 26, done.
remote: Counting objects: 100% (26/26), done.
remote: Total 35 (delta 26), reused 26 (delta 26), pack-reused 9
Unpacking objects: 100% (35/35), done.
From https://github.com/amilcarlucas/ardupilot
 * branch MisRelDec -> FETCH_HEAD
 * [new branch] MisRelDec -> amilcar/MisRelDec
```

```
Willy@17-04-2014-MEDI MINGW64 ~/Documents/GitHub/ardupilot (master)
$ git checkout MisRelDec
Switched to a new branch 'MisRelDec'
M modules/gbenchmark
M modules/mavlink
Branch 'MisRelDec' set up to track remote branch 'MisRelDec' from 'amilcar'.
```

```
Willy@17-04-2014-MEDI MINGW64 ~/Documents/GitHub/ardupilot (MisRelDec)
$ git rebase master
First, rewinding head to replay your work on top of it...
Applying: AP_HAL: add AP_Mission_Relative support.
Applying: AP_Mission: add AP_Mission_Relative support.
Applying: Copter: add AP_Mission_Relative support.
Applying: Plane: add AP_Mission_Relative support
Applying: Sub: add AP_Mission_Relative support
Applying: Rover: add AP_Mission_Relative support
Applying: Tools: add MSGH and SKD locations
Using index info to reconstruct a base tree...
M Tools/autotest/locations.txt
Falling back to patching base and 3-way merge...
Auto-merging Tools/autotest/locations.txt
CONFLICT (content): Merge conflict in Tools/autotest/locations.txt
error: Failed to merge in the changes.
hint: Use 'git am --show-current-patch' to see the failed patch
Patch failed at 0007 Tools: add MSGH and SKD locations
Resolve all conflicts manually, mark them as resolved with
"git add/rm <conflicted_files>", then run "git rebase --continue".
You can instead skip this commit: run "git rebase --skip".
To abort and get back to the state before "git rebase", run "git rebase --abort".
```

```
Willy@17-04-2014-MEDI MINGW64 ~/Documents/GitHub/ardupilot (MisRelDec|REBASE 7/8)
$ git add --all
```

```
Willy@17-04-2014-MEDI MINGW64 ~/Documents/GitHub/ardupilot (MisRelDec|REBASE 7/8)
$ git rebase --continue
Applying: Tools: add MSGH and SKD locations
Applying: AP_HAL_ChibiOS: Add support for "MatekF405-wing-SMR" (Matek405-wing + Soaring
+ Mission_Relative)
```

```
Willy@17-04-2014-MEDI MINGW64 ~/Documents/GitHub/ardupilot (MisRelDec)
$ git push origin
Enumerating objects: 73, done.
Counting objects: 100% (73/73), done.
Delta compression using up to 2 threads
Compressing objects: 100% (47/47), done.
Writing objects: 100% (47/47), 13.52 KiB | 1.93 MiB/s, done.
Total 47 (delta 35), reused 3 (delta 0)
remote: Resolving deltas: 100% (35/35), completed with 25 local objects.
remote:
```

```
remote: Create a pull request for 'MisRelDec' on GitHub by visiting:
remote:   https://github.com/willyZehnder/ardupilot/pull/new/MisRelDec
remote:
To https://github.com/willyZehnder/ardupilot.git
 * [new branch]      MisRelDec -> MisRelDec
```

```
willy@17-04-2014-MEDI MINGW64 ~/Documents/GitHub/ardupilot (MisRelDec)
$
```