

Vehicle: Copter  
Board: speedybeef4v3  
Remote: ardupilot  
git-sha: 2a3dc4b7bf  
Version: stable-4.5.7  
Selected Features:  
Enable EKF3  
Enable Baro Temperature Calibration  
Enable MSP Barometric Sensor  
Enable SPL06 Barometric Sensor  
Enable SMBUS BatteryMonitor  
Enable AK09916 compasses  
Enable HMC5843 compasses  
Enable IST8308 compasses  
Enable LIS3MDL compasses  
Enable QMC5883L compasses  
Enable Mode Brake  
Enable @MISSION/ filesystem  
Enable @PARAM/ filesystem  
Enable @ROMFS/ filesystem  
Enable @SYS/ filesystem  
Enable NMEA GPS  
Enable u-blox GPS  
Enable sending of old BATTERY2 message  
Enable old REQUEST\_AUTOPILOT\_CAPABILITIES command  
Enable handling of DeviceOp mavlink messages  
Enable handling of Serial Control mavlink messages  
Enable old MAVLink FencePoint protocol  
Enable MSP Telemetry and MSP OSD  
Enable MSP Compass  
Enable MSP DisplayPort OSD (aka CANVAS MODE)  
Enable MSP GPS  
Enable MSP Rangefinder  
Enable MAVLink LED Control  
Enable NeoPixel  
Enable ProfiLED  
Enable MAVLink Play Tune  
Enable ToneAlarm on PWM  
Enable OSD  
Enable OSD param  
Enable Scrolling Sidebars  
Enable Buttons  
Enable "tumble" compass calibration  
Enable Logging  
Enable formatting of microSD cards  
Enable CRSF RC Protocol  
Enable Ghost RC Protocol  
Enable IBus RC Protocol  
Enable Serial RC Protocol support  
Enable SBUS Protocol  
Enable SRXL RC Protocol  
Enable SRXL2 RC Protocol  
Enable ST24 Protocol  
Enable SUMD RC Protocol  
Enable Rangefinders  
Enable Rangefinder - HC\_SR04  
Enable Rangefinder - MAVLink  
Enable Rangefinder - NMEA  
Enable Rangefinder - PWM  
Enable Rangefinder - VL53L0X  
Enable Rangefinder - VL53L1X  
Enable Avoidance  
Enable Geofence  
Enable Optical Flow  
Enable Optical flow MAVLink Sensor  
Enable RPM sensors  
Enable RPM ESC Telemetry sensors  
Enable RPM Harmonic Notch sensors  
Enable RPM Pin-based sensors  
Enable CRSF Telemetry  
Enable CRSF Text Param Selection  
Enable FrSky Telemetry  
Enable FrSkySport Telemetry  
Enable FrSkySport PassThrough Telemetry

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HEXA
OCTA
QUADS(BI,TRI also)
Enable SmartAudio VTX Contol
Enable IRC Tramp VTX Control
Enable VideoTX control

Waiting for build to start...

Setting vehicle to: Copter
Running waf configure
Setting top to :
/mnt/volume_nyc3_01/custom/base/tmp/copter:speedybeef4v3:2a3dc4b7bf2507120f7378a7b2fde73185e0c325:765ff18191
4ef6108d28e8199b4ae49e/build_src
Setting out to :
/mnt/volume_nyc3_01/custom/base/tmp/copter:speedybeef4v3:2a3dc4b7bf2507120f7378a7b2fde73185e0c325:765ff18191
4ef6108d28e8199b4ae49e
Autoconfiguration : enabled
Checking for program 'python' : /usr/bin/python3
Checking for python version >= 3.6.9 : 3.10.12
Setting board to : speedybeef4v3
Using toolchain : arm-none-eabi
Checking for 'g++' (C++ compiler) : /home/custom/bin/arm-none-eabi-g++
Checking for 'gcc' (C compiler) : /home/custom/bin/arm-none-eabi-gcc
Checking for c flags '-MMD' : yes
Checking for cxx flags '-MMD' : yes
CXX Compiler : g++ 10.2.1
Checking for program 'make' : /usr/bin/make
Checking for program 'arm-none-eabi-objcopy' : /home/custom/gcc/bin/arm-none-eabi-objcopy
Including
/mnt/volume_nyc3_01/custom/base/tmp/copter:speedybeef4v3:2a3dc4b7bf2507120f7378a7b2fde73185e0c325:765ff18191
4ef6108d28e8199b4ae49e/build_src/libraries/AP_HAL_ChibiOS/hwdef/include/minimize_fpv_osd.inc
Including
/mnt/volume_nyc3_01/custom/base/tmp/copter:speedybeef4v3:2a3dc4b7bf2507120f7378a7b2fde73185e0c325:765ff18191
4ef6108d28e8199b4ae49e/build_src/libraries/AP_HAL_ChibiOS/hwdef/include/minimize_common.inc
Removing HAL_MSP_GPS_ENABLED
Including
/mnt/volume_nyc3_01/custom/base/tmp/copter:speedybeef4v3:2a3dc4b7bf2507120f7378a7b2fde73185e0c325:765ff18191
4ef6108d28e8199b4ae49e/build_src/libraries/AP_HAL_ChibiOS/hwdef/include/no_bootloader_DFU.inc
Removing AP_BATTERY_SYNTHETIC_CURRENT_ENABLED
Removing HAL_EXTERNAL_AHRS_ENABLED
Removing AP_EXTERNAL_AHRS_MICROSTRAIN5_ENABLED
Removing AP_EXTERNAL_AHRS_MICROSTRAIN7_ENABLED
Removing AP_EXTERNAL_AHRS_VECTORNAV_ENABLED
Removing HAL_NAVEKF2_AVAILABLE
Removing HAL_NAVEKF3_AVAILABLE
Removing EK3_FEATURE_EXTERNAL_NAV
Removing EK3_FEATURE_DRAG_FUSION
Removing HAL_INS_TEMPERATURE_CAL_ENABLE
Removing HAL_VISUALODOM_ENABLED
Removing HAL_PERIPH_SUPPORT_LONG_CAN_PRINTF
Removing AP_FETTEC_ONEWIRE_ENABLED
Removing AP_DRONECAN_HIMARK_SERVO_SUPPORT
Removing AP_DRONECAN_HOBBYWING_ESC_SUPPORT
Removing AP_KDECAN_ENABLED
Removing AP_ROBOTISSERVO_ENABLED
Removing AP_SBUSOUTPUT_ENABLED
Removing AP_VOLZ_ENABLED
Removing AP_DRONECAN_VOLZ_FEEDBACK_ENABLED
Removing AP_AIRSPEED_ASP5033_ENABLED
Removing AP_AIRSPEED_ANALOG_ENABLED
Removing AP_AIRSPEED_DLVR_ENABLED
Removing AP_AIRSPEED_DRONECAN_ENABLED
Removing AP_AIRSPEED_MS4525_ENABLED
Removing AP_AIRSPEED_MS5525_ENABLED
Removing AP_AIRSPEED_MSP_ENABLED
Removing AP_AIRSPEED_NMEA_ENABLED
Removing AP_AIRSPEED_SDP3X_ENABLED
Removing AP_TEMPCALIBRATION_ENABLED
Removing HAL_BARO_WIND_COMP_ENABLED
Removing AP_BARO_BMP085_ENABLED
Removing AP_BARO_BMP280_ENABLED
Removing AP_BARO_BMP388_ENABLED
Removing AP_BARO_BMP581_ENABLED
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Removing AP\_BARO\_DPS280\_ENABLED  
Removing AP\_BARO\_DRONECAN\_ENABLED  
Removing AP\_BARO\_DUMMY\_ENABLED  
Removing AP\_BARO\_EXTERNALAHRS\_ENABLED  
Removing AP\_BARO\_FBM320\_ENABLED  
Removing AP\_BARO\_ICM20789\_ENABLED  
Removing AP\_BARO\_ICP101XX\_ENABLED  
Removing AP\_BARO\_ICP201XX\_ENABLED  
Removing AP\_BARO\_KELLERLD\_ENABLED  
Removing AP\_BARO\_LPS2XH\_ENABLED  
Removing AP\_BARO\_MS56XX\_ENABLED  
Removing AP\_BARO\_MSP\_ENABLED  
Removing AP\_BARO\_SPL06\_ENABLED  
Removing AP\_BATTERY\_ESC\_TELEM\_OUTBOUND\_ENABLED  
Removing AP\_BATTERY\_FUELFLOW\_ENABLED  
Removing AP\_BATTERY\_FUELLEVEL\_ANALOG\_ENABLED  
Removing AP\_BATTERY\_FUELLEVEL\_PWM\_ENABLED  
Removing AP\_BATTERY\_INA2XX\_ENABLED  
Removing AP\_BATTERY\_SMBUS\_ENABLED  
Removing AP\_BATTERY\_SYNTHETIC\_CURRENT\_ENABLED  
Removing AP\_BATTERY\_WATT\_MAX\_ENABLED  
Removing AP\_CAMERA\_ENABLED  
Removing AP\_CAMERA\_SEND\_FOV\_STATUS\_ENABLED  
Removing AP\_CAMERA\_MAVLINK\_ENABLED  
Removing AP\_CAMERA\_MAVLINKCAMV2\_ENABLED  
Removing AP\_CAMERA\_MOUNT\_ENABLED  
Removing AP\_CAMERA\_RELAY\_ENABLED  
Removing AP\_CAMERA\_SERVO\_ENABLED  
Removing AP\_CAMERA\_SOLOGIMBAL\_ENABLED  
Removing HAL\_RUNCAM\_ENABLED  
Removing AP\_COMPASS\_AK09916\_ENABLED  
Removing AP\_COMPASS\_AK8963\_ENABLED  
Removing AP\_COMPASS\_BMM150\_ENABLED  
Removing AP\_COMPASS\_DRONECAN\_ENABLED  
Removing AP\_COMPASS\_EXTERNALAHRS\_ENABLED  
Removing AP\_COMPASS\_HMC5843\_ENABLED  
Removing AP\_COMPASS\_ICM20948\_ENABLED  
Removing AP\_COMPASS\_IST8308\_ENABLED  
Removing AP\_COMPASS\_LIS3MDL\_ENABLED  
Removing AP\_COMPASS\_LSM303D\_ENABLED  
Removing AP\_COMPASS\_LSM9DS1\_ENABLED  
Removing AP\_COMPASS\_MAG3110\_ENABLED  
Removing AP\_COMPASS\_MMC3416\_ENABLED  
Removing AP\_COMPASS\_MMC5XX3\_ENABLED  
Removing AP\_COMPASS\_QMC5883L\_ENABLED  
Removing AP\_COMPASS\_RM3100\_ENABLED  
Removing AC\_PAYLOAD\_PLACE\_ENABLED  
Removing MODE\_BRAKE\_ENABLED  
Removing MODE\_FLIP\_ENABLED  
Removing MODE\_FLOWHOLD\_ENABLED  
Removing MODE\_FOLLOW\_ENABLED  
Removing MODE\_GUIDED\_NOGPS\_ENABLED  
Removing MODE\_SPORT\_ENABLED  
Removing MODE\_SYSTEMID\_ENABLED  
Removing MODE\_TURTLE\_ENABLED  
Removing MODE\_ZIGZAG\_ENABLED  
Removing AP\_CRASHDUMP\_ENABLED  
Removing AP\_INERTIALSENSOR\_KILL\_IMU\_ENABLED  
Removing HAL\_ENABLE\_DRONECAN\_DRIVERS  
Removing HAL\_PICCOLO\_CAN\_ENABLE  
Removing HAL\_TORQEEDO\_ENABLED  
Removing FORCE\_APJ\_DEFAULT\_PARAMETERS  
Removing AP\_FILESYSTEM\_MISSION\_ENABLED  
Removing AP\_FILESYSTEM\_PARAM\_ENABLED  
Removing AP\_FILESYSTEM\_ROMFS\_ENABLED  
Removing AP\_FILESYSTEM\_SYS\_ENABLED  
Removing AP\_DRONECAN\_SEND\_GPS  
Removing AP\_GPS\_ERB\_ENABLED  
Removing AP\_GPS\_GSOFF\_ENABLED  
Removing AP\_GPS\_MAV\_ENABLED  
Removing AP\_GPS\_NMEA\_ENABLED  
Removing AP\_GPS\_NMEA\_UNICORE\_ENABLED  
Removing AP\_GPS\_NOVA\_ENABLED  
Removing AP\_GPS\_SBF\_ENABLED

Removing AP\_GPS\_SBP\_ENABLED  
Removing AP\_GPS\_SBP2\_ENABLED  
Removing AP\_GPS\_SIRF\_ENABLED  
Removing AP\_GPS\_UBLOX\_ENABLED  
Removing HAL\_GENERATOR\_ENABLED  
Removing AP\_GENERATOR\_IE\_2400\_ENABLED  
Removing AP\_GENERATOR\_IE\_650\_800\_ENABLED  
Removing AP\_GENERATOR\_RICHENPOWER\_ENABLED  
Removing HAL\_MOUNT\_ALEXMOS\_ENABLED  
Removing HAL\_MOUNT\_GREMSY\_ENABLED  
Removing HAL\_MOUNT\_ENABLED  
Removing HAL\_MOUNT\_SERVO\_ENABLED  
Removing HAL\_MOUNT\_SIYI\_ENABLED  
Removing HAL\_SOLO\_GIMBAL\_ENABLED  
Removing HAL\_MOUNT\_STORM32MAVLINK\_ENABLED  
Removing HAL\_MOUNT\_STORM32SERIAL\_ENABLED  
Removing HAL\_MOUNT\_VIEWPRO\_ENABLED  
Removing HAL\_MOUNT\_XACTI\_ENABLED  
Removing HAL\_EFI\_ENABLED  
Removing AP\_EFI\_CURRAWONG\_ECU\_ENABLED  
Removing AP\_EFI\_DRONECAN\_ENABLED  
Removing AP\_EFI\_SERIAL\_HIRTH\_ENABLED  
Removing AP\_EFI\_SERIAL\_LUTAN\_ENABLED  
Removing AP\_EFI\_MAV\_ENABLED  
Removing AP\_EFI\_SERIAL\_MS\_ENABLED  
Removing AP\_EFI\_NWPWU\_ENABLED  
Removing AP\_ICENGINE\_ENABLED  
Removing HAL\_ADSB\_ENABLED  
Removing HAL\_ADSB\_SAGETECH\_ENABLED  
Removing HAL\_ADSB\_SAGETECH\_MXS\_ENABLED  
Removing HAL\_ADSB\_UAVIONIX\_MAVLINK\_ENABLED  
Removing HAL\_ADSB\_UCP\_ENABLED  
Removing AP\_AIS\_ENABLED  
Removing AP\_OPENDRONEID\_ENABLED  
Removing AP\_MAVLINK\_AUTOPILOT\_VERSION\_REQUEST\_ENABLED  
Removing AP\_MAVLINK\_BATTERY2\_ENABLED  
Removing AP\_MAVLINK\_MAV\_CMD\_REQUEST\_AUTOPILOT\_CAPABILITIES\_ENABLED  
Removing AP\_MAVLINK\_MSG\_DEVICE\_OP\_ENABLED  
Removing AP\_MAVLINK\_MSG\_MISSION\_REQUEST\_ENABLED  
Removing AP\_MAVLINK\_MSG\_MOUNT\_CONFIGURE\_ENABLED  
Removing AP\_MAVLINK\_MSG\_MOUNT\_CONTROL\_ENABLED  
Removing AP\_MAVLINK\_MSG\_RELAY\_STATUS\_ENABLED  
Removing AP\_MAVLINK\_MSG\_SERIAL\_CONTROL\_ENABLED  
Removing AP\_MAVLINK\_SERVO\_RELAY\_ENABLED  
Removing AC\_POLYFENCE\_FENCE\_POINT\_PROTOCOL\_SUPPORT  
Removing HAL\_HIGH\_LATENCY2\_ENABLED  
Removing AP\_MAVLINK\_RALLY\_POINT\_PROTOCOL\_ENABLED  
Removing HAL\_MSP\_ENABLED  
Removing AP\_COMPASS\_MSP\_ENABLED  
Removing HAL\_WITH\_MSP\_DISPLAYPORT  
Removing HAL\_MSP\_GPS\_ENABLED  
Removing HAL\_MSP\_OPTICALFLOW\_ENABLED  
Removing HAL\_MSP\_RANGEFINDER\_ENABLED  
Removing HAL\_MSP\_SENSORS\_ENABLED  
Removing AP\_MISSION\_NAV\_PAYLOAD\_PLACE\_ENABLED  
Removing AP\_NETWORKING\_BACKEND\_PPP  
Removing AP\_NOTIFY\_MAVLINK\_LED\_CONTROL\_SUPPORT\_ENABLED  
Removing AP\_NOTIFY\_NCP5623\_ENABLED  
Removing AP\_NOTIFY\_NEOPIXEL\_ENABLED  
Removing AP\_NOTIFY\_PROFILED\_ENABLED  
Removing AP\_NOTIFY\_PROFILED\_SPI\_ENABLED  
Removing AP\_NOTIFY\_MAVLINK\_PLAY\_TUNE\_SUPPORT\_ENABLED  
Removing AP\_NOTIFY\_TONEALARM\_ENABLED  
Removing OSD\_ENABLED  
Removing AP\_OSD\_LINK\_STATS\_EXTENSIONS\_ENABLED  
Removing OSD\_PARAM\_ENABLED  
Removing HAL\_OSD\_SIDEBAR\_ENABLE  
Removing HAL\_PLUSCODE\_ENABLE  
Removing AP\_BOOTLOADER\_FLASHING\_ENABLED  
Removing HAL\_BUTTON\_ENABLED  
Removing COMPASS\_CAL\_ENABLED  
Removing HAL\_DISPLAY\_ENABLED  
Removing AP\_DRONECAN\_SERIAL\_ENABLED  
Removing HAL\_GYROFFT\_ENABLED

Removing HAL\_LOGGING\_ENABLED  
Removing HAL\_NMEA\_OUTPUT\_ENABLED  
Removing AP\_SCRIPTING\_ENABLED  
Removing AP\_FILESYSTEM\_FORMAT\_ENABLED  
Removing AP\_SDCARD\_STORAGE\_ENABLED  
Removing AP\_CAN\_SLCAN\_ENABLED  
Removing AP\_GRIPPER\_ENABLED  
Removing AP\_LANDINGGEAR\_ENABLED  
Removing AP\_RELAY\_ENABLED  
Removing AP\_SERVORELAJEVENTS\_ENABLED  
Removing HAL\_SPRAYER\_ENABLED  
Removing AP\_WINCH\_ENABLED  
Removing AP\_ADVANCEDFAILSAFE\_ENABLED  
Removing AP\_TUNING\_ENABLED  
Removing HAL\_LANDING\_DEEPSTALL\_ENABLED  
Removing AP\_PLANE\_BLACKBOX\_LOGGING  
Removing QAUTOTUNE\_ENABLED  
Removing HAL\_QUADPLANE\_ENABLED  
Removing HAL\_SOARING\_ENABLED  
Removing AC\_PRECLAND\_ENABLED  
Removing AC\_PRECLAND\_COMPANION\_ENABLED  
Removing AC\_PRECLAND\_IRLOCK\_ENABLED  
Removing HAL\_PROXIMITY\_ENABLED  
Removing AP\_PROXIMITY\_CYGBOT\_ENABLED  
Removing AP\_PROXIMITY\_DRONECAN\_ENABLED  
Removing AP\_PROXIMITY\_LIGHTWARE\_SF40C\_ENABLED  
Removing AP\_PROXIMITY\_LIGHTWARE\_SF45B\_ENABLED  
Removing AP\_PROXIMITY\_MAV\_ENABLED  
Removing AP\_PROXIMITY\_RANGEFINDER\_ENABLED  
Removing AP\_PROXIMITY\_RPLIDARA2\_ENABLED  
Removing AP\_PROXIMITY\_TERARANGERTOWER\_ENABLED  
Removing AP\_PROXIMITY\_TERARANGERTOWEREVO\_ENABLED  
Removing AP\_RCPROTOCOL\_CRSF\_ENABLED  
Removing AP\_RCPROTOCOL\_GHST\_ENABLED  
Removing AP\_RCPROTOCOL\_IBUS\_ENABLED  
Removing AP\_RCPROTOCOL\_PPMSUM\_ENABLED  
Removing AP\_RCPROTOCOL\_ENABLED  
Removing AP\_RCPROTOCOL\_SBUS\_ENABLED  
Removing AP\_RCPROTOCOL\_SRXL\_ENABLED  
Removing AP\_RCPROTOCOL\_SRXL2\_ENABLED  
Removing AP\_RCPROTOCOL\_ST24\_ENABLED  
Removing AP\_RCPROTOCOL\_SUMD\_ENABLED  
Removing AP\_RANGEFINDER\_ENABLED  
Removing AP\_RANGEFINDER\_ANALOG\_ENABLED  
Removing AP\_RANGEFINDER\_BENEWAKE\_CAN\_ENABLED  
Removing AP\_RANGEFINDER\_BENEWAKE\_TF02\_ENABLED  
Removing AP\_RANGEFINDER\_BENEWAKE\_TF03\_ENABLED  
Removing AP\_RANGEFINDER\_BENEWAKE\_TFMINI\_ENABLED  
Removing AP\_RANGEFINDER\_BENEWAKE\_TFMINIPLUS\_ENABLED  
Removing AP\_RANGEFINDER\_BLPING\_ENABLED  
Removing AP\_RANGEFINDER\_DRONECAN\_ENABLED  
Removing AP\_RANGEFINDER\_GYUS42V2\_ENABLED  
Removing AP\_RANGEFINDER\_HC\_SR04\_ENABLED  
Removing AP\_RANGEFINDER\_JRE\_SERIAL\_ENABLED  
Removing AP\_RANGEFINDER\_LANBAO\_ENABLED  
Removing AP\_RANGEFINDER\_LEDDARONE\_ENABLED  
Removing AP\_RANGEFINDER\_LEDDARVU8\_ENABLED  
Removing AP\_RANGEFINDER\_LIGHTWARE\_SERIAL\_ENABLED  
Removing AP\_RANGEFINDER\_LUA\_ENABLED  
Removing AP\_RANGEFINDER\_LWI2C\_ENABLED  
Removing AP\_RANGEFINDER\_MAVLINK\_ENABLED  
Removing AP\_RANGEFINDER\_MAXBOTIX\_SERIAL\_ENABLED  
Removing AP\_RANGEFINDER\_MAXSONARI2CXL\_ENABLED  
Removing AP\_RANGEFINDER\_NMEA\_ENABLED  
Removing AP\_RANGEFINDER\_NOOPLOOP\_ENABLED  
Removing AP\_RANGEFINDER\_NRA24\_CAN\_ENABLED  
Removing AP\_RANGEFINDER\_PULSEDLIGHTLRF\_ENABLED  
Removing AP\_RANGEFINDER\_PWM\_ENABLED  
Removing AP\_RANGEFINDER\_TOFSENSEF\_I2C\_ENABLED  
Removing AP\_RANGEFINDER\_TOFSENSEP\_CAN\_ENABLED  
Removing AP\_RANGEFINDER\_TRI2C\_ENABLED  
Removing AP\_RANGEFINDER\_TERARANGER\_SERIAL\_ENABLED  
Removing AP\_RANGEFINDER\_USD1\_CAN\_ENABLED  
Removing AP\_RANGEFINDER\_USD1\_SERIAL\_ENABLED

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Removing AP_RANGEFINDER_VL53L0X_ENABLED
Removing AP_RANGEFINDER_VL53L1X_ENABLED
Removing AP_RANGEFINDER_WASP_ENABLED
Removing AC_AVOID_ENABLED
Removing AC_OAPATHPLANNER_ENABLED
Removing AP_FENCE_ENABLED
Removing HAL_PARACHUTE_ENABLED
Removing HAL_RALLY_ENABLED
Removing AP_AIRSPEED_ENABLED
Removing AP_BEACON_ENABLED
Removing GPS_MOVING_BASELINE
Removing AP_SERIALMANAGER_IMUOUT_ENABLED
Removing AP_OPTICALFLOW_ENABLED
Removing AP_OPTICALFLOW_CXOF_ENABLED
Removing AP_OPTICALFLOW_HEREFLOW_ENABLED
Removing AP_OPTICALFLOW_MAV_ENABLED
Removing AP_OPTICALFLOW_ONBOARD_ENABLED
Removing AP_OPTICALFLOW_PIXART_ENABLED
Removing AP_OPTICALFLOW_PX4FLOW_ENABLED
Removing AP_OPTICALFLOW_UPFLOW_ENABLED
Removing AP_RPM_ENABLED
Removing AP_RPM_EFI_ENABLED
Removing AP_RPM_ESC_TELEM_ENABLED
Removing AP_RPM_GENERATOR_ENABLED
Removing AP_RPM_HARMONICNOTCH_ENABLED
Removing AP_RPM_PIN_ENABLED
Removing AP_TEMPERATURE_SENSOR_ENABLED
Removing AP_TEMPERATURE_SENSOR_MCP9600_ENABLED
Removing AP_TEMPERATURE_SENSOR_TSYS01_ENABLED
Removing AP_TEMPERATURE_SENSOR_TSYS03_ENABLED
Removing AP_RC_CHANNEL_AUX_FUNCTION_STRINGS_ENABLED
Removing HAL_CRSF_TELEM_ENABLED
Removing HAL_CRSF_TELEM_TEXT_SELECTION_ENABLED
Removing AP_FRSKY_TELEM_ENABLED
Removing AP_FRSKY_D_TELEM_ENABLED
Removing AP_FRSKY_SPORT_TELEM_ENABLED
Removing AP_FRSKY_SPORT_PASSTHROUGH_ENABLED
Removing AP_GHST_TELEM_ENABLED
Removing HAL_HOTT_TELEM_ENABLED
Removing AP_LTM_TELEM_ENABLED
Removing HAL_SPEKTRUM_TELEM_ENABLED
Removing AP_MOTORS_FRAME_DECA_ENABLED
Removing AP_MOTORS_FRAME_DODECAHEXA_ENABLED
Removing AP_MOTORS_FRAME_HEXAHEDRA_ENABLED
Removing AP_MOTORS_FRAME_HEXAHEDRA_ENABLED
Removing AP_MOTORS_FRAME_OCTA_ENABLED
Removing AP_MOTORS_FRAME_OCTAQUAD_ENABLED
Removing AP_MOTORS_FRAME_QUAD_ENABLED
Removing AP_MOTORS_FRAME_Y6_ENABLED
Removing AP_SMARTAUDIO_ENABLED
Removing AP_TRAMP_ENABLED
Removing AP_VIDEOTX_ENABLED
Setup for MCU STM32F405xx
Default parameters path from hwdef:
/mnt/volume_nyc3_01/custom/base/tmp/copter:speedybeef4v3:2a3dc4b7bf2507120f7378a7b2fde73185e0c325:765ff18191
4ef6108d28e8199b4ae49e/build_src/libraries/AP_HAL_ChibiOS/hwdef/speedybeef4v3/defaults.parm
Writing hwdef setup in
/mnt/volume_nyc3_01/custom/base/tmp/copter:speedybeef4v3:2a3dc4b7bf2507120f7378a7b2fde73185e0c325:765ff18191
4ef6108d28e8199b4ae49e/speedybeef4v3/hwdef.h
Writing DMA map
Setting up as normal
Generating ldscript.ld
Checking for env.py
env set ENABLE_DFU_BOOT=0
env set WITH_FATFS=1
env set PROCESS_STACK=0x1C00
env set MAIN_STACK=0x600
env set IOMCU_FW=0
env set PERIPH_FW=0
env set BOARD_FLASH_SIZE=1024
env set EXT_FLASH_SIZE_MB=0
env set INT_FLASH_PRIMARY=False
env set ENABLE_CRASHDUMP=False
env set CPU_FLAGS=['-mcpu=cortex-m4', '-mfpu=fpv4-sp-d16', '-mfloat-abi=hard', '-DARM_MATH_CM4', '-u_printf_float']
```

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env set CORTEX=cortex-m4
env set APJ_BOARD_ID=1082
env set APJ_BOARD_TYPE=STM32F405xx
env set USBID=0x1209/0x5741
env set FLASH_RESERVE_START_KB=48
env set EXT_FLASH_RESERVE_START_KB=0
env set FLASH_TOTAL=999424
env set HAS_EXTERNAL_FLASH_SECTIONS=0
env set CHIBIOS_BUILD_FLAGS=USE_FATFS=yes
CHIBIOS_STARTUP_MK=os/common/startup/ARMCMx/compilers/GCC/mk/startup_stm32f4xx.mk
CHIBIOS_PLATFORM_MK=os/hal/ports/STM32/STM32F4xx/platform.mk MCU=cortex-m4 ENV_UDEFS=-DCHPRINTF_USE_FLOAT=1
Enabling ChibiOS asserts : no
Disabling Watchdog : no
Enabling malloc guard : no
Enabling ChibiOS thread statistics : no
Enabling -Werror : yes
Checking for intelhex module: : OK
Enabled OpenDroneID : no
Enabled firmware ID checking : no
GPS Debug Logging : no
Enabled custom controller : no
Checking for HAVE_CMATH_ISFINITE : yes
Checking for HAVE_CMATH_ISINF : yes
Checking for HAVE_CMATH_ISNAN : yes
Checking for NEED_CMATH_ISFINITE_STD_NAMESPACE : yes
Checking for NEED_CMATH_ISINF_STD_NAMESPACE : yes
Checking for NEED_CMATH_ISNAN_STD_NAMESPACE : yes
Checking for header endian.h : not found
Checking for header byteswap.h : not found
Checking for HAVE_MEMRCHR : no
Configured VSCode Intellisense: : no
DC_DSDL compiler :
/mnt/volume_nyc3_01/custom/base/tmp/copter:speedybeef4v3:2a3dc4b7bf2507120f7378a7b2fde73185e0c325:765ff18191
4ef6108d28e8199b4ae49e/build_src/modules/DroneCAN/dronecan_dsdlc/dronecan_dsdlc.py
Source is git repository : yes
Update submodules : yes
Checking for program 'git' : /usr/bin/git
Gtest : STM32 boards currently don't support compiling gtest
Checking for program 'arm-none-eabi-size' : /home/custom/gcc/bin/arm-none-eabi-size
Benchmarks : disabled
Unit tests : disabled
Scripting : maybe
Scripting runtime checks : enabled
Debug build : disabled
Coverage build : disabled
Force 32-bit build : disabled
Checking for program 'rsync' : /usr/bin/rsync
'configure' finished successfully (0.621s)
Running clean
'clean' finished successfully (1.093s)
Running build
Waf: Entering directory
~/mnt/volume_nyc3_01/custom/base/tmp/copter:speedybeef4v3:2a3dc4b7bf2507120f7378a7b2fde73185e0c325:765ff18191
14ef6108d28e8199b4ae49e/speedybeef4v3'
Including
/mnt/volume_nyc3_01/custom/base/tmp/copter:speedybeef4v3:2a3dc4b7bf2507120f7378a7b2fde73185e0c325:765ff18191
4ef6108d28e8199b4ae49e/build_src/libraries/AP_HAL_ChibiOS/hwdef/include/minimize_fpv_osd.inc
Including
/mnt/volume_nyc3_01/custom/base/tmp/copter:speedybeef4v3:2a3dc4b7bf2507120f7378a7b2fde73185e0c325:765ff18191
4ef6108d28e8199b4ae49e/build_src/libraries/AP_HAL_ChibiOS/hwdef/include/minimize_common.inc
Removing HAL_MSP_GPS_ENABLED
Including
/mnt/volume_nyc3_01/custom/base/tmp/copter:speedybeef4v3:2a3dc4b7bf2507120f7378a7b2fde73185e0c325:765ff18191
4ef6108d28e8199b4ae49e/build_src/libraries/AP_HAL_ChibiOS/hwdef/include/no_bootloader_DFU.inc
Removing AP_BATTERY_SYNTHETIC_CURRENT_ENABLED
Removing HAL_EXTERNAL_AHRS_ENABLED
Removing AP_EXTERNAL_AHRS_MICROSTRAIN5_ENABLED
Removing AP_EXTERNAL_AHRS_MICROSTRAIN7_ENABLED
Removing AP_EXTERNAL_AHRS_VECTORNAV_ENABLED
Removing HAL_NAVEKF2_AVAILABLE
Removing HAL_NAVEKF3_AVAILABLE
Removing EK3_FEATURE_EXTERNAL_NAV
Removing EK3_FEATURE_DRAG_FUSION
Removing HAL_INS_TEMPERATURE_CAL_ENABLE
```

Removing HAL\_VISUALODOM\_ENABLED  
Removing HAL\_PERIPH\_SUPPORT\_LONG\_CAN\_PRINTF  
Removing AP\_FETTEC\_ONEWIRE\_ENABLED  
Removing AP\_DRONECAN\_HIMARK\_SERVO\_SUPPORT  
Removing AP\_DRONECAN\_HOBBYWING\_ESC\_SUPPORT  
Removing AP\_KDECAN\_ENABLED  
Removing AP\_ROBOTISSERVO\_ENABLED  
Removing AP\_SBUSOUTPUT\_ENABLED  
Removing AP\_VOLZ\_ENABLED  
Removing AP\_DRONECAN\_VOLZ\_FEEDBACK\_ENABLED  
Removing AP\_AIRSPEED\_ASP5033\_ENABLED  
Removing AP\_AIRSPEED\_ANALOG\_ENABLED  
Removing AP\_AIRSPEED\_DLVR\_ENABLED  
Removing AP\_AIRSPEED\_DRONECAN\_ENABLED  
Removing AP\_AIRSPEED\_MS4525\_ENABLED  
Removing AP\_AIRSPEED\_MS5525\_ENABLED  
Removing AP\_AIRSPEED\_MSP\_ENABLED  
Removing AP\_AIRSPEED\_NMEA\_ENABLED  
Removing AP\_AIRSPEED\_SDP3X\_ENABLED  
Removing AP\_TEMPCALIBRATION\_ENABLED  
Removing HAL\_BARO\_WIND\_COMP\_ENABLED  
Removing AP\_BARO\_BMP085\_ENABLED  
Removing AP\_BARO\_BMP280\_ENABLED  
Removing AP\_BARO\_BMP388\_ENABLED  
Removing AP\_BARO\_BMP581\_ENABLED  
Removing AP\_BARO\_DPS280\_ENABLED  
Removing AP\_BARO\_DRONECAN\_ENABLED  
Removing AP\_BARO\_DUMMY\_ENABLED  
Removing AP\_BARO\_EXTERNALAHRS\_ENABLED  
Removing AP\_BARO\_FBM320\_ENABLED  
Removing AP\_BARO\_ICM20789\_ENABLED  
Removing AP\_BARO\_ICP101XX\_ENABLED  
Removing AP\_BARO\_ICP201XX\_ENABLED  
Removing AP\_BARO\_KELLERLD\_ENABLED  
Removing AP\_BARO\_LPS2XH\_ENABLED  
Removing AP\_BARO\_MS56XX\_ENABLED  
Removing AP\_BARO\_MSP\_ENABLED  
Removing AP\_BARO\_SPL06\_ENABLED  
Removing AP\_BATTERY\_ESC\_TELEM\_OUTBOUND\_ENABLED  
Removing AP\_BATTERY\_FUELFLOW\_ENABLED  
Removing AP\_BATTERY\_FUELLEVEL\_ANALOG\_ENABLED  
Removing AP\_BATTERY\_FUELLEVEL\_PWM\_ENABLED  
Removing AP\_BATTERY\_INA2XX\_ENABLED  
Removing AP\_BATTERY\_SMBUS\_ENABLED  
Removing AP\_BATTERY\_SYNTHETIC\_CURRENT\_ENABLED  
Removing AP\_BATTERY\_WATT\_MAX\_ENABLED  
Removing AP\_CAMERA\_ENABLED  
Removing AP\_CAMERA\_SEND\_FOV\_STATUS\_ENABLED  
Removing AP\_CAMERA\_MAVLINK\_ENABLED  
Removing AP\_CAMERA\_MAVLINKCAMV2\_ENABLED  
Removing AP\_CAMERA\_MOUNT\_ENABLED  
Removing AP\_CAMERA\_RELAY\_ENABLED  
Removing AP\_CAMERA\_SERVO\_ENABLED  
Removing AP\_CAMERA\_SOLOGIMBAL\_ENABLED  
Removing HAL\_RUNCAM\_ENABLED  
Removing AP\_COMPASS\_AK09916\_ENABLED  
Removing AP\_COMPASS\_AK8963\_ENABLED  
Removing AP\_COMPASS\_BMM150\_ENABLED  
Removing AP\_COMPASS\_DRONECAN\_ENABLED  
Removing AP\_COMPASS\_EXTERNALAHRS\_ENABLED  
Removing AP\_COMPASS\_HMC5843\_ENABLED  
Removing AP\_COMPASS\_ICM20948\_ENABLED  
Removing AP\_COMPASS\_IST8308\_ENABLED  
Removing AP\_COMPASS\_LIS3MDL\_ENABLED  
Removing AP\_COMPASS\_LSM303D\_ENABLED  
Removing AP\_COMPASS\_LSM9DS1\_ENABLED  
Removing AP\_COMPASS\_MAG3110\_ENABLED  
Removing AP\_COMPASS\_MMC3416\_ENABLED  
Removing AP\_COMPASS\_MMC5XX3\_ENABLED  
Removing AP\_COMPASS\_QMC5883L\_ENABLED  
Removing AP\_COMPASS\_RM3100\_ENABLED  
Removing AC\_PAYLOAD\_PLACE\_ENABLED  
Removing MODE\_BRAKE\_ENABLED  
Removing MODE\_FLIP\_ENABLED



Removing MODE\_FLOWHOLD\_ENABLED  
Removing MODE\_FOLLOW\_ENABLED  
Removing MODE\_GUIDED\_NOGPS\_ENABLED  
Removing MODE\_SPORT\_ENABLED  
Removing MODE\_SYSTEMID\_ENABLED  
Removing MODE\_TURTLE\_ENABLED  
Removing MODE\_ZIGZAG\_ENABLED  
Removing AP\_CRASHDUMP\_ENABLED  
Removing AP\_INERTIALSENSOR\_KILL\_IMU\_ENABLED  
Removing HAL\_ENABLE\_DRONECAN\_DRIVERS  
Removing HAL\_PICCOLO\_CAN\_ENABLE  
Removing HAL\_TORQEEDO\_ENABLED  
Removing FORCE\_APJ\_DEFAULT\_PARAMETERS  
Removing AP\_FILESYSTEM\_MISSION\_ENABLED  
Removing AP\_FILESYSTEM\_PARAM\_ENABLED  
Removing AP\_FILESYSTEM\_ROMFS\_ENABLED  
Removing AP\_FILESYSTEM\_SYS\_ENABLED  
Removing AP\_DRONECAN\_SEND\_GPS  
Removing AP\_GPS\_ERB\_ENABLED  
Removing AP\_GPS\_GSOFF\_ENABLED  
Removing AP\_GPS\_MAV\_ENABLED  
Removing AP\_GPS\_NMEA\_ENABLED  
Removing AP\_GPS\_NMEA\_UNICORE\_ENABLED  
Removing AP\_GPS\_NOVA\_ENABLED  
Removing AP\_GPS\_SBF\_ENABLED  
Removing AP\_GPS\_SBP\_ENABLED  
Removing AP\_GPS\_SBP2\_ENABLED  
Removing AP\_GPS\_SIRF\_ENABLED  
Removing AP\_GPS\_UBLOX\_ENABLED  
Removing HAL\_GENERATOR\_ENABLED  
Removing AP\_GENERATOR\_IE\_2400\_ENABLED  
Removing AP\_GENERATOR\_IE\_650\_800\_ENABLED  
Removing AP\_GENERATOR\_RICHENPOWER\_ENABLED  
Removing HAL\_MOUNT\_ALEXMOS\_ENABLED  
Removing HAL\_MOUNT\_GREMSY\_ENABLED  
Removing HAL\_MOUNT\_ENABLED  
Removing HAL\_MOUNT\_SERVO\_ENABLED  
Removing HAL\_MOUNT\_SIYI\_ENABLED  
Removing HAL\_SOLO\_GIMBAL\_ENABLED  
Removing HAL\_MOUNT\_STORM32MAVLINK\_ENABLED  
Removing HAL\_MOUNT\_STORM32SERIAL\_ENABLED  
Removing HAL\_MOUNT\_VIEWPRO\_ENABLED  
Removing HAL\_MOUNT\_XACTI\_ENABLED  
Removing HAL\_EFI\_ENABLED  
Removing AP\_EFI\_CURRAWONG\_ECU\_ENABLED  
Removing AP\_EFI\_DRONECAN\_ENABLED  
Removing AP\_EFI\_SERIAL\_HIRTH\_ENABLED  
Removing AP\_EFI\_SERIAL\_LUTAN\_ENABLED  
Removing AP\_EFI\_MAV\_ENABLED  
Removing AP\_EFI\_SERIAL\_MS\_ENABLED  
Removing AP\_EFI\_NWPWU\_ENABLED  
Removing AP\_ICENGINE\_ENABLED  
Removing HAL\_ADSB\_ENABLED  
Removing HAL\_ADSB\_SAGETECH\_ENABLED  
Removing HAL\_ADSB\_SAGETECH\_MXS\_ENABLED  
Removing HAL\_ADSB\_UAVIONIX\_MAVLINK\_ENABLED  
Removing HAL\_ADSB\_UCP\_ENABLED  
Removing AP\_AIS\_ENABLED  
Removing AP\_OPENDRONEID\_ENABLED  
Removing AP\_MAVLINK\_AUTOPILOT\_VERSION\_REQUEST\_ENABLED  
Removing AP\_MAVLINK\_BATTERY2\_ENABLED  
Removing AP\_MAVLINK\_MAV\_CMD\_REQUEST\_AUTOPILOT\_CAPABILITIES\_ENABLED  
Removing AP\_MAVLINK\_MSG\_DEVICE\_OP\_ENABLED  
Removing AP\_MAVLINK\_MSG\_MISSION\_REQUEST\_ENABLED  
Removing AP\_MAVLINK\_MSG\_MOUNT\_CONFIGURE\_ENABLED  
Removing AP\_MAVLINK\_MSG\_MOUNT\_CONTROL\_ENABLED  
Removing AP\_MAVLINK\_MSG\_RELAY\_STATUS\_ENABLED  
Removing AP\_MAVLINK\_MSG\_SERIAL\_CONTROL\_ENABLED  
Removing AP\_MAVLINK\_SERVO\_RELAY\_ENABLED  
Removing AC\_POLYFENCE\_FENCE\_POINT\_PROTOCOL\_SUPPORT  
Removing HAL\_HIGH\_LATENCY2\_ENABLED  
Removing AP\_MAVLINK\_RALLY\_POINT\_PROTOCOL\_ENABLED  
Removing HAL\_MSP\_ENABLED  
Removing AP\_COMPASS\_MSP\_ENABLED

Removing HAL\_WITH\_MSP\_DISPLAYPORT  
Removing HAL\_MSP\_GPS\_ENABLED  
Removing HAL\_MSP\_OPTICALFLOW\_ENABLED  
Removing HAL\_MSP\_RANGEFINDER\_ENABLED  
Removing HAL\_MSP\_SENSORS\_ENABLED  
Removing AP\_MISSION\_NAV\_PAYLOAD\_PLACE\_ENABLED  
Removing AP\_NETWORKING\_BACKEND\_PPP  
Removing AP\_NOTIFY\_MAVLINK\_LED\_CONTROL\_SUPPORT\_ENABLED  
Removing AP\_NOTIFY\_NCP5623\_ENABLED  
Removing AP\_NOTIFY\_NEOPixel\_ENABLED  
Removing AP\_NOTIFY\_PROFILED\_ENABLED  
Removing AP\_NOTIFY\_PROFILED\_SPI\_ENABLED  
Removing AP\_NOTIFY\_MAVLINK\_PLAY\_TUNE\_SUPPORT\_ENABLED  
Removing AP\_NOTIFY\_TONEALARM\_ENABLED  
Removing OSD\_ENABLED  
Removing AP\_OSD\_LINK\_STATS\_EXTENSIONS\_ENABLED  
Removing OSD\_PARAM\_ENABLED  
Removing HAL\_OSD\_SIDEBAR\_ENABLE  
Removing HAL\_PLUSCODE\_ENABLE  
Removing AP\_BOOTLOADER\_FLASHING\_ENABLED  
Removing HAL\_BUTTON\_ENABLED  
Removing COMPASS\_CAL\_ENABLED  
Removing HAL\_DISPLAY\_ENABLED  
Removing AP\_DRONECAN\_SERIAL\_ENABLED  
Removing HAL\_GYROFFT\_ENABLED  
Removing HAL\_LOGGING\_ENABLED  
Removing HAL\_NMEA\_OUTPUT\_ENABLED  
Removing AP\_SCRIPTING\_ENABLED  
Removing AP\_FILESYSTEM\_FORMAT\_ENABLED  
Removing AP\_SDCARD\_STORAGE\_ENABLED  
Removing AP\_CAN\_SLCAN\_ENABLED  
Removing AP\_GRIPPER\_ENABLED  
Removing AP\_LANDINGGEAR\_ENABLED  
Removing AP\_RELAY\_ENABLED  
Removing AP\_SERVORELAYEVENTS\_ENABLED  
Removing HAL\_SPRAYER\_ENABLED  
Removing AP\_WINCH\_ENABLED  
Removing AP\_ADVANCEDFAILSAFE\_ENABLED  
Removing AP\_TUNING\_ENABLED  
Removing HAL\_LANDING\_DEEPSTALL\_ENABLED  
Removing AP\_PLANE\_BLACKBOX\_LOGGING  
Removing QAUTOTUNE\_ENABLED  
Removing HAL\_QUADPLANE\_ENABLED  
Removing HAL\_SOARING\_ENABLED  
Removing AC\_PRECLAND\_ENABLED  
Removing AC\_PRECLAND\_COMPANION\_ENABLED  
Removing AC\_PRECLAND\_IRLOCK\_ENABLED  
Removing HAL\_PROXIMITY\_ENABLED  
Removing AP\_PROXIMITY\_CYGBOT\_ENABLED  
Removing AP\_PROXIMITY\_DRONECAN\_ENABLED  
Removing AP\_PROXIMITY\_LIGHTWARE\_SF40C\_ENABLED  
Removing AP\_PROXIMITY\_LIGHTWARE\_SF45B\_ENABLED  
Removing AP\_PROXIMITY\_MAV\_ENABLED  
Removing AP\_PROXIMITY\_RANGEFINDER\_ENABLED  
Removing AP\_PROXIMITY\_RPLIDARA2\_ENABLED  
Removing AP\_PROXIMITY\_TERARANGERTOWER\_ENABLED  
Removing AP\_PROXIMITY\_TERARANGERTOWEREVO\_ENABLED  
Removing AP\_RCPROTOCOL\_CRSF\_ENABLED  
Removing AP\_RCPROTOCOL\_GHST\_ENABLED  
Removing AP\_RCPROTOCOL\_IBUS\_ENABLED  
Removing AP\_RCPROTOCOL\_PPMSUM\_ENABLED  
Removing AP\_RCPROTOCOL\_ENABLED  
Removing AP\_RCPROTOCOL\_SBUS\_ENABLED  
Removing AP\_RCPROTOCOL\_SRXL\_ENABLED  
Removing AP\_RCPROTOCOL\_SRXL2\_ENABLED  
Removing AP\_RCPROTOCOL\_ST24\_ENABLED  
Removing AP\_RCPROTOCOL\_SUMD\_ENABLED  
Removing AP\_RANGEFINDER\_ENABLED  
Removing AP\_RANGEFINDER\_ANALOG\_ENABLED  
Removing AP\_RANGEFINDER\_BENEWAKE\_CAN\_ENABLED  
Removing AP\_RANGEFINDER\_BENEWAKE\_TF02\_ENABLED  
Removing AP\_RANGEFINDER\_BENEWAKE\_TF03\_ENABLED  
Removing AP\_RANGEFINDER\_BENEWAKE\_TFMINI\_ENABLED  
Removing AP\_RANGEFINDER\_BENEWAKE\_TFMINIPLUS\_ENABLED

Removing AP\_RANGEFINDER\_BLPING\_ENABLED  
Removing AP\_RANGEFINDER\_DRONECAN\_ENABLED  
Removing AP\_RANGEFINDER\_GYUS42V2\_ENABLED  
Removing AP\_RANGEFINDER\_HC\_SR04\_ENABLED  
Removing AP\_RANGEFINDER\_JRE\_SERIAL\_ENABLED  
Removing AP\_RANGEFINDER\_LANBAO\_ENABLED  
Removing AP\_RANGEFINDER\_LEDDARONE\_ENABLED  
Removing AP\_RANGEFINDER\_LEDDARVU8\_ENABLED  
Removing AP\_RANGEFINDER\_LIGHTWARE\_SERIAL\_ENABLED  
Removing AP\_RANGEFINDER\_LUA\_ENABLED  
Removing AP\_RANGEFINDER\_LWI2C\_ENABLED  
Removing AP\_RANGEFINDER\_MAVLINK\_ENABLED  
Removing AP\_RANGEFINDER\_MAXBOTIX\_SERIAL\_ENABLED  
Removing AP\_RANGEFINDER\_MAXSONARI2CXL\_ENABLED  
Removing AP\_RANGEFINDER\_NMEA\_ENABLED  
Removing AP\_RANGEFINDER\_NOOLOOP\_ENABLED  
Removing AP\_RANGEFINDER\_NRA24\_CAN\_ENABLED  
Removing AP\_RANGEFINDER\_PULSEDLIGHTLRF\_ENABLED  
Removing AP\_RANGEFINDER\_PWM\_ENABLED  
Removing AP\_RANGEFINDER\_TOFSENSEF\_I2C\_ENABLED  
Removing AP\_RANGEFINDER\_TOFSENSEP\_CAN\_ENABLED  
Removing AP\_RANGEFINDER\_TRI2C\_ENABLED  
Removing AP\_RANGEFINDER\_TERARANGER\_SERIAL\_ENABLED  
Removing AP\_RANGEFINDER\_USD1\_CAN\_ENABLED  
Removing AP\_RANGEFINDER\_USD1\_SERIAL\_ENABLED  
Removing AP\_RANGEFINDER\_VL53L0X\_ENABLED  
Removing AP\_RANGEFINDER\_VL53L1X\_ENABLED  
Removing AP\_RANGEFINDER\_WASP\_ENABLED  
Removing AC\_AVOID\_ENABLED  
Removing AC\_OAPATHPLANNER\_ENABLED  
Removing AP\_FENCE\_ENABLED  
Removing HAL\_PARACHUTE\_ENABLED  
Removing HAL\_RALLY\_ENABLED  
Removing AP\_AIRSPEED\_ENABLED  
Removing AP\_BEACON\_ENABLED  
Removing GPS\_MOVING\_BASELINE  
Removing AP\_SERIALMANAGER\_IMUOUT\_ENABLED  
Removing AP\_OPTICALFLOW\_ENABLED  
Removing AP\_OPTICALFLOW\_CXOF\_ENABLED  
Removing AP\_OPTICALFLOW\_HEREFLOW\_ENABLED  
Removing AP\_OPTICALFLOW\_MAV\_ENABLED  
Removing AP\_OPTICALFLOW\_ONBOARD\_ENABLED  
Removing AP\_OPTICALFLOW\_PIXART\_ENABLED  
Removing AP\_OPTICALFLOW\_PX4FLOW\_ENABLED  
Removing AP\_OPTICALFLOW\_UPFLOW\_ENABLED  
Removing AP\_RPM\_ENABLED  
Removing AP\_RPM\_EFI\_ENABLED  
Removing AP\_RPM\_ESC\_TELEM\_ENABLED  
Removing AP\_RPM\_GENERATOR\_ENABLED  
Removing AP\_RPM\_HARMONICNOTCH\_ENABLED  
Removing AP\_RPM\_PIN\_ENABLED  
Removing AP\_TEMPERATURE\_SENSOR\_ENABLED  
Removing AP\_TEMPERATURE\_SENSOR\_MCP9600\_ENABLED  
Removing AP\_TEMPERATURE\_SENSOR\_TSYS01\_ENABLED  
Removing AP\_TEMPERATURE\_SENSOR\_TSYS03\_ENABLED  
Removing AP\_RC\_CHANNEL\_AUX\_FUNCTION\_STRINGS\_ENABLED  
Removing HAL\_CRSF\_TELEM\_ENABLED  
Removing HAL\_CRSF\_TELEM\_TEXT\_SELECTION\_ENABLED  
Removing AP\_FRSKY\_TELEM\_ENABLED  
Removing AP\_FRSKY\_D\_TELEM\_ENABLED  
Removing AP\_FRSKY\_SPORT\_TELEM\_ENABLED  
Removing AP\_FRSKY\_SPORT\_PASSTHROUGH\_ENABLED  
Removing AP\_GHST\_TELEM\_ENABLED  
Removing HAL\_HOTT\_TELEM\_ENABLED  
Removing AP\_LTM\_TELEM\_ENABLED  
Removing HAL\_SPEKTRUM\_TELEM\_ENABLED  
Removing AP\_MOTORS\_FRAME\_DECA\_ENABLED  
Removing AP\_MOTORS\_FRAME\_DODECAHEXA\_ENABLED  
Removing AP\_MOTORS\_FRAME\_HEXAX\_ENABLED  
Removing AP\_MOTORS\_FRAME\_OCTA\_ENABLED  
Removing AP\_MOTORS\_FRAME\_OCTAQUAD\_ENABLED  
Removing AP\_MOTORS\_FRAME\_QUAD\_ENABLED  
Removing AP\_MOTORS\_FRAME\_Y6\_ENABLED  
Removing AP\_SMARTAUDIO\_ENABLED

```
Removing AP_TRAMP_ENABLED
Removing AP_VIDEOTX_ENABLED
Setup for MCU STM32F405xx
Default parameters path from hwdef:
/mnt/volume_nyc3_01/custom/base/tmp/copter:speedybeef4v3:2a3dc4b7bf2507120f7378a7b2fde73185e0c325:765ff18191
4ef6108d28e8199b4ae49e/build_src/libraries/AP_HAL_ChibiOS/hwdef/speedybeef4v3/defaults.parm
Writing hwdef setup in
/mnt/volume_nyc3_01/custom/base/tmp/copter:speedybeef4v3:2a3dc4b7bf2507120f7378a7b2fde73185e0c325:765ff18191
4ef6108d28e8199b4ae49e/speedybeef4v3/hwdef.h
Writing DMA map
Setting up as normal
Generating ldscript.ld
Checking for env.py
No env.py found
Generating hwdef.h
Embedding file
defaults.parm:/mnt/volume_nyc3_01/custom/base/tmp/copter:speedybeef4v3:2a3dc4b7bf2507120f7378a7b2fde73185e0c
325:765ff181914ef6108d28e8199b4ae49e/speedybeef4v3/processed_defaults.parm
Embedding file font0.bin:libraries/AP_OSD/fonts/font0.bin
Embedding file font1.bin:libraries/AP_OSD/fonts/font1.bin
Embedding file font2.bin:libraries/AP_OSD/fonts/font2.bin
Embedding file font3.bin:libraries/AP_OSD/fonts/font3.bin
Embedding file font4.bin:libraries/AP_OSD/fonts/font4.bin
Embedding file
hwdef.dat:/mnt/volume_nyc3_01/custom/base/tmp/copter:speedybeef4v3:2a3dc4b7bf2507120f7378a7b2fde73185e0c325:
765ff181914ef6108d28e8199b4ae49e/speedybeef4v3/hw.dat
[ 3/10] Creating ../speedybeef4v3/hwdef.h
[ 4/10] Creating ../speedybeef4v3/modules/ChibiOS/include_dirs
[ 5/10] Compiling libraries/AP_Scripting/generator/src/main.c
[ 6/10] Processing modules/mavlink/message_definitions/v1.0/all.xml
[ 7/10] Creating ../speedybeef4v3/ap_version.h
[ 8/10] Creating ../speedybeef4v3/chibios_flags.h
Validation skipped for
/mnt/volume_nyc3_01/custom/base/tmp/copter:speedybeef4v3:2a3dc4b7bf2507120f7378a7b2fde73185e0c325:765ff18191
4ef6108d28e8199b4ae49e/build_src/modules/mavlink/message_definitions/v1.0/all.xml.
Parsing
/mnt/volume_nyc3_01/custom/base/tmp/copter:speedybeef4v3:2a3dc4b7bf2507120f7378a7b2fde73185e0c325:765ff18191
4ef6108d28e8199b4ae49e/build_src/modules/mavlink/message_definitions/v1.0/all.xml
Validation skipped for
/mnt/volume_nyc3_01/custom/base/tmp/copter:speedybeef4v3:2a3dc4b7bf2507120f7378a7b2fde73185e0c325:765ff18191
4ef6108d28e8199b4ae49e/build_src/modules/mavlink/message_definitions/v1.0/ardupilotmega.xml.
Parsing
/mnt/volume_nyc3_01/custom/base/tmp/copter:speedybeef4v3:2a3dc4b7bf2507120f7378a7b2fde73185e0c325:765ff18191
4ef6108d28e8199b4ae49e/build_src/modules/mavlink/message_definitions/v1.0/ardupilotmega.xml
Validation skipped for
/mnt/volume_nyc3_01/custom/base/tmp/copter:speedybeef4v3:2a3dc4b7bf2507120f7378a7b2fde73185e0c325:765ff18191
4ef6108d28e8199b4ae49e/build_src/modules/mavlink/message_definitions/v1.0/ASLUAV.xml.
Parsing
/mnt/volume_nyc3_01/custom/base/tmp/copter:speedybeef4v3:2a3dc4b7bf2507120f7378a7b2fde73185e0c325:765ff18191
4ef6108d28e8199b4ae49e/build_src/modules/mavlink/message_definitions/v1.0/ASLUAV.xml
Validation skipped for
/mnt/volume_nyc3_01/custom/base/tmp/copter:speedybeef4v3:2a3dc4b7bf2507120f7378a7b2fde73185e0c325:765ff18191
4ef6108d28e8199b4ae49e/build_src/modules/mavlink/message_definitions/v1.0/common.xml.
Parsing
/mnt/volume_nyc3_01/custom/base/tmp/copter:speedybeef4v3:2a3dc4b7bf2507120f7378a7b2fde73185e0c325:765ff18191
4ef6108d28e8199b4ae49e/build_src/modules/mavlink/message_definitions/v1.0/common.xml
Validation skipped for
/mnt/volume_nyc3_01/custom/base/tmp/copter:speedybeef4v3:2a3dc4b7bf2507120f7378a7b2fde73185e0c325:765ff18191
4ef6108d28e8199b4ae49e/build_src/modules/mavlink/message_definitions/v1.0/development.xml.
Parsing
/mnt/volume_nyc3_01/custom/base/tmp/copter:speedybeef4v3:2a3dc4b7bf2507120f7378a7b2fde73185e0c325:765ff18191
4ef6108d28e8199b4ae49e/build_src/modules/mavlink/message_definitions/v1.0/development.xml
Validation skipped for
/mnt/volume_nyc3_01/custom/base/tmp/copter:speedybeef4v3:2a3dc4b7bf2507120f7378a7b2fde73185e0c325:765ff18191
4ef6108d28e8199b4ae49e/build_src/modules/mavlink/message_definitions/v1.0/icarous.xml.
Parsing
/mnt/volume_nyc3_01/custom/base/tmp/copter:speedybeef4v3:2a3dc4b7bf2507120f7378a7b2fde73185e0c325:765ff18191
4ef6108d28e8199b4ae49e/build_src/modules/mavlink/message_definitions/v1.0/icarous.xml
Validation skipped for
/mnt/volume_nyc3_01/custom/base/tmp/copter:speedybeef4v3:2a3dc4b7bf2507120f7378a7b2fde73185e0c325:765ff18191
4ef6108d28e8199b4ae49e/build_src/modules/mavlink/message_definitions/v1.0/minimal.xml.
Parsing
/mnt/volume_nyc3_01/custom/base/tmp/copter:speedybeef4v3:2a3dc4b7bf2507120f7378a7b2fde73185e0c325:765ff18191
4ef6108d28e8199b4ae49e/build_src/modules/mavlink/message_definitions/v1.0/minimal.xml
```

Validation skipped for  
/mnt/volume\_nyc3\_01/custom/base/tmp/copter:speedybeef4v3:2a3dc4b7bf2507120f7378a7b2fde73185e0c325:765ff181914ef6108d28e8199b4ae49e/build\_src/modules/mavlink/message\_definitions/v1.0/python\_array\_test.xml.  
Parsing  
/mnt/volume\_nyc3\_01/custom/base/tmp/copter:speedybeef4v3:2a3dc4b7bf2507120f7378a7b2fde73185e0c325:765ff181914ef6108d28e8199b4ae49e/build\_src/modules/mavlink/message\_definitions/v1.0/python\_array\_test.xml  
Validation skipped for  
/mnt/volume\_nyc3\_01/custom/base/tmp/copter:speedybeef4v3:2a3dc4b7bf2507120f7378a7b2fde73185e0c325:765ff181914ef6108d28e8199b4ae49e/build\_src/modules/mavlink/message\_definitions/v1.0/standard.xml.  
Parsing  
/mnt/volume\_nyc3\_01/custom/base/tmp/copter:speedybeef4v3:2a3dc4b7bf2507120f7378a7b2fde73185e0c325:765ff181914ef6108d28e8199b4ae49e/build\_src/modules/mavlink/message\_definitions/v1.0/standard.xml  
Validation skipped for  
/mnt/volume\_nyc3\_01/custom/base/tmp/copter:speedybeef4v3:2a3dc4b7bf2507120f7378a7b2fde73185e0c325:765ff181914ef6108d28e8199b4ae49e/build\_src/modules/mavlink/message\_definitions/v1.0/test.xml.  
Parsing  
/mnt/volume\_nyc3\_01/custom/base/tmp/copter:speedybeef4v3:2a3dc4b7bf2507120f7378a7b2fde73185e0c325:765ff181914ef6108d28e8199b4ae49e/build\_src/modules/mavlink/message\_definitions/v1.0/test.xml  
Validation skipped for  
/mnt/volume\_nyc3\_01/custom/base/tmp/copter:speedybeef4v3:2a3dc4b7bf2507120f7378a7b2fde73185e0c325:765ff181914ef6108d28e8199b4ae49e/build\_src/modules/mavlink/message\_definitions/v1.0/ualberta.xml.  
Parsing  
/mnt/volume\_nyc3\_01/custom/base/tmp/copter:speedybeef4v3:2a3dc4b7bf2507120f7378a7b2fde73185e0c325:765ff181914ef6108d28e8199b4ae49e/build\_src/modules/mavlink/message\_definitions/v1.0/ualberta.xml  
Validation skipped for  
/mnt/volume\_nyc3\_01/custom/base/tmp/copter:speedybeef4v3:2a3dc4b7bf2507120f7378a7b2fde73185e0c325:765ff181914ef6108d28e8199b4ae49e/build\_src/modules/mavlink/message\_definitions/v1.0/uAvionix.xml.  
Parsing  
/mnt/volume\_nyc3\_01/custom/base/tmp/copter:speedybeef4v3:2a3dc4b7bf2507120f7378a7b2fde73185e0c325:765ff181914ef6108d28e8199b4ae49e/build\_src/modules/mavlink/message\_definitions/v1.0/uAvionix.xml  
Validation skipped for  
/mnt/volume\_nyc3\_01/custom/base/tmp/copter:speedybeef4v3:2a3dc4b7bf2507120f7378a7b2fde73185e0c325:765ff181914ef6108d28e8199b4ae49e/build\_src/modules/mavlink/message\_definitions/v1.0/loweheiser.xml.  
Parsing  
/mnt/volume\_nyc3\_01/custom/base/tmp/copter:speedybeef4v3:2a3dc4b7bf2507120f7378a7b2fde73185e0c325:765ff181914ef6108d28e8199b4ae49e/build\_src/modules/mavlink/message\_definitions/v1.0/loweheiser.xml  
Validation skipped for  
/mnt/volume\_nyc3\_01/custom/base/tmp/copter:speedybeef4v3:2a3dc4b7bf2507120f7378a7b2fde73185e0c325:765ff181914ef6108d28e8199b4ae49e/build\_src/modules/mavlink/message\_definitions/v1.0/storm32.xml.  
Parsing  
/mnt/volume\_nyc3\_01/custom/base/tmp/copter:speedybeef4v3:2a3dc4b7bf2507120f7378a7b2fde73185e0c325:765ff181914ef6108d28e8199b4ae49e/build\_src/modules/mavlink/message\_definitions/v1.0/storm32.xml  
Validation skipped for  
/mnt/volume\_nyc3\_01/custom/base/tmp/copter:speedybeef4v3:2a3dc4b7bf2507120f7378a7b2fde73185e0c325:765ff181914ef6108d28e8199b4ae49e/build\_src/modules/mavlink/message\_definitions/v1.0/AVSSUAS.xml.  
Parsing  
/mnt/volume\_nyc3\_01/custom/base/tmp/copter:speedybeef4v3:2a3dc4b7bf2507120f7378a7b2fde73185e0c325:765ff181914ef6108d28e8199b4ae49e/build\_src/modules/mavlink/message\_definitions/v1.0/AVSSUAS.xml  
Validation skipped for  
/mnt/volume\_nyc3\_01/custom/base/tmp/copter:speedybeef4v3:2a3dc4b7bf2507120f7378a7b2fde73185e0c325:765ff181914ef6108d28e8199b4ae49e/build\_src/modules/mavlink/message\_definitions/v1.0/cubepilot.xml.  
Parsing  
/mnt/volume\_nyc3\_01/custom/base/tmp/copter:speedybeef4v3:2a3dc4b7bf2507120f7378a7b2fde73185e0c325:765ff181914ef6108d28e8199b4ae49e/build\_src/modules/mavlink/message\_definitions/v1.0/cubepilot.xml  
Validation skipped for  
/mnt/volume\_nyc3\_01/custom/base/tmp/copter:speedybeef4v3:2a3dc4b7bf2507120f7378a7b2fde73185e0c325:765ff181914ef6108d28e8199b4ae49e/build\_src/modules/mavlink/message\_definitions/v1.0/csAirLink.xml.  
Parsing  
/mnt/volume\_nyc3\_01/custom/base/tmp/copter:speedybeef4v3:2a3dc4b7bf2507120f7378a7b2fde73185e0c325:765ff181914ef6108d28e8199b4ae49e/build\_src/modules/mavlink/message\_definitions/v1.0/csAirLink.xml  
Merged enum MAV\_CMD  
Merged enum MAV\_CMD  
Merged enum MAV\_CMD  
Merged enum MAV\_CMD  
Merged enum MAV\_CMD  
Merged enum MAV\_CMD  
Found 338 MAVLink message types in 17 XML files  
Generating C implementation in directory  
/mnt/volume\_nyc3\_01/custom/base/tmp/copter:speedybeef4v3:2a3dc4b7bf2507120f7378a7b2fde73185e0c325:765ff181914ef6108d28e8199b4ae49e/speedybeef4v3/libraries/GCS\_MAVLink/include/mavlink/v2.0/all  
Generating C implementation in directory  
/mnt/volume\_nyc3\_01/custom/base/tmp/copter:speedybeef4v3:2a3dc4b7bf2507120f7378a7b2fde73185e0c325:765ff181914ef6108d28e8199b4ae49e/speedybeef4v3/libraries/GCS\_MAVLink/include/mavlink/v2.0/ardupilotmega  
[ 9/10] Processing

```
/mnt/volume_nyc3_01/custom/base/tmp/copter:speedybeef4v3:2a3dc4b7bf2507120f7378a7b2fde73185e0c325:765ff18191
4ef6108d28e8199b4ae49e/speedybeef4v3/libraries/AP_Scripting/lua_generated_bindings.cpp,/mnt/volume_nyc3_01/c
ustom/base/tmp/copter:speedybeef4v3:2a3dc4b7bf2507120f7378a7b2fde73185e0c325:765ff181914ef6108d28e8199b4ae49
e/speedybeef4v3/libraries/AP_Scripting/lua_generated_bindings.h:
libraries/AP_Scripting/generator/description/bindings.desc ../speedybeef4v3/gen-bindings ->
../speedybeef4v3/libraries/AP_Scripting/lua_generated_bindings.cpp
../speedybeef4v3/libraries/AP_Scripting/lua_generated_bindings.h
Generating C implementation in directory
/mnt/volume_nyc3_01/custom/base/tmp/copter:speedybeef4v3:2a3dc4b7bf2507120f7378a7b2fde73185e0c325:765ff18191
4ef6108d28e8199b4ae49e/speedybeef4v3/libraries/GCS_MAVLink/include/mavlink/v2.0/ASLUAV
Generating C implementation in directory
/mnt/volume_nyc3_01/custom/base/tmp/copter:speedybeef4v3:2a3dc4b7bf2507120f7378a7b2fde73185e0c325:765ff18191
4ef6108d28e8199b4ae49e/speedybeef4v3/libraries/GCS_MAVLink/include/mavlink/v2.0/common
Including
/mnt/volume_nyc3_01/custom/base/tmp/copter:speedybeef4v3:2a3dc4b7bf2507120f7378a7b2fde73185e0c325:765ff18191
4ef6108d28e8199b4ae49e/build_src/libraries/AP_HAL_ChibiOS/hwdef/include/minimize_fpv_osd.inc
Including
/mnt/volume_nyc3_01/custom/base/tmp/copter:speedybeef4v3:2a3dc4b7bf2507120f7378a7b2fde73185e0c325:765ff18191
4ef6108d28e8199b4ae49e/build_src/libraries/AP_HAL_ChibiOS/hwdef/include/minimize_common.inc
Removing HAL_MSP_GPS_ENABLED
Including
/mnt/volume_nyc3_01/custom/base/tmp/copter:speedybeef4v3:2a3dc4b7bf2507120f7378a7b2fde73185e0c325:765ff18191
4ef6108d28e8199b4ae49e/build_src/libraries/AP_HAL_ChibiOS/hwdef/include/no_bootloader_DFU.inc
Removing AP_BATTERY_SYNTHETIC_CURRENT_ENABLED
Removing HAL_EXTERNAL_AHRS_ENABLED
Removing AP_EXTERNAL_AHRS_MICROSTRAINS5_ENABLED
Removing AP_EXTERNAL_AHRS_MICROSTRAIN7_ENABLED
Removing AP_EXTERNAL_AHRS_VECTORNAV_ENABLED
Removing HAL_NAVEKF2_AVAILABLE
Removing HAL_NAVEKF3_AVAILABLE
Removing EK3_FEATURE_EXTERNAL_NAV
Removing EK3_FEATURE_DRAG_FUSION
Removing HAL_INS_TEMPERATURE_CAL_ENABLE
Removing HAL_VISUALODOM_ENABLED
Removing HAL_PERIPH_SUPPORT_LONG_CAN_PRINTF
Removing AP_FETTEC_ONEWIRE_ENABLED
Removing AP_DRONECAN_HIMARK_SERVO_SUPPORT
Removing AP_DRONECAN_HOBBYWING_ESC_SUPPORT
Removing AP_KDECAN_ENABLED
Removing AP_ROBOTISSERVO_ENABLED
Removing AP_SBUSOUTPUT_ENABLED
Removing AP_VOLZ_ENABLED
Removing AP_DRONECAN_VOLZ_FEEDBACK_ENABLED
Removing AP_AIRSPEED_ASP5033_ENABLED
Removing AP_AIRSPEED_ANALOG_ENABLED
Removing AP_AIRSPEED_DLVR_ENABLED
Removing AP_AIRSPEED_DRONECAN_ENABLED
Removing AP_AIRSPEED_MS4525_ENABLED
Removing AP_AIRSPEED_MS5525_ENABLED
Removing AP_AIRSPEED_MSP_ENABLED
Removing AP_AIRSPEED_NMEA_ENABLED
Removing AP_AIRSPEED_SDP3X_ENABLED
Removing AP_TEMPCALIBRATION_ENABLED
Removing HAL_BARO_WIND_COMP_ENABLED
Removing AP_BARO_BMP085_ENABLED
Removing AP_BARO_BMP280_ENABLED
Removing AP_BARO_BMP388_ENABLED
Removing AP_BARO_BMP581_ENABLED
Removing AP_BARO_DPS280_ENABLED
Removing AP_BARO_DRONECAN_ENABLED
Removing AP_BARO_DUMMY_ENABLED
Removing AP_BARO_EXTERNALAHRIS_ENABLED
Removing AP_BARO_FBM320_ENABLED
Removing AP_BARO_ICM20789_ENABLED
Removing AP_BARO_ICP101XX_ENABLED
Removing AP_BARO_ICP201XX_ENABLED
Removing AP_BARO_KELLERLD_ENABLED
Removing AP_BARO_LPS2XH_ENABLED
Removing AP_BARO_MS56XX_ENABLED
Removing AP_BARO_MSP_ENABLED
Removing AP_BARO_SPL06_ENABLED
Removing AP_BATTERY_ESC_TELEM_OUTBOUND_ENABLED
Removing AP_BATTERY_FUELFLOW_ENABLED
Removing AP_BATTERY_FUELLEVEL_ANALOG_ENABLED
```

Removing AP\_BATTERY\_FUELLEVEL\_PWM\_ENABLED  
Removing AP\_BATTERY\_INA2XX\_ENABLED  
Removing AP\_BATTERY\_SMBUS\_ENABLED  
Removing AP\_BATTERY\_SYNTHETIC\_CURRENT\_ENABLED  
Removing AP\_BATTERY\_WATT\_MAX\_ENABLED  
Removing AP\_CAMERA\_ENABLED  
Removing AP\_CAMERA\_SEND\_FOV\_STATUS\_ENABLED  
Removing AP\_CAMERA\_MAVLINK\_ENABLED  
Removing AP\_CAMERA\_MAVLINKCAMV2\_ENABLED  
Removing AP\_CAMERA\_MOUNT\_ENABLED  
Removing AP\_CAMERA\_RELAY\_ENABLED  
Removing AP\_CAMERA\_SERVO\_ENABLED  
Removing AP\_CAMERA\_SOLOGIMBAL\_ENABLED  
Removing HAL\_RUNCAM\_ENABLED  
Removing AP\_COMPASS\_AK09916\_ENABLED  
Removing AP\_COMPASS\_AK8963\_ENABLED  
Removing AP\_COMPASS\_BMM150\_ENABLED  
Removing AP\_COMPASS\_DRONECAN\_ENABLED  
Removing AP\_COMPASS\_EXTERNALAHRS\_ENABLED  
Removing AP\_COMPASS\_HMC5843\_ENABLED  
Removing AP\_COMPASS\_ICM20948\_ENABLED  
Removing AP\_COMPASS\_IST8308\_ENABLED  
Removing AP\_COMPASS\_LIS3MDL\_ENABLED  
Removing AP\_COMPASS\_LSM303D\_ENABLED  
Removing AP\_COMPASS\_LSM9DS1\_ENABLED  
Removing AP\_COMPASS\_MAG3110\_ENABLED  
Removing AP\_COMPASS\_MMC3416\_ENABLED  
Removing AP\_COMPASS\_MMC5XX3\_ENABLED  
Removing AP\_COMPASS\_QMC5883L\_ENABLED  
Removing AP\_COMPASS\_RM3100\_ENABLED  
Removing AC\_PAYLOAD\_PLACE\_ENABLED  
Removing MODE\_BRAKE\_ENABLED  
Removing MODE\_FLIP\_ENABLED  
Removing MODE\_FLOWHOLD\_ENABLED  
Removing MODE\_FOLLOW\_ENABLED  
Removing MODE\_GUIDED\_NOGPS\_ENABLED  
Removing MODE\_SPORT\_ENABLED  
Removing MODE\_SYSTEMID\_ENABLED  
Removing MODE\_TURTLE\_ENABLED  
Removing MODE\_ZIGZAG\_ENABLED  
Removing AP\_CRASHDUMP\_ENABLED  
Removing AP\_INERTIALSENSOR\_KILL\_IMU\_ENABLED  
Removing HAL\_ENABLE\_DRONECAN\_DRIVERS  
Removing HAL\_PICCOLO\_CAN\_ENABLE  
Removing HAL\_TORQEEDO\_ENABLED  
Removing FORCE\_APJ\_DEFAULT\_PARAMETERS  
Removing AP\_FILESYSTEM\_MISSION\_ENABLED  
Removing AP\_FILESYSTEM\_PARAM\_ENABLED  
Removing AP\_FILESYSTEM\_ROMFS\_ENABLED  
Removing AP\_FILESYSTEM\_SYS\_ENABLED  
Removing AP\_DRONECAN\_SEND\_GPS  
Removing AP\_GPS\_ERB\_ENABLED  
Removing AP\_GPS\_GSOFF\_ENABLED  
Removing AP\_GPS\_MAV\_ENABLED  
Removing AP\_GPS\_NMEA\_ENABLED  
Removing AP\_GPS\_NMEA\_UNICORE\_ENABLED  
Removing AP\_GPS\_NOVA\_ENABLED  
Removing AP\_GPS\_SBF\_ENABLED  
Removing AP\_GPS\_SBP\_ENABLED  
Removing AP\_GPS\_SBP2\_ENABLED  
Removing AP\_GPS\_SIRF\_ENABLED  
Removing AP\_GPS\_UBLOX\_ENABLED  
Removing HAL\_GENERATOR\_ENABLED  
Removing AP\_GENERATOR\_IE\_2400\_ENABLED  
Removing AP\_GENERATOR\_IE\_650\_800\_ENABLED  
Removing AP\_GENERATOR\_RICHENPOWER\_ENABLED  
Removing HAL\_MOUNT\_ALEXMOS\_ENABLED  
Removing HAL\_MOUNT\_GREMSY\_ENABLED  
Removing HAL\_MOUNT\_ENABLED  
Removing HAL\_MOUNT\_SERVO\_ENABLED  
Removing HAL\_MOUNT\_SIYI\_ENABLED  
Removing HAL\_SOLO\_GIMBAL\_ENABLED  
Removing HAL\_MOUNT\_STORM32MAVLINK\_ENABLED  
Removing HAL\_MOUNT\_STORM32SERIAL\_ENABLED

Removing HAL\_MOUNT\_VIEWPRO\_ENABLED  
Removing HAL\_MOUNT\_XACTI\_ENABLED  
Removing HAL\_EFI\_ENABLED  
Removing AP\_EFI\_CURRAWONG\_ECU\_ENABLED  
Removing AP\_EFI\_DRONECAN\_ENABLED  
Removing AP\_EFI\_SERIAL\_HIRTH\_ENABLED  
Removing AP\_EFI\_SERIAL\_LUTAN\_ENABLED  
Removing AP\_EFI\_MAV\_ENABLED  
Removing AP\_EFI\_SERIAL\_MS\_ENABLED  
Removing AP\_EFI\_NWPWU\_ENABLED  
Removing AP\_ICENGINE\_ENABLED  
Removing HAL\_ADSB\_ENABLED  
Removing HAL\_ADSB\_SAGETECH\_ENABLED  
Removing HAL\_ADSB\_SAGETECH\_MXS\_ENABLED  
Removing HAL\_ADSB\_UAVIONIX\_MAVLINK\_ENABLED  
Removing HAL\_ADSB\_UCP\_ENABLED  
Removing AP\_AIS\_ENABLED  
Removing AP\_OPENDRONEID\_ENABLED  
Removing AP\_MAVLINK\_AUTOPILOT\_VERSION\_REQUEST\_ENABLED  
Removing AP\_MAVLINK\_BATTERY2\_ENABLED  
Removing AP\_MAVLINK\_MAV\_CMD\_REQUEST\_AUTOPILOT\_CAPABILITIES\_ENABLED  
Removing AP\_MAVLINK\_MSG\_DEVICE\_OP\_ENABLED  
Removing AP\_MAVLINK\_MSG\_MISSION\_REQUEST\_ENABLED  
Removing AP\_MAVLINK\_MSG\_MOUNT\_CONFIGURE\_ENABLED  
Removing AP\_MAVLINK\_MSG\_MOUNT\_CONTROL\_ENABLED  
Removing AP\_MAVLINK\_MSG\_RELAY\_STATUS\_ENABLED  
Removing AP\_MAVLINK\_MSG\_SERIAL\_CONTROL\_ENABLED  
Removing AP\_MAVLINK\_SERVO\_RELAY\_ENABLED  
Removing AC\_POLYFENCE\_FENCE\_POINT\_PROTOCOL\_SUPPORT  
Removing HAL\_HIGH\_LATENCY2\_ENABLED  
Removing AP\_MAVLINK\_RALLY\_POINT\_PROTOCOL\_ENABLED  
Removing HAL\_MSP\_ENABLED  
Removing AP\_COMPASS\_MSP\_ENABLED  
Removing HAL\_WITH\_MSP\_DISPLAYPORT  
Removing HAL\_MSP\_GPS\_ENABLED  
Removing HAL\_MSP\_OPTICALFLOW\_ENABLED  
Removing HAL\_MSP\_RANGEFINDER\_ENABLED  
Removing HAL\_MSP\_SENSORS\_ENABLED  
Removing AP\_MISSION\_NAV\_PAYLOAD\_PLACE\_ENABLED  
Removing AP\_NETWORKING\_BACKEND\_PPP  
Removing AP\_NOTIFY\_MAVLINK\_LED\_CONTROL\_SUPPORT\_ENABLED  
Removing AP\_NOTIFY\_NCP5623\_ENABLED  
Removing AP\_NOTIFY\_NEOPIXEL\_ENABLED  
Removing AP\_NOTIFY\_PROFILED\_ENABLED  
Removing AP\_NOTIFY\_PROFILED\_SPI\_ENABLED  
Removing AP\_NOTIFY\_MAVLINK\_PLAY\_TUNE\_SUPPORT\_ENABLED  
Removing AP\_NOTIFY\_TONEALARM\_ENABLED  
Removing OSD\_ENABLED  
Removing AP\_OSD\_LINK\_STATS\_EXTENSIONS\_ENABLED  
Removing OSD\_PARAM\_ENABLED  
Removing HAL\_OSD\_SIDEBAR\_ENABLE  
Removing HAL\_PLUSCODE\_ENABLE  
Removing AP\_BOOTLOADER\_FLASHING\_ENABLED  
Removing HAL\_BUTTON\_ENABLED  
Removing COMPASS\_CAL\_ENABLED  
Removing HAL\_DISPLAY\_ENABLED  
Removing AP\_DRONECAN\_SERIAL\_ENABLED  
Removing HAL\_GYROFFT\_ENABLED  
Removing HAL\_LOGGING\_ENABLED  
Removing HAL\_NMEA\_OUTPUT\_ENABLED  
Removing AP\_SCRIPTING\_ENABLED  
Removing AP\_FILESYSTEM\_FORMAT\_ENABLED  
Removing AP\_SDCARD\_STORAGE\_ENABLED  
Removing AP\_CAN\_SLCAN\_ENABLED  
Removing AP\_GRIPPER\_ENABLED  
Removing AP\_LANDINGGEAR\_ENABLED  
Removing AP\_RELAY\_ENABLED  
Removing AP\_SERVORELAYEVENTS\_ENABLED  
Removing HAL\_SPRAYER\_ENABLED  
Removing AP\_WINCH\_ENABLED  
Removing AP\_ADVANCEDFAILSAFE\_ENABLED  
Removing AP\_TUNING\_ENABLED  
Removing HAL\_LANDING\_DEEPSTALL\_ENABLED  
Removing AP\_PLANE\_BLACKBOX\_LOGGING



Removing QAUTOTUNE\_ENABLED  
Removing HAL\_QUADPLANE\_ENABLED  
Removing HAL\_SOARING\_ENABLED  
Removing AC\_PRECLAND\_ENABLED  
Removing AC\_PRECLAND\_COMPANION\_ENABLED  
Removing AC\_PRECLAND\_IRLOCK\_ENABLED  
Removing HAL\_PROXIMITY\_ENABLED  
Removing AP\_PROXIMITY\_CYGBOT\_ENABLED  
Removing AP\_PROXIMITY\_DRONECAN\_ENABLED  
Removing AP\_PROXIMITY\_LIGHTWARE\_SF40C\_ENABLED  
Removing AP\_PROXIMITY\_LIGHTWARE\_SF45B\_ENABLED  
Removing AP\_PROXIMITY\_MAV\_ENABLED  
Removing AP\_PROXIMITY\_RANGEFINDER\_ENABLED  
Removing AP\_PROXIMITY\_RPLIDARA2\_ENABLED  
Removing AP\_PROXIMITY\_TERARANGERTOWER\_ENABLED  
Removing AP\_PROXIMITY\_TERARANGERTOWEREVO\_ENABLED  
Removing AP\_RCPROTOCOL\_CRSF\_ENABLED  
Removing AP\_RCPROTOCOL\_GHST\_ENABLED  
Removing AP\_RCPROTOCOL\_IBUS\_ENABLED  
Removing AP\_RCPROTOCOL\_PPMSUM\_ENABLED  
Removing AP\_RCPROTOCOL\_ENABLED  
Removing AP\_RCPROTOCOL\_SBUS\_ENABLED  
Removing AP\_RCPROTOCOL\_SRXL\_ENABLED  
Removing AP\_RCPROTOCOL\_SRXL2\_ENABLED  
Removing AP\_RCPROTOCOL\_ST24\_ENABLED  
Removing AP\_RCPROTOCOL\_SUMD\_ENABLED  
Removing AP\_RANGEFINDER\_ENABLED  
Removing AP\_RANGEFINDER\_ANALOG\_ENABLED  
Removing AP\_RANGEFINDER\_BENEWAKE\_CAN\_ENABLED  
Removing AP\_RANGEFINDER\_BENEWAKE\_TF02\_ENABLED  
Removing AP\_RANGEFINDER\_BENEWAKE\_TF03\_ENABLED  
Removing AP\_RANGEFINDER\_BENEWAKE\_TFMINI\_ENABLED  
Removing AP\_RANGEFINDER\_BENEWAKE\_TFMINIPLUS\_ENABLED  
Removing AP\_RANGEFINDER\_BLPING\_ENABLED  
Removing AP\_RANGEFINDER\_DRONECAN\_ENABLED  
Removing AP\_RANGEFINDER\_GYUS42V2\_ENABLED  
Removing AP\_RANGEFINDER\_HC\_SR04\_ENABLED  
Removing AP\_RANGEFINDER\_JRE\_SERIAL\_ENABLED  
Removing AP\_RANGEFINDER\_LANBAO\_ENABLED  
Removing AP\_RANGEFINDER\_LEDDARONE\_ENABLED  
Removing AP\_RANGEFINDER\_LEDDARVU8\_ENABLED  
Removing AP\_RANGEFINDER\_LIGHTWARE\_SERIAL\_ENABLED  
Removing AP\_RANGEFINDER\_LUA\_ENABLED  
Removing AP\_RANGEFINDER\_LWI2C\_ENABLED  
Removing AP\_RANGEFINDER\_MAVLINK\_ENABLED  
Removing AP\_RANGEFINDER\_MAXBOTIX\_SERIAL\_ENABLED  
Removing AP\_RANGEFINDER\_MAXSONARI2CXL\_ENABLED  
Removing AP\_RANGEFINDER\_NMEA\_ENABLED  
Removing AP\_RANGEFINDER\_NOOPLOOP\_ENABLED  
Removing AP\_RANGEFINDER\_NRA24\_CAN\_ENABLED  
Removing AP\_RANGEFINDER\_PULSEDLIGHTLRF\_ENABLED  
Removing AP\_RANGEFINDER\_PWM\_ENABLED  
Removing AP\_RANGEFINDER\_TOFSENSEF\_I2C\_ENABLED  
Removing AP\_RANGEFINDER\_TOFSENSEP\_CAN\_ENABLED  
Removing AP\_RANGEFINDER\_TRI2C\_ENABLED  
Removing AP\_RANGEFINDER\_TERARANGER\_SERIAL\_ENABLED  
Removing AP\_RANGEFINDER\_USD1\_CAN\_ENABLED  
Removing AP\_RANGEFINDER\_USD1\_SERIAL\_ENABLED  
Removing AP\_RANGEFINDER\_VL53L0X\_ENABLED  
Removing AP\_RANGEFINDER\_VL53L1X\_ENABLED  
Removing AP\_RANGEFINDER\_WASP\_ENABLED  
Removing AC\_AVOID\_ENABLED  
Removing AC\_OAPATHPLANNER\_ENABLED  
Removing AP\_FENCE\_ENABLED  
Removing HAL\_PARACHUTE\_ENABLED  
Removing HAL\_RALLY\_ENABLED  
Removing AP\_AIRSPPEED\_ENABLED  
Removing AP\_BEACON\_ENABLED  
Removing GPS\_MOVING\_BASELINE  
Removing AP\_SERIALMANAGER\_IMUOUT\_ENABLED  
Removing AP\_OPTICALFLOW\_ENABLED  
Removing AP\_OPTICALFLOW\_CXOF\_ENABLED  
Removing AP\_OPTICALFLOW\_HEREFLOW\_ENABLED  
Removing AP\_OPTICALFLOW\_MAV\_ENABLED

```
Removing AP_OPTICALFLOW_ENABLED
Removing AP_OPTICALFLOW_PIXART_ENABLED
Removing AP_OPTICALFLOW_PX4FLOW_ENABLED
Removing AP_OPTICALFLOW_UPFLOW_ENABLED
Removing AP_RPM_ENABLED
Removing AP_RPM_EFI_ENABLED
Removing AP_RPM_ESC_TELEM_ENABLED
Removing AP_RPM_GENERATOR_ENABLED
Removing AP_RPM_HARMONICNOTCH_ENABLED
Removing AP_RPM_PIN_ENABLED
Removing AP_TEMPERATURE_SENSOR_ENABLED
Removing AP_TEMPERATURE_SENSOR_MCP9600_ENABLED
Removing AP_TEMPERATURE_SENSOR_TSYS01_ENABLED
Removing AP_TEMPERATURE_SENSOR_TSYS03_ENABLED
Removing AP_RC_CHANNEL_AUX_FUNCTION_STRINGS_ENABLED
Removing HAL_CRSF_TELEM_ENABLED
Removing HAL_CRSF_TELEM_TEXT_SELECTION_ENABLED
Removing AP_FRSKY_TELEM_ENABLED
Removing AP_FRSKY_D_TELEM_ENABLED
Removing AP_FRSKY_SPORT_TELEM_ENABLED
Removing AP_FRSKY_SPORT_PASSTHROUGH_ENABLED
Removing AP_GHST_TELEM_ENABLED
Removing HAL_HOTT_TELEM_ENABLED
Removing AP_LTM_TELEM_ENABLED
Removing HAL_SPEKTRUM_TELEM_ENABLED
Removing AP_MOTORS_FRAME_DECA_ENABLED
Removing AP_MOTORS_FRAME_DODECAHEXA_ENABLED
Removing AP_MOTORS_FRAME_HEXAHEDRA_ENABLED
Removing AP_MOTORS_FRAME_OCTA_ENABLED
Removing AP_MOTORS_FRAME_OCTAQUAD_ENABLED
Removing AP_MOTORS_FRAME_QUAD_ENABLED
Removing AP_MOTORS_FRAME_Y6_ENABLED
Removing AP_SMARTAUDIO_ENABLED
Removing AP_TRAMP_ENABLED
Removing AP_VIDEOTX_ENABLED
Setup for MCU STM32F405xx
Default parameters path from hwdef:
/mnt/volume_nyc3_01/custom/base/tmp/copter:speedybeef4v3:2a3dc4b7bf2507120f7378a7b2fde73185e0c325:765ff18191
4ef6108d28e8199b4ae49e/build_src/libraries/AP_HAL_ChibiOS/hwdef/speedybeef4v3/defaults.parm
Writing hwdef setup in
/mnt/volume_nyc3_01/custom/base/tmp/copter:speedybeef4v3:2a3dc4b7bf2507120f7378a7b2fde73185e0c325:765ff18191
4ef6108d28e8199b4ae49e/speedybeef4v3/hwdef.h
Writing DMA map
Setting up as normal
No change in hwdef.h
Generating ldscript.ld

Generating C implementation in directory
/mnt/volume_nyc3_01/custom/base/tmp/copter:speedybeef4v3:2a3dc4b7bf2507120f7378a7b2fde73185e0c325:765ff18191
4ef6108d28e8199b4ae49e/speedybeef4v3/libraries/GCS_MAVLink/include/mavlink/v2.0/development
Generating C implementation in directory
/mnt/volume_nyc3_01/custom/base/tmp/copter:speedybeef4v3:2a3dc4b7bf2507120f7378a7b2fde73185e0c325:765ff18191
4ef6108d28e8199b4ae49e/speedybeef4v3/libraries/GCS_MAVLink/include/mavlink/v2.0/icarous
Generating C implementation in directory
/mnt/volume_nyc3_01/custom/base/tmp/copter:speedybeef4v3:2a3dc4b7bf2507120f7378a7b2fde73185e0c325:765ff18191
4ef6108d28e8199b4ae49e/speedybeef4v3/libraries/GCS_MAVLink/include/mavlink/v2.0/minimal
Generating C implementation in directory
/mnt/volume_nyc3_01/custom/base/tmp/copter:speedybeef4v3:2a3dc4b7bf2507120f7378a7b2fde73185e0c325:765ff18191
4ef6108d28e8199b4ae49e/speedybeef4v3/libraries/GCS_MAVLink/include/mavlink/v2.0/python_array_test
Generating C implementation in directory
/mnt/volume_nyc3_01/custom/base/tmp/copter:speedybeef4v3:2a3dc4b7bf2507120f7378a7b2fde73185e0c325:765ff18191
4ef6108d28e8199b4ae49e/speedybeef4v3/libraries/GCS_MAVLink/include/mavlink/v2.0/standard
Generating C implementation in directory
/mnt/volume_nyc3_01/custom/base/tmp/copter:speedybeef4v3:2a3dc4b7bf2507120f7378a7b2fde73185e0c325:765ff18191
4ef6108d28e8199b4ae49e/speedybeef4v3/libraries/GCS_MAVLink/include/mavlink/v2.0/test
Generating C implementation in directory
/mnt/volume_nyc3_01/custom/base/tmp/copter:speedybeef4v3:2a3dc4b7bf2507120f7378a7b2fde73185e0c325:765ff18191
4ef6108d28e8199b4ae49e/speedybeef4v3/libraries/GCS_MAVLink/include/mavlink/v2.0/ualberta
Generating C implementation in directory
/mnt/volume_nyc3_01/custom/base/tmp/copter:speedybeef4v3:2a3dc4b7bf2507120f7378a7b2fde73185e0c325:765ff18191
4ef6108d28e8199b4ae49e/speedybeef4v3/libraries/GCS_MAVLink/include/mavlink/v2.0/uAvionix
Generating C implementation in directory
/mnt/volume_nyc3_01/custom/base/tmp/copter:speedybeef4v3:2a3dc4b7bf2507120f7378a7b2fde73185e0c325:765ff18191
4ef6108d28e8199b4ae49e/speedybeef4v3/libraries/GCS_MAVLink/include/mavlink/v2.0/loweheiser
```

```
Generating C implementation in directory
/mnt/volume_nyc3_01/custom/base/tmp/copter:speedybeef4v3:2a3dc4b7bf2507120f7378a7b2fde73185e0c325:765ff18191
4ef6108d28e8199b4ae49e/speedybeef4v3/libraries/GCS_MAVLink/include/mavlink/v2.0/storm32
Generating C implementation in directory
/mnt/volume_nyc3_01/custom/base/tmp/copter:speedybeef4v3:2a3dc4b7bf2507120f7378a7b2fde73185e0c325:765ff18191
4ef6108d28e8199b4ae49e/speedybeef4v3/libraries/GCS_MAVLink/include/mavlink/v2.0/AVSSUAS
Generating C implementation in directory
/mnt/volume_nyc3_01/custom/base/tmp/copter:speedybeef4v3:2a3dc4b7bf2507120f7378a7b2fde73185e0c325:765ff18191
4ef6108d28e8199b4ae49e/speedybeef4v3/libraries/GCS_MAVLink/include/mavlink/v2.0/cubepilot
Generating C implementation in directory
/mnt/volume_nyc3_01/custom/base/tmp/copter:speedybeef4v3:2a3dc4b7bf2507120f7378a7b2fde73185e0c325:765ff18191
4ef6108d28e8199b4ae49e/speedybeef4v3/libraries/GCS_MAVLink/include/mavlink/v2.0/csAirLink
Copying fixed headers for protocol 2.0 to
/mnt/volume_nyc3_01/custom/base/tmp/copter:speedybeef4v3:2a3dc4b7bf2507120f7378a7b2fde73185e0c325:765ff18191
4ef6108d28e8199b4ae49e/speedybeef4v3/libraries/GCS_MAVLink/include/mavlink/v2.0
[10/110] Linking ../speedybeef4v3/modules/ChibiOS/libch.a
[1/111] ChibiOS: Compiling crt0_v7m.S
[2/111] ChibiOS: Compiling vectors.S
[3/111] ChibiOS: Compiling chcoreasm.S
[4/111] ChibiOS: Compiling ff.c
[5/111] ChibiOS: Compiling ffunicode.c
[6/111] ChibiOS: Compiling chcore.c
[7/111] ChibiOS: Compiling crt1.c
[8/111] ChibiOS: Compiling bufstreams.c
[9/111] ChibiOS: Compiling chprintf.c
[10/111] ChibiOS: Compiling chscanf.c
[11/111] ChibiOS: Compiling memstreams.c
[12/111] ChibiOS: Compiling nullstreams.c
[13/111] ChibiOS: Compiling osal.c
[14/111] ChibiOS: Compiling hal_adc_lld.c
[15/111] ChibiOS: Compiling hal_can_lld.c
[16/111] ChibiOS: Compiling hal_crypto_lld.c
[17/111] ChibiOS: Compiling hal_dac_lld.c
[18/111] ChibiOS: Compiling stm32_dma.c
[19/111] ChibiOS: Compiling stm32_exti.c
[20/111] ChibiOS: Compiling hal_pal_lld.c
[21/111] ChibiOS: Compiling hal_i2c_lld.c
[22/111] ChibiOS: Compiling hal_mac_lld.c
[23/111] ChibiOS: Compiling hal_usb_lld.c
[24/111] ChibiOS: Compiling hal_wspi_lld.c
[25/111] ChibiOS: Compiling hal_rtc_lld.c
[26/111] ChibiOS: Compiling hal_sdc_lld.c
[27/111] ChibiOS: Compiling hal_i2s_lld.c
[28/111] ChibiOS: Compiling hal_spi_lld.c
[29/111] ChibiOS: Compiling hal_st_lld.c
[30/111] ChibiOS: Compiling hal_eicu_lld.c
[31/111] ChibiOS: Compiling hal_gpt_lld.c
[32/111] ChibiOS: Compiling hal_icu_lld.c
[33/111] ChibiOS: Compiling hal_pwm_lld.c
[34/111] ChibiOS: Compiling hal_serial_lld.c
[35/111] ChibiOS: Compiling hal_uart_lld.c
[36/111] ChibiOS: Compiling hal_wdg_lld.c
[37/111] ChibiOS: Compiling hal_efl_lld.c
[38/111] ChibiOS: Compiling hal_lld.c
[39/111] ChibiOS: Compiling stm32_isr.c
[40/111] ChibiOS: Compiling nvic.c
[41/111] ChibiOS: Compiling hal.c
[42/111] ChibiOS: Compiling hal_adc.c
[43/111] ChibiOS: Compiling hal_buffers.c
[44/111] ChibiOS: Compiling hal_can.c
[45/111] ChibiOS: Compiling hal_crypto.c
[46/111] ChibiOS: Compiling hal_dac.c
[47/111] ChibiOS: Compiling hal_efl.c
[48/111] ChibiOS: Compiling hal_eicu.c
[49/111] ChibiOS: Compiling hal_flash.c
[50/111] ChibiOS: Compiling hal_gpt.c
[51/111] ChibiOS: Compiling hal_i2c.c
[52/111] ChibiOS: Compiling hal_i2s.c
[53/111] ChibiOS: Compiling hal_icu.c
[54/111] ChibiOS: Compiling hal_mac.c
[55/111] ChibiOS: Compiling hal_mmc_spi.c
[56/111] ChibiOS: Compiling hal_mmcsd.c
[57/111] ChibiOS: Compiling hal_pal.c
[58/111] ChibiOS: Compiling hal_pwm.c
```

```
[59/111] ChibiOS: Compiling hal_queues.c
[60/111] ChibiOS: Compiling hal_rtc.c
[61/111] ChibiOS: Compiling hal_sdc.c
[62/111] ChibiOS: Compiling hal_serial.c
[63/111] ChibiOS: Compiling hal_serial_usb.c
[64/111] ChibiOS: Compiling hal_sio.c
[65/111] ChibiOS: Compiling hal_spi.c
[66/111] ChibiOS: Compiling hal_st.c
[67/111] ChibiOS: Compiling hal_trng.c
[68/111] ChibiOS: Compiling hal_uart.c
[69/111] ChibiOS: Compiling hal_usb.c
[70/111] ChibiOS: Compiling hal_wdg.c
[71/111] ChibiOS: Compiling hal_wspi.c
[72/111] ChibiOS: Compiling chdelegates.c
[73/111] ChibiOS: Compiling chfactory.c
[74/111] ChibiOS: Compiling chmboxes.c
[75/111] ChibiOS: Compiling chmemcore.c
[76/111] ChibiOS: Compiling chmemheaps.c
[77/111] ChibiOS: Compiling chmempools.c
[78/111] ChibiOS: Compiling chobjcaches.c
[79/111] ChibiOS: Compiling chpipes.c
[80/111] ChibiOS: Compiling chcond.c
[81/111] ChibiOS: Compiling chdebug.c
[82/111] ChibiOS: Compiling chdynamic.c
[83/111] ChibiOS: Compiling chevents.c
[84/111] ChibiOS: Compiling chinstances.c
[85/111] ChibiOS: Compiling chmsg.c
[86/111] ChibiOS: Compiling chmtx.c
[87/111] ChibiOS: Compiling chregistry.c
[88/111] ChibiOS: Compiling chrfcu.c
[89/111] ChibiOS: Compiling chschd.c
[90/111] ChibiOS: Compiling chsem.c
[91/111] ChibiOS: Compiling chstats.c
[92/111] ChibiOS: Compiling chsys.c
[93/111] ChibiOS: Compiling chthreads.c
[94/111] ChibiOS: Compiling chtm.c
[95/111] ChibiOS: Compiling chtrace.c
[96/111] ChibiOS: Compiling chvt.c
[97/111] ChibiOS: Compiling fatfs_diskio.c
[98/111] ChibiOS: Compiling fatfs_syscall.c
[99/111] ChibiOS: Compiling syscalls.c
[100/111] ChibiOS: Compiling stubs.c
[101/111] ChibiOS: Compiling board.c
[102/111] ChibiOS: Compiling usbcfg.c
[103/111] ChibiOS: Compiling usbcfg_dualcdc.c
[104/111] ChibiOS: Compiling usbcfg_common.c
[105/111] ChibiOS: Compiling flash.c
[106/111] ChibiOS: Compiling malloc.c
[107/111] ChibiOS: Compiling hrt.c
[108/111] ChibiOS: Compiling stm32_util.c
[109/111] ChibiOS: Compiling bouncebuffer.c
[110/111] ChibiOS: Compiling watchdog.c
[111/111] ChibiOS: Compiling ch.cpp
```

ChibiOS: Done!

arm-none-eabi-ar: creating modules/ChibiOS/libch.a

```
[ 11/1003] Compiling libraries/AC_AttitudeControl/ControlMonitor.cpp
[ 12/1003] Compiling libraries/AC_AttitudeControl/AC_AttitudeControl_Multi_6DoF.cpp
[ 13/1003] Compiling libraries/AC_AttitudeControl/AC_AttitudeControl_Heli.cpp
[ 14/1003] Compiling libraries/AC_AttitudeControl/AC_AttitudeControl_TS.cpp
[ 15/1003] Compiling libraries/AC_AttitudeControl/AC_CommandModel.cpp
[ 16/1003] Compiling libraries/AC_AttitudeControl/AC_AttitudeControl_Multi.cpp
[ 17/1003] Compiling libraries/AC_AttitudeControl/AC_AttitudeControl_Sub.cpp
[ 18/1003] Compiling libraries/AC_AutoTune/AC_AutoTune_Multi.cpp
[ 19/1003] Compiling libraries/AC_AutoTune/AC_AutoTune_Heli.cpp
[ 20/1003] Compiling libraries/AC_AutoTune/AC_AutoTune_FreqResp.cpp
[ 21/1003] Compiling libraries/AC_Autorotation/AC_Autorotation.cpp
[ 22/1003] Compiling libraries/AC_Avoidance/AP_OAVisGraph.cpp
[ 23/1003] Compiling libraries/AC_Avoidance/AP_OADijkstra.cpp
[ 24/1003] Compiling libraries/AC_Avoidance/AP_OAPathPlanner.cpp
[ 25/1003] Compiling libraries/AC_Avoidance/AC_Avoidance_Logging.cpp
[ 26/1003] Compiling libraries/AC_InputManager/AC_InputManager.cpp
```

[ 27/1003] Compiling libraries/AC\_InputManager/AC\_InputManager\_Heli.cpp  
[ 28/1003] Compiling libraries/AC\_PID/AC\_P\_2D.cpp  
[ 29/1003] Compiling libraries/AC\_PID/AC\_HELI\_PID.cpp  
[ 30/1003] Compiling libraries/AC\_PID/AC\_P.cpp  
[ 31/1003] Compiling libraries/AC\_PID/AC\_PI.cpp  
[ 32/1003] Compiling libraries/AC\_PID/AC\_PID.cpp  
[ 33/1003] Compiling libraries/AC\_PID/AC\_PID\_2D.cpp  
[ 34/1003] Compiling libraries/AC\_PID/AC\_PID\_Basic.cpp  
[ 35/1003] Compiling libraries/AC\_PID/AC\_PI\_2D.cpp  
[ 36/1003] Compiling libraries/AC\_PID/AC\_P\_1D.cpp  
[ 37/1003] Compiling libraries/AC\_PrecLand/PosVeleKF.cpp  
[ 38/1003] Compiling libraries/AC\_PrecLand/AC\_PrecLand\_Companion.cpp  
[ 39/1003] Compiling libraries/AC\_PrecLand/AC\_PrecLand\_IRLock.cpp  
[ 40/1003] Compiling libraries/AC\_PrecLand/AC\_PrecLand\_SITL.cpp  
[ 41/1003] Compiling libraries/AC\_PrecLand/AC\_PrecLand\_SITL\_Gazebo.cpp  
[ 42/1003] Compiling libraries/AC\_PrecLand/AC\_PrecLand\_StateMachine.cpp  
[ 43/1003] Compiling libraries/AC\_Sprayer/AC\_Sprayer.cpp  
[ 44/1003] Compiling libraries/AC\_WPNav/AC\_Circle.cpp  
[ 45/1003] Compiling libraries/AC\_WPNav/AC\_WPNav.cpp  
[ 46/1003] Compiling libraries/AC\_WPNav/AC\_WPNav\_OA.cpp  
[ 47/1003] Compiling libraries/AP\_ADC/AP\_ADC\_ADS1115.cpp  
[ 48/1003] Compiling libraries/AP\_ADSB/AP\_ADSB\_Backend.cpp  
[ 49/1003] Compiling libraries/AP\_ADSB/AP\_ADSB\_Sagetech.cpp  
[ 50/1003] Compiling libraries/AP\_ADSB/AP\_ADSB\_uAvionix\_MAVLink.cpp  
[ 51/1003] Compiling libraries/AP\_ADSB/AP\_ADSB\_uAvionix\_UCP.cpp  
[ 52/1003] Compiling libraries/AP\_AHRS/AP\_AHRS\_View.cpp  
[ 53/1003] Compiling libraries/AP\_AHRS/AP\_AHRS\_External.cpp  
[ 54/1003] Compiling libraries/AP\_AHRS/AP\_AHRS\_Logging.cpp  
[ 55/1003] Compiling libraries/AP\_AHRS/AP\_AHRS\_SIM.cpp  
[ 56/1003] Compiling libraries/AP\_AccelCal/AP\_AccelCal.cpp  
[ 57/1003] Compiling libraries/AP\_AccelCal/AccelCalibrator.cpp  
[ 58/1003] Compiling libraries/AP\_AdvancedFailsafe/AP\_AdvancedFailsafe.cpp  
[ 59/1003] Compiling libraries/AP\_Airspeed/AP\_Airspeed\_MS4525.cpp  
[ 60/1003] Compiling libraries/AP\_Airspeed/AP\_Airspeed\_ASP5033.cpp  
[ 61/1003] Compiling libraries/AP\_Airspeed/AP\_Airspeed\_MSP.cpp  
[ 62/1003] Compiling libraries/AP\_Airspeed/AP\_Airspeed\_Backend.cpp  
[ 63/1003] Compiling libraries/AP\_Airspeed/AP\_Airspeed\_External.cpp  
[ 64/1003] Compiling libraries/AP\_Airspeed/AP\_Airspeed\_DLVR.cpp  
[ 65/1003] Compiling libraries/AP\_Airspeed/AP\_Airspeed\_DroneCAN.cpp  
[ 66/1003] Compiling libraries/AP\_Airspeed/AP\_Airspeed\_Health.cpp  
[ 67/1003] Compiling libraries/AP\_Airspeed/AP\_Airspeed\_MS5525.cpp  
[ 68/1003] Compiling libraries/AP\_Airspeed/AP\_Airspeed\_SITL.cpp  
[ 69/1003] Compiling libraries/AP\_Airspeed/AP\_Airspeed\_SDP3X.cpp  
[ 70/1003] Compiling libraries/AP\_Airspeed/AP\_Airspeed\_analog.cpp  
[ 71/1003] Compiling libraries/AP\_Airspeed/Airspeed\_Calibration.cpp  
[ 72/1003] Compiling libraries/AP\_Baro/AP\_Baro\_Backend.cpp  
[ 73/1003] Compiling libraries/AP\_Baro/AP\_Baro\_DPS280.cpp  
[ 74/1003] Compiling libraries/AP\_Baro/AP\_Baro\_DroneCAN.cpp  
[ 75/1003] Compiling libraries/AP\_Baro/AP\_Baro\_Dummy.cpp  
[ 76/1003] Compiling libraries/AP\_Baro/AP\_Baro\_ExternalAHRS.cpp  
[ 77/1003] Compiling libraries/AP\_Baro/AP\_Baro\_FBM320.cpp  
[ 78/1003] Compiling libraries/AP\_Baro/AP\_Baro\_HIL.cpp  
[ 79/1003] Compiling libraries/AP\_Baro/AP\_Baro\_ICM20789.cpp  
[ 80/1003] Compiling libraries/AP\_Baro/AP\_Baro\_ICP101XX.cpp  
[ 81/1003] Compiling libraries/AP\_Baro/AP\_Baro\_ICP201XX.cpp  
[ 82/1003] Compiling libraries/AP\_Baro/AP\_Baro\_KellerLD.cpp  
[ 83/1003] Compiling libraries/AP\_Baro/AP\_Baro\_LPS2XH.cpp  
[ 84/1003] Compiling libraries/AP\_Baro/AP\_Baro\_Logging.cpp  
[ 85/1003] Compiling libraries/AP\_Baro/AP\_Baro\_BMP581.cpp  
[ 86/1003] Compiling libraries/AP\_Baro/AP\_Baro\_MS5611.cpp  
[ 87/1003] Compiling libraries/AP\_Baro/AP\_Baro\_MSP.cpp  
[ 88/1003] Compiling libraries/AP\_Baro/AP\_Baro\_SPL06.cpp  
[ 89/1003] Compiling libraries/AP\_Baro/AP\_Baro\_Wind.cpp  
[ 90/1003] Compiling libraries/AP\_Baro/AP\_Baro\_BMP085.cpp  
[ 91/1003] Compiling libraries/AP\_Baro/AP\_Baro\_BMP280.cpp  
[ 92/1003] Compiling libraries/AP\_Baro/AP\_Baro\_BMP388.cpp  
[ 93/1003] Compiling libraries/AP\_BattMonitor/AP\_BattMonitor\_Logging.cpp  
[ 94/1003] Compiling libraries/AP\_BattMonitor/AP\_BattMonitor\_EFI.cpp  
[ 95/1003] Compiling libraries/AP\_BattMonitor/AP\_BattMonitor\_DroneCAN.cpp  
[ 96/1003] Compiling libraries/AP\_BattMonitor/AP\_BattMonitor\_FuelLevel\_Analog.cpp  
[ 97/1003] Compiling libraries/AP\_BattMonitor/AP\_BattMonitor\_FuelFlow.cpp  
[ 98/1003] Compiling libraries/AP\_BattMonitor/AP\_BattMonitor\_LTC2946.cpp  
[ 99/1003] Compiling libraries/AP\_BattMonitor/AP\_BattMonitor\_Analog.cpp  
[ 100/1003] Compiling libraries/AP\_BattMonitor/AP\_BattMonitor\_ESC.cpp

[ 101/1003] Compiling libraries/AP\_BattMonitor/AP\_BattMonitor\_FuelLevel\_PWM.cpp  
[ 102/1003] Compiling libraries/AP\_BattMonitor/AP\_BattMonitor\_Sum.cpp  
[ 103/1003] Compiling libraries/AP\_BattMonitor/AP\_BattMonitor\_Torqueedo.cpp  
[ 104/1003] Compiling libraries/AP\_BattMonitor/AP\_BattMonitor\_Scripting.cpp  
[ 105/1003] Compiling libraries/AP\_BattMonitor/AP\_BattMonitor\_INA2xx.cpp  
[ 106/1003] Compiling libraries/AP\_BattMonitor/AP\_BattMonitor\_INA239.cpp  
[ 107/1003] Compiling libraries/AP\_BattMonitor/AP\_BattMonitor\_SMBus\_Rotoye.cpp  
[ 108/1003] Compiling libraries/AP\_BattMonitor/AP\_BattMonitor\_Backend.cpp  
[ 109/1003] Compiling libraries/AP\_BattMonitor/AP\_BattMonitor\_Synthetic\_Current.cpp  
[ 110/1003] Compiling libraries/AP\_BattMonitor/AP\_BattMonitor\_Bebop.cpp  
[ 111/1003] Compiling libraries/AP\_BattMonitor/AP\_BattMonitor\_SMBus\_SUI.cpp  
[ 112/1003] Compiling libraries/AP\_BattMonitor/AP\_BattMonitor\_SMBus\_Generic.cpp  
[ 113/1003] Compiling libraries/AP\_BattMonitor/AP\_BattMonitor\_AD7091R5.cpp  
[ 114/1003] Compiling libraries/AP\_BattMonitor/AP\_BattMonitor\_SMBus\_Solo.cpp  
[ 115/1003] Compiling libraries/AP\_BattMonitor/AP\_BattMonitor\_SMBus.cpp  
[ 116/1003] Compiling libraries/AP\_BattMonitor/AP\_BattMonitor\_Generator.cpp  
[ 117/1003] Compiling libraries/AP\_BattMonitor/AP\_BattMonitor\_SMBus\_NeoDesign.cpp  
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[ 713/1003] Compiling libraries/AP\_HAL\_Empty/UARTDriver.cpp  
[ 714/1003] Compiling libraries/AP\_HAL\_ChibiOS/I2CDevice.cpp  
[ 715/1003] Compiling libraries/AP\_HAL\_ChibiOS/RCOutput.cpp  
[ 716/1003] Compiling libraries/AP\_HAL\_ChibiOS/sdcard.cpp  
[ 717/1003] Compiling libraries/AP\_HAL\_ChibiOS/RCInput.cpp  
[ 718/1003] Compiling libraries/AP\_HAL\_ChibiOS/UARTDriver.cpp  
[ 719/1003] Compiling libraries/AP\_HAL\_ChibiOS/AnalogIn.cpp  
[ 720/1003] Compiling libraries/AP\_HAL\_ChibiOS/WSPIDevice.cpp  
[ 721/1003] Compiling libraries/AP\_HAL\_ChibiOS/Device.cpp  
[ 722/1003] Compiling libraries/AP\_HAL\_ChibiOS/CanIface.cpp  
[ 723/1003] Compiling libraries/AP\_HAL\_ChibiOS/SoftSigReaderInt.cpp  
[ 724/1003] Compiling libraries/AP\_HAL\_ChibiOS/Semaphores.cpp  
[ 725/1003] Compiling libraries/AP\_HAL\_ChibiOS/SoftSigReader.cpp  
[ 726/1003] Compiling libraries/AP\_HAL\_ChibiOS/SPIDevice.cpp  
[ 727/1003] Compiling libraries/AP\_HAL\_ChibiOS/RCOutput\_iofirmware.cpp  
[ 728/1003] Compiling libraries/AP\_HAL\_ChibiOS/stdio.cpp  
[ 729/1003] Compiling libraries/AP\_HAL\_ChibiOS/CANFDIface.cpp  
[ 730/1003] Compiling libraries/AP\_HAL\_ChibiOS/RCOutput\_bdshot.cpp  
[ 731/1003] Compiling libraries/AP\_HAL\_ChibiOS/shared\_dma.cpp  
[ 732/1003] Compiling libraries/AP\_HAL\_ChibiOS/DSP.cpp  
[ 733/1003] Compiling libraries/AP\_HAL\_ChibiOS/Scheduler.cpp  
[ 734/1003] Compiling libraries/AP\_HAL\_ChibiOS/Util.cpp  
[ 735/1003] Compiling libraries/AP\_HAL\_ChibiOS/RCOutput\_serial.cpp  
[ 736/1003] Compiling libraries/AP\_Scripting/AP\_Scripting\_CANSensor.cpp  
[ 737/1003] Compiling libraries/AP\_Scripting/AP\_Scripting.cpp  
[ 738/1003] Compiling libraries/AP\_Scripting/lua/src/ltm.c  
[ 739/1003] Compiling libraries/AP\_Scripting/lua/src/lopcodes.c  
[ 740/1003] Compiling libraries/AP\_Scripting/lua/src/ltable.c  
[ 741/1003] Compiling libraries/AP\_Scripting/lua/src/lgc.c  
[ 742/1003] Compiling libraries/AP\_Scripting/lua/src/lmathlib.c  
[ 743/1003] Compiling libraries/AP\_Scripting/lua/src/liolib.c  
[ 744/1003] Compiling libraries/AP\_Scripting/lua/src/luac.c  
[ 745/1003] Compiling libraries/AP\_Scripting/lua/src/ldebug.c  
[ 746/1003] Compiling libraries/AP\_Scripting/lua/src/ldump.c  
[ 747/1003] Compiling libraries/AP\_Scripting/lua/src/lutf8lib.c  
[ 748/1003] Compiling libraries/AP\_Scripting/lua/src/lapi.c  
[ 749/1003] Compiling libraries/AP\_Scripting/lua/src/lvm.c  
[ 750/1003] Compiling libraries/AP\_Scripting/lua/src/loslib.c  
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[ 752/1003] Compiling libraries/AP\_Scripting/lua/src/lundump.c  
[ 753/1003] Compiling libraries/AP\_Scripting/lua/src/lstrlib.c  
[ 754/1003] Compiling libraries/AP\_Scripting/lua/src/lzio.c  
[ 755/1003] Compiling libraries/AP\_Scripting/lua/src/lcode.c  
[ 756/1003] Compiling libraries/AP\_Scripting/lua/src/lbaselib.c  
[ 757/1003] Compiling libraries/AP\_Scripting/lua/src/lstring.c  
[ 758/1003] Compiling libraries/AP\_Scripting/lua/src/lauxlib.c  
[ 759/1003] Compiling libraries/AP\_Scripting/lua/src/ldo.c  
[ 760/1003] Compiling libraries/AP\_Scripting/lua/src/lcorolib.c  
[ 761/1003] Compiling libraries/AP\_Scripting/lua/src/lstate.c  
[ 762/1003] Compiling libraries/AP\_Scripting/lua/src/ltablib.c  
[ 763/1003] Compiling libraries/AP\_Scripting/lua/src/loadlib.c  
[ 764/1003] Compiling libraries/AP\_Scripting/lua/src/lparser.c  
[ 765/1003] Compiling libraries/AP\_Scripting/lua/src/lobject.c  
[ 766/1003] Compiling libraries/AP\_Scripting/lua/src/lmem.c

[ 767/1003] Compiling libraries/AP\_Scripting/lua/src/lfunc.c  
[ 768/1003] Compiling libraries/AP\_Scripting/lua/src/llex.c  
[ 769/1003] Compiling libraries/AP\_Scripting/lua/src/lua.c  
[ 770/1003] Compiling libraries/AP\_Scripting/lua/src/ldblib.c  
[ 771/1003] Compiling libraries/AP\_Scripting/lua/src/limit.c  
[ 772/1003] Compiling libraries/AP\_Scripting/lua/src/lctype.c  
[ 773/1003] Compiling libraries/AP\_PiccoloCAN/piccolo\_protocol/ESCVelocityProtocol.c  
[ 774/1003] Compiling libraries/AP\_PiccoloCAN/piccolo\_protocol/ServoCommands.c  
[ 775/1003] Compiling libraries/AP\_PiccoloCAN/piccolo\_protocol/ECUDefines.c  
[ 776/1003] Compiling libraries/AP\_PiccoloCAN/piccolo\_protocol/scaleddecode.c  
[ 777/1003] Compiling libraries/AP\_PiccoloCAN/piccolo\_protocol/ServoProtocol.c  
[ 778/1003] Compiling libraries/AP\_PiccoloCAN/piccolo\_protocol/ServoPackets.c  
[ 779/1003] Compiling libraries/AP\_PiccoloCAN/piccolo\_protocol/fieldencode.c  
[ 780/1003] Compiling libraries/AP\_PiccoloCAN/piccolo\_protocol/fielddecode.c  
[ 781/1003] Compiling libraries/AP\_PiccoloCAN/piccolo\_protocol/scaledencode.c  
[ 782/1003] Compiling libraries/AP\_PiccoloCAN/piccolo\_protocol/ServoDefines.c  
[ 783/1003] Compiling libraries/AP\_PiccoloCAN/piccolo\_protocol/ESCDefines.c  
[ 784/1003] Compiling libraries/AP\_PiccoloCAN/piccolo\_protocol/ESCPackets.c  
[ 785/1003] Compiling libraries/AP\_PiccoloCAN/piccolo\_protocol/ESCCommands.c  
[ 786/1003] Compiling libraries/AP\_PiccoloCAN/piccolo\_protocol/ECUProtocol.c  
[ 787/1003] Compiling libraries/AP\_PiccoloCAN/piccolo\_protocol/ECUPackets.c  
[ 788/1003] Compiling libraries/AP\_PiccoloCAN/piccolo\_protocol/ECUSettings.c  
[ 789/1003] Compiling libraries/AP\_ADSB/sagetech-sdk/target.c  
[ 790/1003] Compiling libraries/AP\_ADSB/sagetech-sdk/toLatLon.c  
[ 791/1003] Compiling libraries/AP\_ADSB/sagetech-sdk/charArray2Buf.c  
[ 792/1003] Compiling libraries/AP\_ADSB/sagetech-sdk/sgEncodeTargetReq.c  
[ 793/1003] Compiling libraries/AP\_ADSB/sagetech-sdk/sgDecodeSVR.c  
[ 794/1003] Compiling libraries/AP\_ADSB/sagetech-sdk/sgDecodeInstall.c  
[ 795/1003] Compiling libraries/AP\_ADSB/sagetech-sdk/sgDecodeFlightId.c  
[ 796/1003] Compiling libraries/AP\_ADSB/sagetech-sdk/sgEncodeDataReq.c  
[ 797/1003] Compiling libraries/AP\_ADSB/sagetech-sdk/sgDecodeMSR.c  
[ 798/1003] Compiling libraries/AP\_ADSB/sagetech-sdk/toGS.c  
[ 799/1003] Compiling libraries/AP\_ADSB/sagetech-sdk/toHeading2.c  
[ 800/1003] Compiling libraries/AP\_ADSB/sagetech-sdk/sgEncodeGPS.c  
[ 801/1003] Compiling libraries/AP\_ADSB/sagetech-sdk/sgEncodeOperating.c  
[ 802/1003] Compiling libraries/AP\_ADSB/sagetech-sdk/float2Buf.c  
[ 803/1003] Compiling libraries/AP\_ADSB/sagetech-sdk/toHeading.c  
[ 804/1003] Compiling libraries/AP\_ADSB/sagetech-sdk/toAlt.c  
[ 805/1003] Compiling libraries/AP\_ADSB/sagetech-sdk/sgEncodeInstall.c  
[ 806/1003] Compiling libraries/AP\_ADSB/sagetech-sdk/toVel.c  
[ 807/1003] Compiling libraries/AP\_ADSB/sagetech-sdk/sgDecodeAck.c  
[ 808/1003] Compiling libraries/AP\_ADSB/sagetech-sdk/calcChecksum.c  
[ 809/1003] Compiling libraries/AP\_ADSB/sagetech-sdk/icao2Buf.c  
[ 810/1003] Compiling libraries/AP\_ADSB/sagetech-sdk/toInt32.c  
[ 811/1003] Compiling libraries/AP\_ADSB/sagetech-sdk/uint162Buf.c  
[ 812/1003] Compiling libraries/AP\_ADSB/sagetech-sdk/uint322Buf.c  
[ 813/1003] Compiling libraries/AP\_ADSB/sagetech-sdk/toTOA.c  
[ 814/1003] Compiling libraries/AP\_ADSB/sagetech-sdk/toInt16.c  
[ 815/1003] Compiling libraries/AP\_ADSB/sagetech-sdk/toUint16.c  
[ 816/1003] Compiling libraries/AP\_ADSB/sagetech-sdk/sgEncodeFlightId.c  
[ 817/1003] Compiling libraries/AP\_ADSB/sagetech-sdk/toUint32.c  
[ 818/1003] Compiling libraries/AP\_ADSB/sagetech-sdk/appendChecksum.c  
[ 819/1003] Compiling libraries/AP\_ADSB/sagetech-sdk/toIcao.c  
[ 820/1003] Compiling libraries/AP\_Airspeed/AP\_Airspeed.cpp  
[ 821/1003] Compiling libraries/AP\_Airspeed/AP\_Airspeed\_NMEA.cpp  
[ 822/1003] Compiling libraries/AP\_Airspeed/AP\_Airspeed\_Params.cpp  
[ 823/1003] Compiling libraries/AP\_AHRS/AP\_AHRS\_Backend.cpp  
[ 824/1003] Compiling libraries/AP\_AHRS/AP\_AHRS\_DCM.cpp  
[ 825/1003] Compiling libraries/AP\_AHRS/AP\_AHRS.cpp  
[ 826/1003] Compiling libraries/AP\_Baro/AP\_Baro.cpp  
[ 827/1003] Compiling libraries/AP\_Baro/AP\_Baro\_SITL.cpp  
[ 828/1003] Compiling libraries/AP\_BattMonitor/AP\_BattMonitor.cpp  
[ 829/1003] Compiling libraries/AP\_BattMonitor/AP\_BattMonitor\_Params.cpp  
[ 830/1003] Compiling libraries/AP\_BoardConfig/AP\_BoardConfig.cpp  
[ 831/1003] Compiling libraries/AP\_Compass/AP\_Compass.cpp  
[ 832/1003] Compiling libraries/AP\_HAL/SIMState.cpp  
[ 833/1003] Compiling libraries/AP\_InertialSensor/AP\_InertialSensor.cpp  
[ 834/1003] Compiling libraries/AP\_Math/quaterrion.cpp  
[ 835/1003] Compiling libraries/AP\_Math/vector3.cpp  
[ 836/1003] Compiling libraries/AP\_Math/SCurve.cpp  
[ 837/1003] Compiling libraries/AP\_Mission/AP\_Mission.cpp  
[ 838/1003] Compiling libraries/AP\_DAL/AP\_DAL\_RangeFinder.cpp  
[ 839/1003] Compiling libraries/AP\_DAL/AP\_DAL\_VisualOdom.cpp  
[ 840/1003] Compiling libraries/AP\_DAL/AP\_DAL.cpp

[ 841/1003] Compiling libraries/AP\_DAL/AP\_DAL\_Beacon.cpp  
[ 842/1003] Compiling libraries/AP\_NavEKF2/AP\_NavEKF2\_OptFlowFusion.cpp  
[ 843/1003] Compiling libraries/AP\_NavEKF2/AP\_NavEKF2.cpp  
[ 844/1003] Compiling libraries/AP\_NavEKF3/AP\_NavEKF3.cpp  
[ 845/1003] Compiling libraries/AP\_NavEKF3/AP\_NavEKF3\_Outputs.cpp  
[ 846/1003] Compiling libraries/AP\_NavEKF3/AP\_NavEKF3\_VehicleStatus.cpp  
[ 847/1003] Compiling libraries/AP\_NavEKF3/AP\_NavEKF3\_GyroBias.cpp  
[ 848/1003] Compiling libraries/AP\_NavEKF3/AP\_NavEKF3\_AirDataFusion.cpp  
[ 849/1003] Compiling libraries/AP\_NavEKF3/AP\_NavEKF3\_Control.cpp  
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[ 853/1003] Compiling libraries/AP\_NavEKF3/AP\_NavEKF3\_OptFlowFusion.cpp  
[ 854/1003] Compiling libraries/AP\_NavEKF3/AP\_NavEKF3\_RngBcnFusion.cpp  
[ 855/1003] Compiling libraries/AP\_NavEKF3/AP\_NavEKF3\_PosVelFusion.cpp  
[ 856/1003] Compiling libraries/AP\_NavEKF3/AP\_NavEKF3\_Logging.cpp  
[ 857/1003] Compiling libraries/AP\_Rally/AP\_Rally.cpp  
[ 858/1003] Compiling libraries/AP\_Scheduler/AP\_Scheduler.cpp  
[ 859/1003] Compiling libraries/AP\_Terrain/AP\_Terrain.cpp  
[ 860/1003] Compiling libraries/AP\_Vehicle/AP\_Vehicle.cpp  
[ 861/1003] Compiling libraries/AP\_Logger/AP\_Logger\_File.cpp  
[ 862/1003] Compiling libraries/AP\_Logger/AP\_Logger\_Backend.cpp  
[ 863/1003] Compiling libraries/AP\_Logger/LoggerMessageWriter.cpp  
[ 864/1003] Compiling libraries/AP\_Logger/AP\_Logger.cpp  
[ 865/1003] Compiling libraries/GCS\_MAVLink/GCS\_Dummy.cpp  
[ 866/1003] Compiling libraries/GCS\_MAVLink/GCS\_Fence.cpp  
[ 867/1003] Compiling libraries/GCS\_MAVLink/GCS\_Common.cpp  
[ 868/1003] Compiling libraries/RC\_Channel/RC\_Channel.cpp  
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[ 870/1003] Compiling libraries/AP\_Frsky\_Telem/AP\_Frsky\_SPort\_Passthrough.cpp  
[ 871/1003] Compiling libraries/AP\_Relay/AP\_Relay.cpp  
[ 872/1003] Compiling libraries/AP\_RCProtocol/AP\_RCProtocol\_SRXL2.cpp  
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[ 874/1003] Compiling libraries/AP\_RCProtocol/AP\_RCProtocol\_FPort.cpp  
[ 875/1003] Compiling libraries/AP\_RCProtocol/AP\_RCProtocol\_GHST.cpp  
[ 876/1003] Compiling libraries/AP\_RCProtocol/AP\_RCProtocol\_FPort2.cpp  
[ 877/1003] Compiling libraries/AP\_RCProtocol/AP\_RCProtocol\_CRSF.cpp  
[ 878/1003] Compiling libraries/AP\_BLHeli/AP\_BLHeli.cpp  
[ 879/1003] Compiling libraries/AP\_Proximity/AP\_Proximity\_Backend.cpp  
[ 880/1003] Compiling libraries/AP\_Proximity/AP\_Proximity\_Utils.cpp  
[ 881/1003] Compiling libraries/AC\_Fence/AC\_PolyFence\_loader.cpp  
[ 882/1003] Compiling libraries/AC\_Fence/AC\_Fence.cpp  
[ 883/1003] Compiling libraries/AC\_Avoidance/AC\_Avoid.cpp  
[ 884/1003] Compiling libraries/AC\_Avoidance/AP\_OABendyRuler.cpp  
[ 885/1003] Compiling libraries/AC\_Avoidance/AP\_OADatabase.cpp  
[ 886/1003] Compiling libraries/AP\_LandingGear/AP\_LandingGear.cpp  
[ 887/1003] Compiling libraries/AP\_FileSystem/AP\_FileSystem\_posix.cpp  
[ 888/1003] Compiling libraries/AP\_ADSB/AP\_ADSB.cpp  
[ 889/1003] Compiling libraries/AP\_ADSB/AP\_ADSB\_Sagetech\_MXS.cpp  
[ 890/1003] Compiling libraries/AP\_ESC\_Telem/AP\_ESC\_Telem\_Backend.cpp  
[ 891/1003] Compiling libraries/AP\_GyroFFT/AP\_GyroFFT.cpp  
[ 892/1003] Compiling libraries/AP\_RCTelemetry/AP\_CRSF\_Telem.cpp  
[ 893/1003] Compiling libraries/AP\_RCTelemetry/AP\_RCTelemetry.cpp  
[ 894/1003] Compiling libraries/AP\_ExternalAHRS/AP\_ExternalAHRS\_InertialLabs.cpp  
[ 895/1003] Compiling libraries/AP\_TemperatureSensor/AP\_TemperatureSensor.cpp  
[ 896/1003] Compiling libraries/AP\_CustomRotations/AP\_CustomRotations.cpp  
[ 897/1003] Compiling libraries/AP\_CustomRotations/AP\_CustomRotations\_params.cpp  
[ 898/1003] Compiling libraries/AP\_AIS/AP\_AIS.cpp  
[ 899/1003] Compiling libraries/AC\_AttitudeControl/AC\_WeatherVane.cpp  
[ 900/1003] Compiling libraries/AC\_AttitudeControl/AC\_AttitudeControl.cpp  
[ 901/1003] Compiling libraries/AC\_AttitudeControl/AC\_PosControl.cpp  
[ 902/1003] Compiling libraries/AC\_PrecLand/AC\_PrecLand.cpp  
[ 903/1003] Compiling libraries/AC\_WPNav/AC\_Loiter.cpp  
[ 904/1003] Compiling libraries/AP\_Motors/AP\_MotorsMulticopter.cpp  
[ 905/1003] Compiling libraries/AP\_Motors/AP\_MotorsMatrix.cpp  
[ 906/1003] Compiling libraries/AP\_Motors/AP\_Motors\_Thrust\_Linearization.cpp  
[ 907/1003] Compiling libraries/AP\_Motors/AP\_MotorsTri.cpp  
[ 908/1003] Compiling libraries/AP\_Avoidance/AP\_Avoidance.cpp  
[ 909/1003] Compiling libraries/AP\_Arming/AP\_Arming.cpp  
[ 910/1003] Compiling libraries/AP\_Follow/AP\_Follow.cpp  
[ 911/1003] Compiling libraries/AP\_OSD/AP\_OSD\_ParamSetting.cpp  
[ 912/1003] Compiling libraries/AP\_OSD/AP\_OSD\_ParamScreen.cpp  
[ 913/1003] Compiling libraries/AP\_OSD/AP\_OSD\_Screen.cpp  
[ 914/1003] Compiling libraries/AC\_AutoTune/AC\_AutoTune.cpp



```
[ 915/1003] Compiling libraries/AP_HAL_ChibiOS/GPIO.cpp
[ 916/1003] Compiling libraries/AP_HAL_ChibiOS/Storage.cpp
[ 917/1003] Compiling libraries/AP_HAL_ChibiOS/system.cpp
[ 918/1003] Compiling libraries/AP_HAL_ChibiOS/HAL_ChibiOS_Class.cpp
[ 919/1003] Compiling libraries/AP_Scripting/lua_repl.cpp
[ 920/1003] Compiling libraries/AP_Scripting/lua_scripts.cpp
[ 921/1003] Compiling libraries/AP_Scripting/AP_Scripting_helpers.cpp
[ 922/1003] Compiling libraries/AP_Scripting/lua_bindings.cpp
[ 923/1003] Compiling ../speedybeef4v3/libraries/AP_Scripting/lua_generated_bindings.cpp
[ 924/1003] Compiling libraries/AP_Scripting/lua_boxed_numerics.cpp
[ 925/1003] Compiling ArduCopter/inertia.cpp
[ 926/1003] Compiling ArduCopter/failsafe.cpp
[ 927/1003] Compiling ArduCopter/events.cpp
[ 928/1003] Compiling ArduCopter/compassmot.cpp
[ 929/1003] Compiling ArduCopter/standby.cpp
[ 930/1003] Compiling ArduCopter/mode_guided.cpp
[ 931/1003] Compiling ArduCopter/mode_autorotate.cpp
[ 932/1003] Compiling ArduCopter/mode_flowhold.cpp
[ 933/1003] Compiling ArduCopter/toy_mode.cpp
[ 934/1003] Compiling ArduCopter/mode_stabilize.cpp
[ 935/1003] Compiling ArduCopter/mode_loiter.cpp
[ 936/1003] Compiling ArduCopter/crash_check.cpp
[ 937/1003] Compiling ArduCopter/mode_drift.cpp
[ 938/1003] Compiling ArduCopter/mode_flip.cpp
[ 939/1003] Compiling ArduCopter/UserCode.cpp
[ 940/1003] Compiling ArduCopter/RC_Channel.cpp
[ 941/1003] Compiling ArduCopter/autoyaw.cpp
[ 942/1003] Linking ../speedybeef4v3/lib/libArduCopter_libs.a
[ 943/1003] Compiling ArduCopter/Log.cpp
[ 944/1003] Compiling ArduCopter/precision_landing.cpp
[ 945/1003] Compiling ArduCopter/esc_calibration.cpp
[ 946/1003] Compiling ArduCopter/terrain.cpp
[ 947/1003] Compiling ArduCopter/mode_poshold.cpp
[ 948/1003] Compiling ArduCopter/fence.cpp
[ 949/1003] Compiling ArduCopter/mode_circle.cpp
[ 950/1003] Compiling ArduCopter/mode_zigzag.cpp
[ 951/1003] Compiling ArduCopter/mode_avoid_adsb.cpp
[ 952/1003] Compiling ArduCopter/baro_ground_effect.cpp
[ 953/1003] Compiling ArduCopter/mode_throw.cpp
[ 954/1003] Compiling ArduCopter/mode_brake.cpp
[ 955/1003] Compiling ArduCopter/GCS_Mavlink.cpp
[ 956/1003] Compiling ArduCopter/UserParameters.cpp
[ 957/1003] Compiling ArduCopter/AP_State.cpp
[ 958/1003] Compiling ArduCopter/mode_althold.cpp
[ 959/1003] Compiling ArduCopter/ekf_check.cpp
[ 960/1003] Compiling ArduCopter/takeoff.cpp
[ 961/1003] Compiling ArduCopter/AP_ExternalControl_Copter.cpp
[ 962/1003] Compiling ArduCopter/mode_systemid.cpp
[ 963/1003] Compiling ArduCopter/radio.cpp
[ 964/1003] Compiling ArduCopter/mode_land.cpp
[ 965/1003] Compiling ArduCopter/avoidance_adsb.cpp
[ 966/1003] Compiling ArduCopter/heli.cpp
[ 967/1003] Compiling ArduCopter/sensors.cpp
[ 968/1003] Compiling ArduCopter/mode_smart_rtl.cpp
[ 969/1003] Compiling ArduCopter/mode_acro_heli.cpp
[ 970/1003] Compiling ArduCopter/takeoff_check.cpp
[ 971/1003] Compiling ArduCopter/motors.cpp
[ 972/1003] Compiling ArduCopter/land_detector.cpp
[ 973/1003] Compiling ArduCopter/mode_stabilize_heli.cpp
[ 974/1003] Compiling ArduCopter/GCS_Copter.cpp
[ 975/1003] Compiling ArduCopter/mode.cpp
[ 976/1003] Compiling ArduCopter/mode_acro.cpp
[ 977/1003] Compiling ArduCopter/Parameters.cpp
[ 978/1003] Compiling ArduCopter/navigation.cpp
[ 979/1003] Compiling ArduCopter/motor_test.cpp
[ 980/1003] Compiling ArduCopter/mode_autotune.cpp
[ 981/1003] Compiling ArduCopter/mode_auto.cpp
[ 982/1003] Compiling ArduCopter/mode_sport.cpp
[ 983/1003] Compiling ArduCopter/AP_Rally.cpp
[ 984/1003] Compiling ArduCopter/tuning.cpp
[ 985/1003] Compiling ArduCopter/mode_turtle.cpp
[ 986/1003] Compiling ArduCopter/commands.cpp
[ 987/1003] Compiling ArduCopter/avoidance.cpp
[ 988/1003] Compiling ArduCopter/Attitude.cpp
```

```

[ 989/1003] Compiling ArduCopter/mode_follow.cpp
[ 990/1003] Compiling ArduCopter/mode_rtl.cpp
[ 991/1003] Compiling ArduCopter/Copter.cpp
[ 992/1003] Compiling ArduCopter/landing_gear.cpp
[ 993/1003] Compiling ArduCopter/AP_Arming.cpp
[ 994/1003] Compiling ArduCopter/mode_guided_nogps.cpp
[ 995/1003] Compiling ArduCopter/afs_copter.cpp
[ 996/1003] Compiling ArduCopter/surface_tracking.cpp
[ 997/1003] Compiling ArduCopter/system.cpp
[ 998/1003] Linking ../speedybeef4v3/bin/arducopter
[ 999/1003] Generating bin/arducopter.bin
[1000/1003] app_descriptor ../speedybeef4v3/bin/arducopter.bin
No APP_DESCRIPTOR found
[1001/1003] apj_gen ../speedybeef4v3/bin/arducopter.bin
[1002/1003] bin_cleanup ../speedybeef4v3/bin/arducopter.bin
[1003/1003] Generating bin/arducopter_with_bl.hex
Waf: Leaving directory
`/mnt/volume_nyc3_01/custom/base/tmp/copter:speedybeef4v3:2a3dc4b7bf2507120f7378a7b2fde73185e0c325:765ff181914ef6108d28e8199b4ae49e/speedybeef4v3'

```

#### BUILD SUMMARY

Build directory:

```

/mnt/volume_nyc3_01/custom/base/tmp/copter:speedybeef4v3:2a3dc4b7bf2507120f7378a7b2fde73185e0c325:765ff181914ef6108d28e8199b4ae49e/speedybeef4v3

```

Target	Text (B)	Data (B)	BSS (B)	Total Flash Used (B)	Free Flash (B)	External Flash Used (B)
bin/arducopter	837812	2252	128916	840064	159352	Not Applicable

'copter' finished successfully (46.884s)

done build

BUILD\_FINISHED