Sensor updates
Gyro sensor → time interval >= 1/200
Accel sensor → time interval >= 1/512 (default)
Magnetic sensor → time interval >= 1/100 (default)
Barometric sensor → time interval >= 1/50 (default)
GPS sensor → time interval >= 1/4(default)
Sonar sensor → time interval >= 1/10

//
Tasks
```
 tid_t main_periodic_tid; ///< id for main_periodic() timer
tid_t modules_tid;       ///< id for modules_periodic_task() timer
tid_t failsafe_tid;      ///< id for failsafe_check() timer
tid_t radio_control_tid; ///< id for radio_control_periodic_task() timer
tid_t electrical_tid;    ///< id for electrical_periodic() timer
tid_t telemetry_tid;     ///< id for telemetry_periodic() timer

// register the timers for the periodic functions
  main_periodic_tid = sys_time_register_timer((1. / PERIODIC_FREQUENCY), NULL);
  modules_tid = sys_time_register_timer(1. / MODULES_FREQUENCY, NULL);
  radio_control_tid = sys_time_register_timer((1. / 60.), NULL);
  failsafe_tid = sys_time_register_timer(0.05, NULL);
  electrical_tid = sys_time_register_timer(0.1, NULL);
  telemetry_tid = sys_time_register_timer((1. / TELEMETRY_FREQUENCY), NULL);
```

PERIODIC_FREQUENCY = 512
MODULES_FREQUENCY = 512
TELEMETRY_FREQUENCY = 512
//

handel_periodic_tasks
- check main_periodic_tid
  - main_periodic every time
    - imu_periodic (if used)
    - InsPeriodic (if defined)
    - * autopilot_periodic
      - compute dist to home every 32 iterations
      - nav_periodic_task or nave_home every 32 iterations
        - (dependent on mode)
    - set actuators
    - * increment inflight counter
      - (done every 60 iterations used in autopilot_periodic)
    - blink led every 10 iterations

check modules_tid
    air_data_periodic every 51 iterations
        (decrement health of barometer)
    geo_mag_periodic every 512 iterations
        (enables execution of geo_mag_event)

check failsafe_tid
    failsafe_check every time
        (sets autopilot to safety/recovery modes)

check electrical_tid
    electrical_periodic every time
        (calculates power level and populates data structure)
check telemetry_tid
    periodic_telemtry_send_Main
        (sends telemetry for the state of the aircraft sensors,errors,status
        all at different iteration numbers between 0 and 5683 iterations)