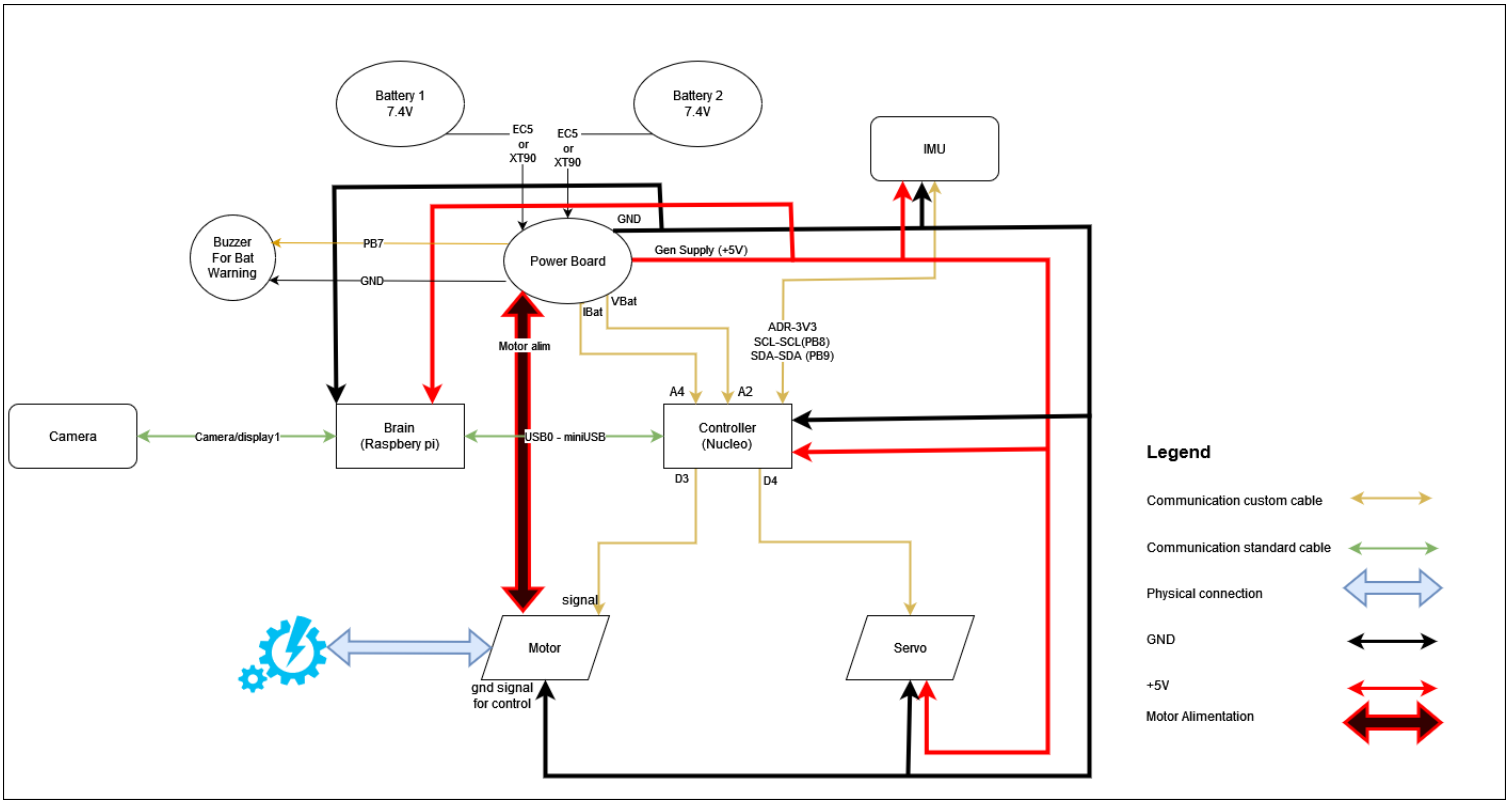
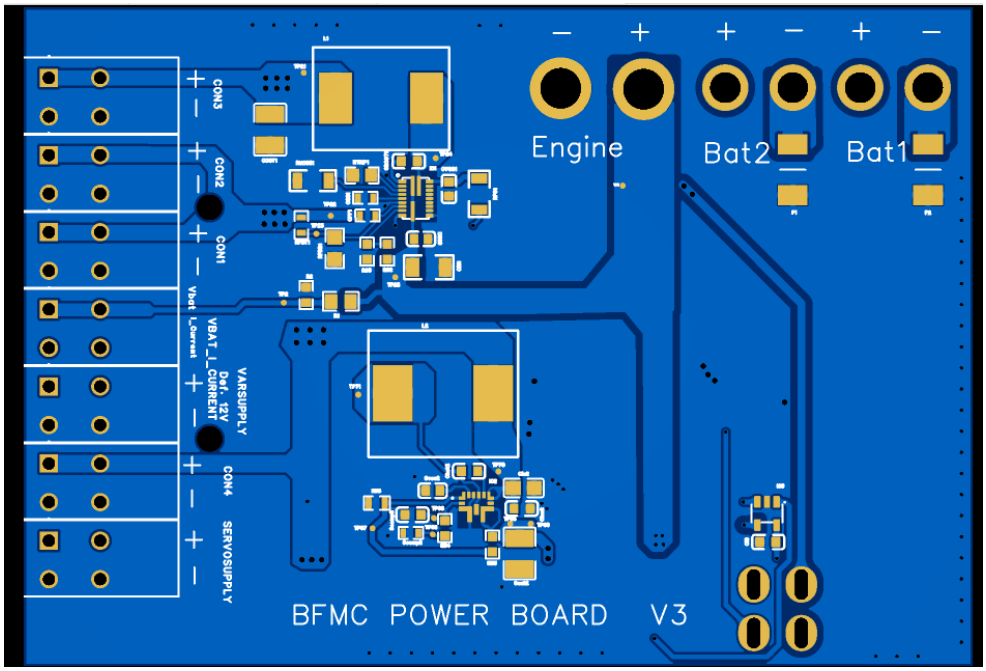
Architecture

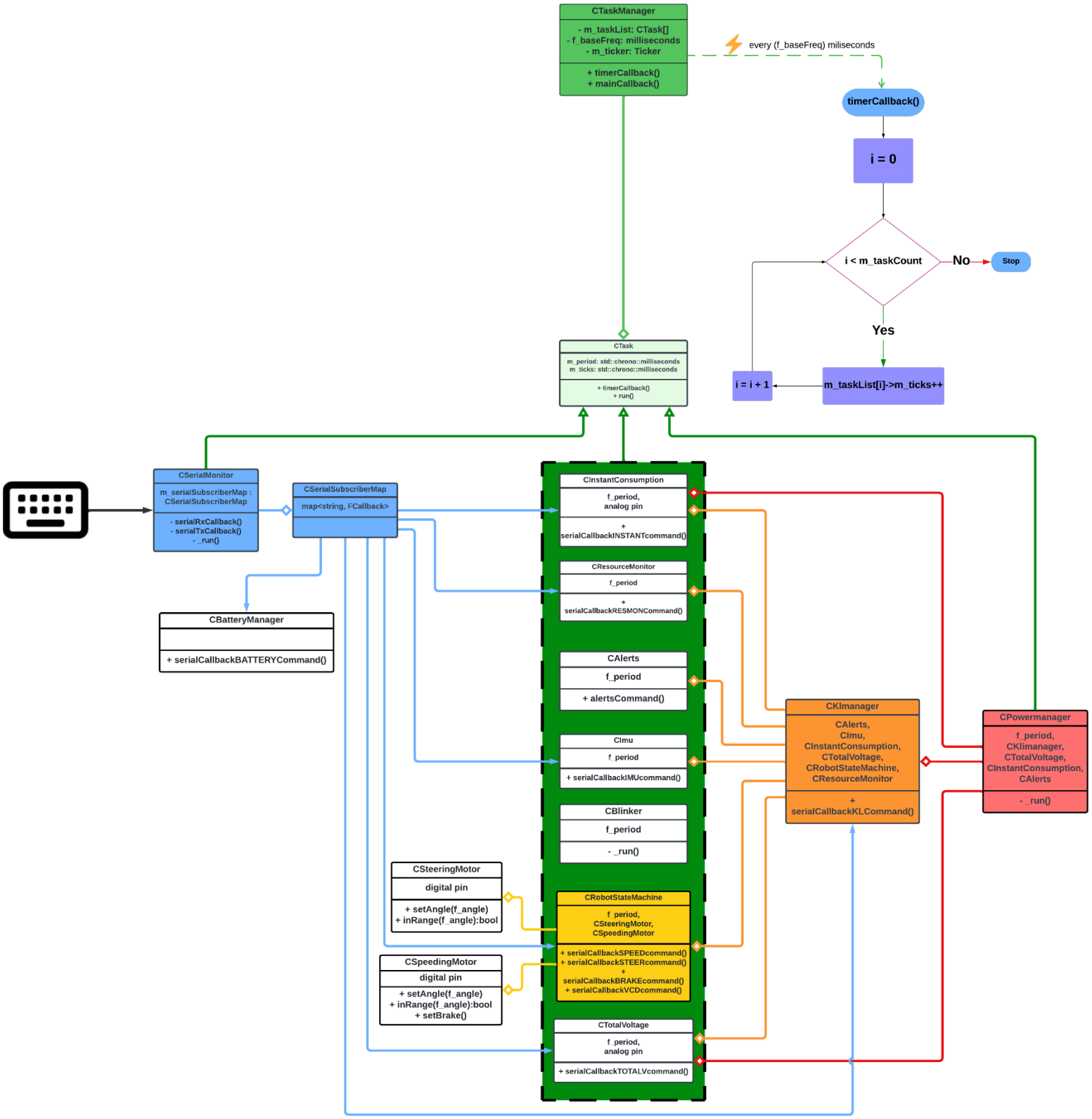
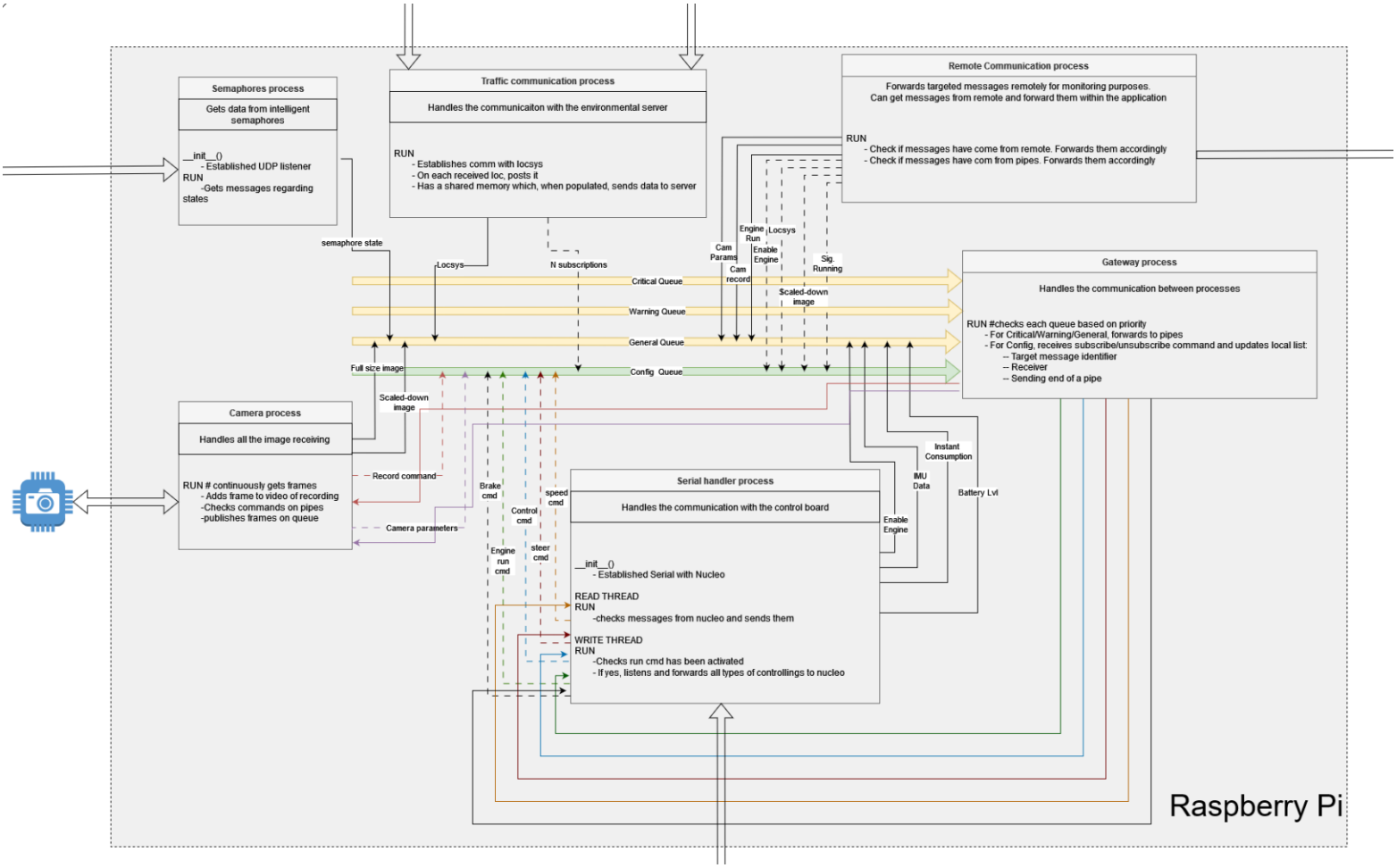
Hardware:



Power board:



Embedded:


CTaskManager
- m_taskList: CTask[]
- f_baseFreq: milliseconds
- m_ticker: Ticker
+ timerCallback()
+ mainCallback()
every (f_baseFreq) miliseconds
timerCallback()
i = 0
i < m_taskCount
No
Stop
Yes
m_taskList[i]->m_ticks++
i = i + 1
CTask
m_period: std::chrono::milliseconds
m_ticks: std::chrono::milliseconds
+ timerCallback()
+ run()
CSerialMonitor
m_serialSubscriberMap : CSerialSubscriberMap
- serialRxCallback()
- serialTxCallback()
- _run()
CSerialSubscriberMap
map<string, FCallback>
CBatteryManager
+ serialCallbackBATTERYCommand()
CInstantConsumption
f_period, analog pin
+ serialCallbackINSTANTcommand()
CResourceMonitor
f_period
+ serialCallbackRESMONCommand()
CAlerts
f_period
+ alertsCommand()
CImu
f_period
+ serialCallbackIMUcommand()
CBlinker
f_period
- _run()
CSteeringMotor
digital pin
+ setAngle(f_angle)
+ inRange(f_angle):bool
CRobotStateMachine
f_period, CSteeringMotor, CSpeedingMotor
+ serialCallbackSPEEDcommand()
+ serialCallbackSTEERcommand()
+ serialCallbackBRAKEcommand()
+ serialCallbackVCDcommand()
CSpeedingMotor
digital pin
+ setAngle(f_angle)
+ inRange(f_angle):bool
+ setBrake()
CTotalVoltage
f_period, analog pin
+ serialCallbackTOTALVcommand()
CKImanager
CAlerts, CImu, CInstantConsumption, CTotalVoltage, CRobotStateMachine, CResourceMonitor
+ serialCallbackKLCommand()
CPowermanager
f_period, CKImanager, CTotalVoltage, CInstantConsumption, CAlerts
- _run()

Raspberry pi: