Software Architecture

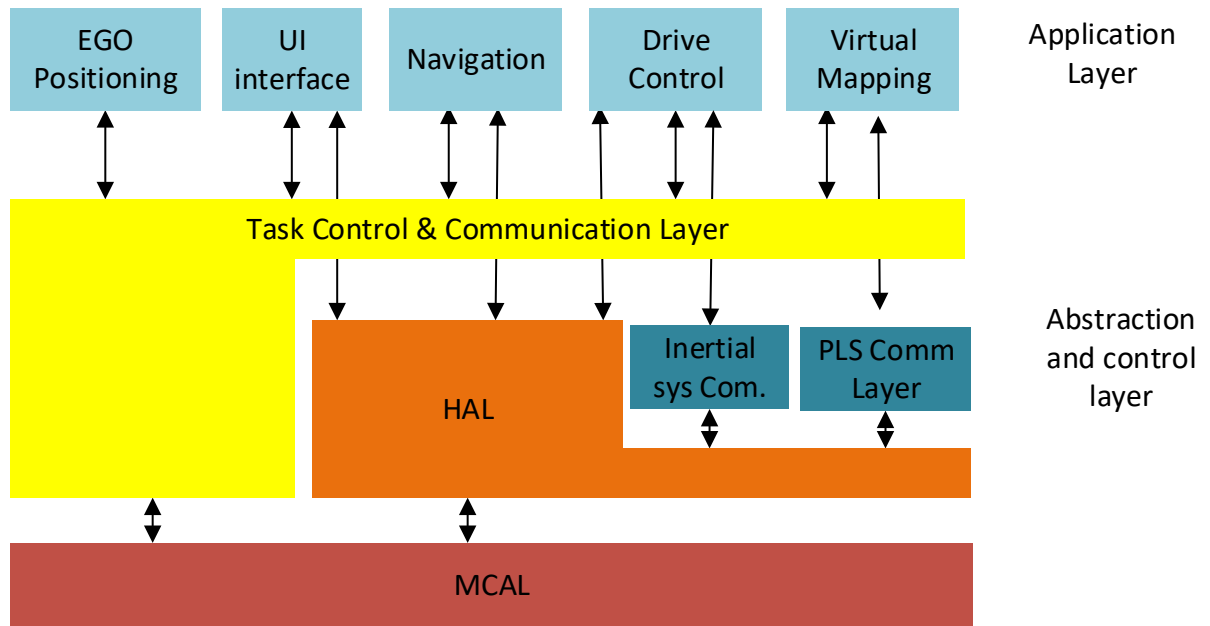|	
EGO Positioning · **UI interface** · **Navigation** · **Drive Control** · **Virtual Mapping**	Application Layer
Task Control & Communication Layer	
HAL · **Inertial sys Com.** · **PLS Comm Layer**	Abstraction and control layer
MCAL	

- ■ HAL – Hardware Abstraction Layer
- ■ MCAL-Microcontroller Abstraction Layer

Component Diagram

Application Layer

CEGO_Pos	CNavigation	CUserIF	CMotorCntrl	CVirtualMap
+init()	+init()	+init()	+init()	+init()

Task Control & Communication Layer

<<Interface>>
ITaskCntrl
- +Init
- +start
- +resume
- +suspend
- +stop

CTaskController
- +init
- +RegisterTask(ITaskCntrl& iTask)

CRTE
- -mVal
- +ReadValue()
- +setValue()

PLS Comms Layer

CPLSComm
- -mRcvBuff[RCV_BUFF_SIZE]
- -mSndBuff[SND_BUFF_SIZE]
- +Init
- +Send(uint8* buff):bool
- +ReadRecvBuf(Uint8* buff):bool
- +isRcvDataAvailable():bool

MCAL

CMCAL
- +init
- +RegisterSysCallBc()
- +reset
- +sleep()

HAL

CPWM
- +init()
- +SetPWMFrequency()
- +SetDutyCycle()
- +Reset()

CSerialComms
- +init(uint8& sndBuff, uint8 rcvBuff);
- +send(uint8* buffer):bool
- +recieve(uint8*buffer):bool
- +

CGPIO
- +Init()
- +SetPinMode()
- +SetPinValue()
- +ReadPinValue()

CADC
- +init
- +readADC

CEncoder
- +Init
- +readAndDisplacment
- +reset

CI2C
- +Init
- +Read
- +write