EDGE COMPUTER - CODE DESCRIPTION

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RadioStudio

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2 Revision History

Version No	Date	Author	Change Log
1	28/10/2023	Meimurugan Krishna	

3 Code Description:

3.1 PROTOCOL USED

- 3.1.1 Mqtt Websocket protocol is used for publish and subscribe.
- 3.1.2 Http Protocol is used to post the version number and date of the python, tlc firware and the wgid to the cloud.

3.2 CODE FLOW

- 3.2.1 Mqtt thread initialised by using <code>Merit_MqttStart()</code> function and check the mqtt websocket is connected to the broker using <code>MqttConnectFlag</code> in a loop in the interval of one second till the MqttConnectFlag is set.
- 3.2.2 After the *MqttConnectFlag* is set, Subscribe the mqtt topics using *Merit MqttSubscribeTopics()*
- 3.2.3 Monitor the TLC ComPort using *Merit_FindTLCPort()* function in a loop in the interval of three seconds till found the tlc comport.
- 3.2.4 If the port is found then starts the TLCThread and write TLC commands over Serial Port via queue by using Merit_SerialWriterQueue() function
- 3.2.5 Get tlc firmware version and release date over serial port by using Merit_SerialWriterVersionRequesAndDate() function in a loop in the interval of one second till get the tlc firmware version release details. After getting the version from the tlc, post the version number and date of the python, tlc firware and the wgid to the cloud by using Merit_VersionPost().
- 3.2.6 After version post successful, starts the MqttPublishThread for publishing Merit wagon weighment process details to mqtt server by using *Merit MqttPublishWaqonDetails()* function.
- 3.2.7 After that, write the wagon weighment read command & read input and output status over the TLC in a loop by using Merit_TLCMonitor() function.
- 3.2.8 And if the Serial communication error occurs while processing commands then it starts to Monitor the TLC ComPort by using *Merit_FindTLCPort()* function in a loop till found the tlc comport in the interval of three seconds and if the port is found then the process continues further.

4 References