



Rackgo X OCP LCD Debug Card

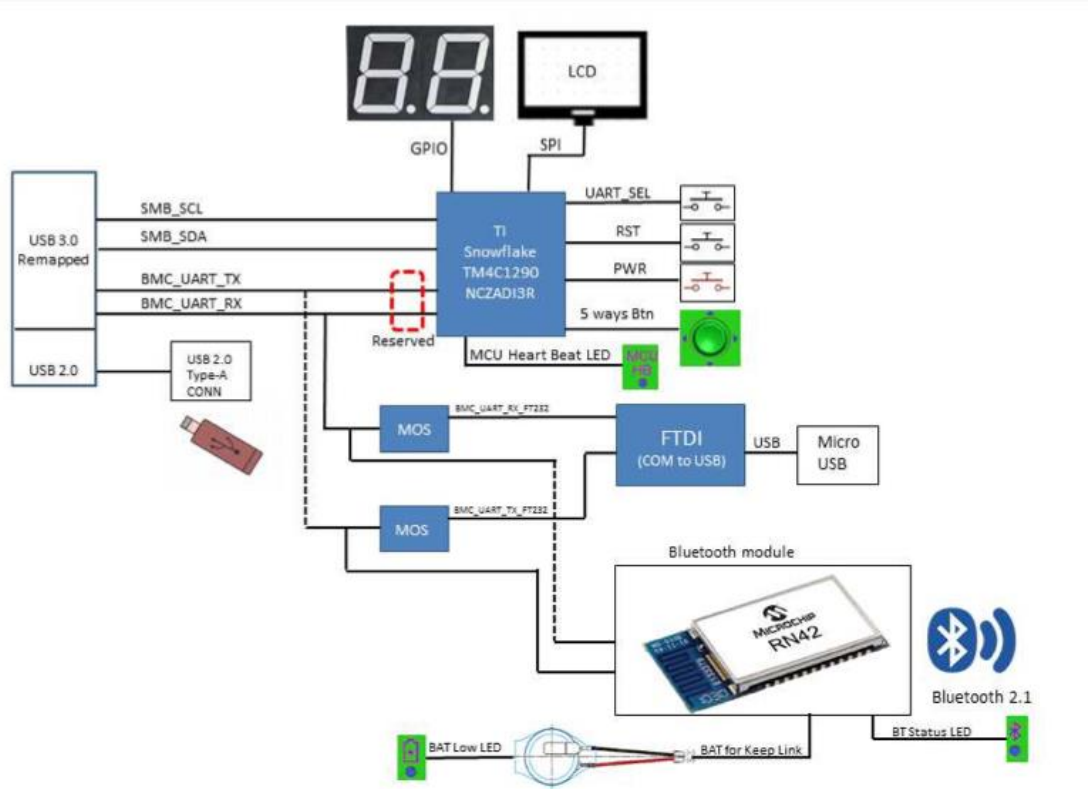
Overview & Agenda

- Rackgo X OCP Debug Card v2.0 is intended to improve and replace the existing Bluetooth Debug card. It carries all the features of the existing Bluetooth debug card to improve service efficiency and is compliant with current OPC product.
- OCP contribution by Quanta:
 - Design files of Debug Card v2.0
- Reference:
 - Facebook_OCP_Debug_Card_with_LCD_Spec_v1p0

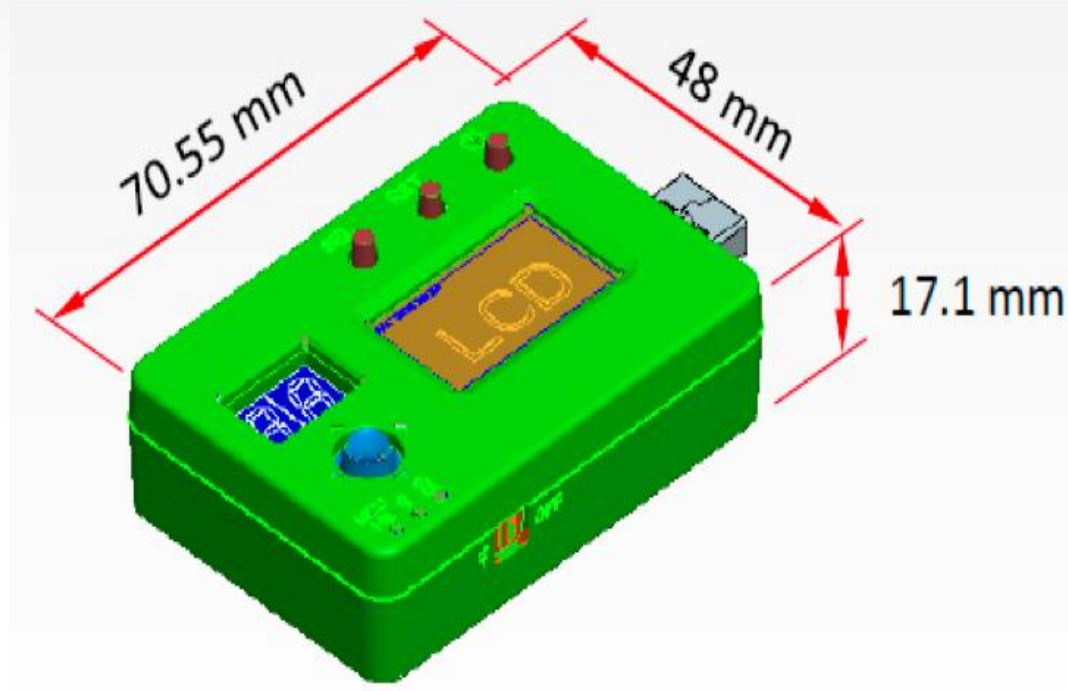
High Level Features

Description	
Description	Rackgo X OCP Debug Card v2.0
Dimension	
Dimension	70.55 mm(L)x48mm(W)x17.1mm(H)
Connector Interface	
Interface	<ol style="list-style-type: none">1. USB 3.0 Connector with remapped proprietary signal pin<ul style="list-style-type: none">--USB2.0--I2C--PRSN--UART <p>The USB3.0 connector will downgrade to support USB2.0 speed only</p> <ol style="list-style-type: none">2. Micro USB3. USB 2.0 type A connector
Human interface	
Human interface	<ul style="list-style-type: none">--Power/Reset/UART select button--5-way switch: The 5 way switch allows the user to page up or page down through the debug information on LED panel--Bluetooth on/off switch: Turn the battery power on/off to enable/disable Bluetooth module.

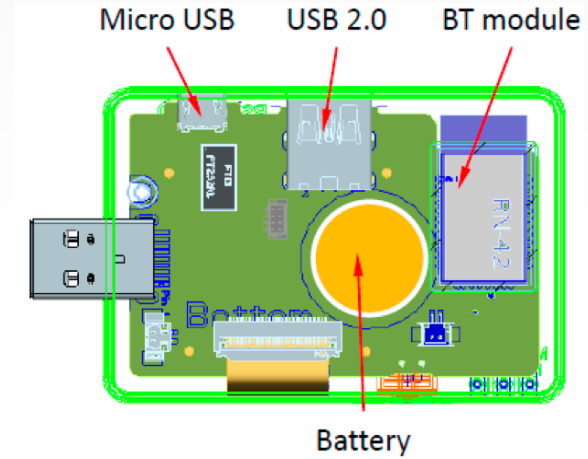
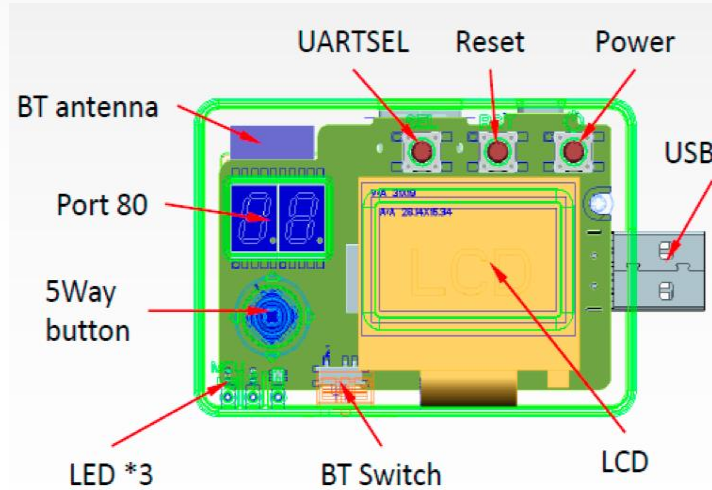
Block Diagram



Mechanical View and Dimension

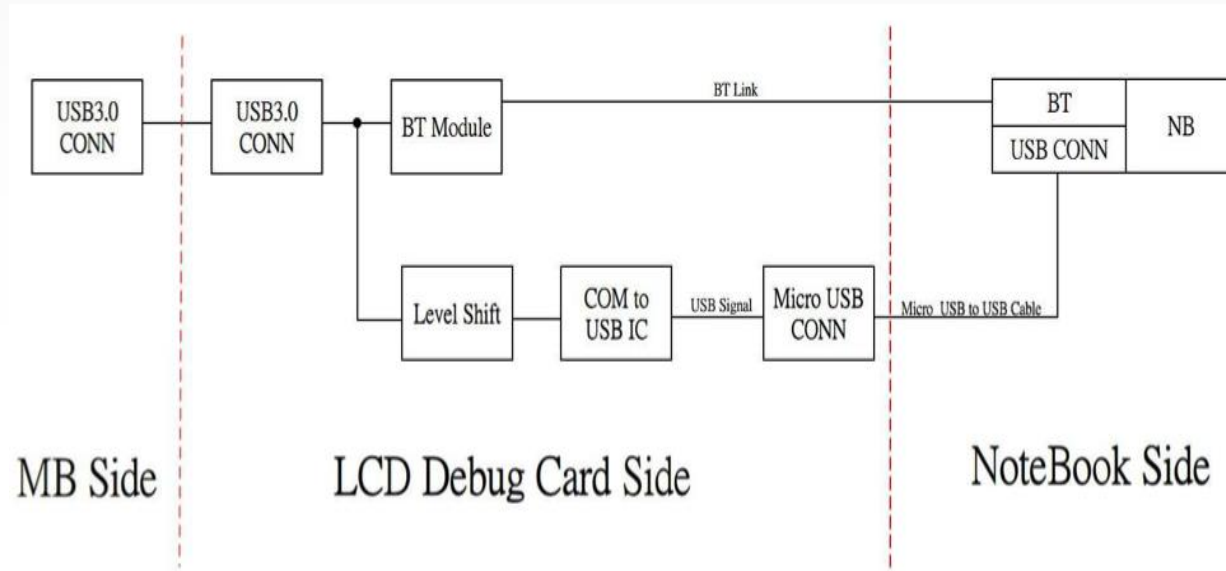


Key Part Placement



UART Block Diagram

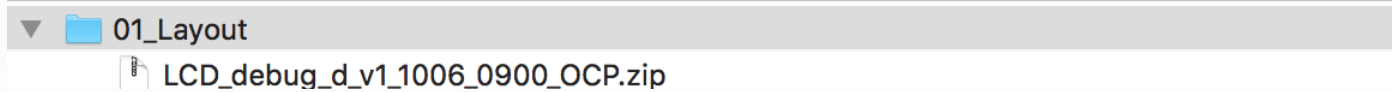
➤ UART Connection between Server Board to NoteBook



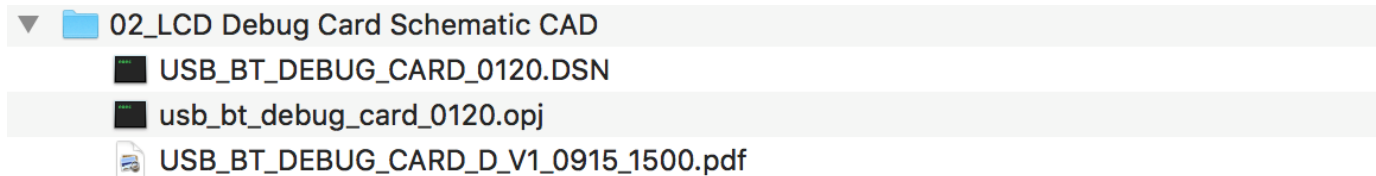
Design Files Contribution-

01_Electricals

➤ 01_Full System Board Layout



➤ 02_Full System Schematic CAD



Design Files Contribution-

01_Electricals

➤ 03_Full System Component BOM

- ▼ 03_LCD Debug Card Component BOM
 - LCD Debug Card Component BOM.xlsx

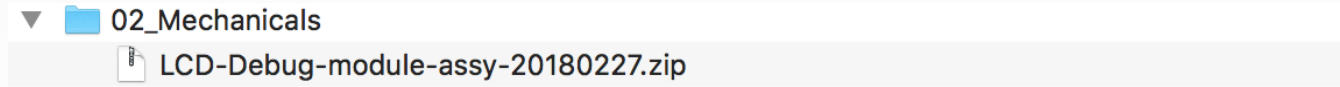
➤ 04_Manufacturing Files

- ▼ 04_Manufacturing Files
 - ▼ 01_PCB manufacturing files
 - LCD_debug_d_v1_1006_0900_OCP_gerber.zip
 - ▼ 02_Schematic (.pdf)
 - USB_BT_DEBUG_CARD_D_V1_0915_1500.pdf
 - ▼ 03_Board component placement map (.pdf)
 - LCD Debug Card placement map.pdf
 - ▼ 04_Stack Up
 - (Stackup)Bluetooth_Debug_Card_4L_1p6mm_FR4_Rev0p2_20160308.xls

Design Files Contribution-

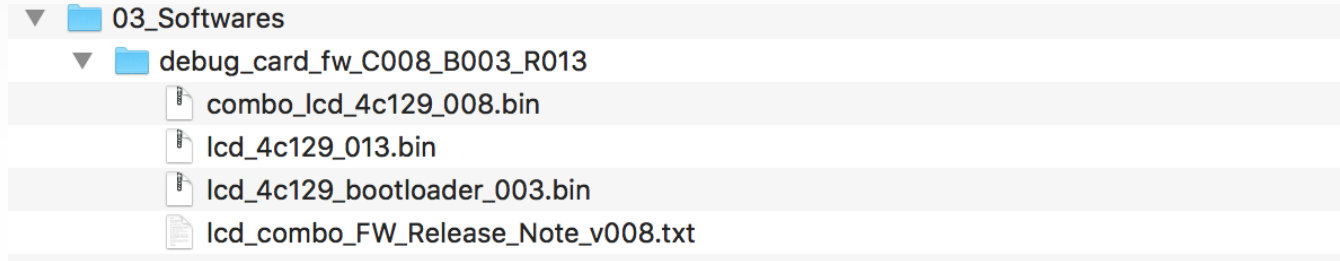
02_Mechanicals

➤ Mechanical files



Design Files Contribution- 03_Software

➤ Software files



OCP Tenets/Principles

➤ **Efficiency**

- To Integrate debug utility & debug message into one small box without separated utilities and extra effort
- Reserve more front end IO space for more critical IO expansion

➤ **Scalability**

- Comply with common debug protocol, like UART, USB, and

➤ **Openness**

- Derive from debug card V1 and with enhanced features

➤ **Impact**

- Readable LED & LCD to accelerate the progress of debugging

Thanks!!!