



Simula

# USB-C Connector Solution

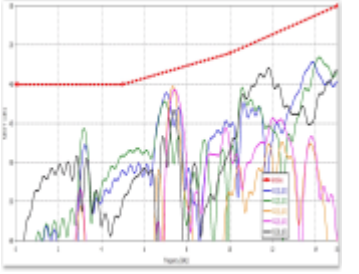
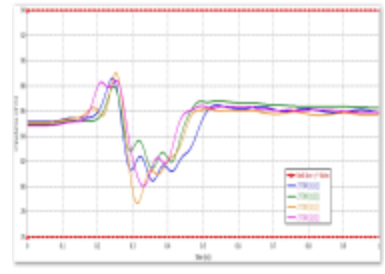
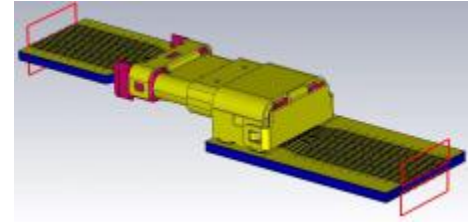
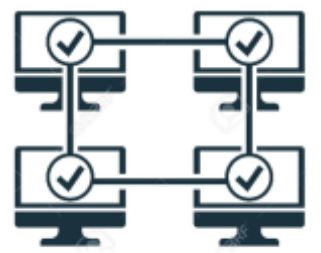
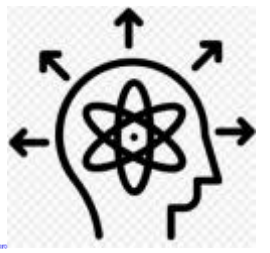
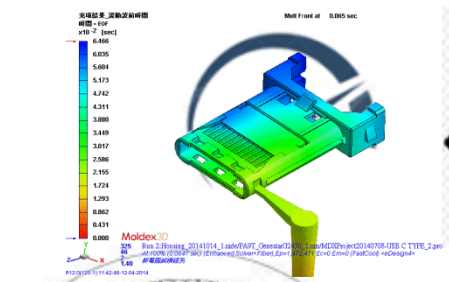
# USB-C

## Benefits

- Support USB 2.0, USB 3.2 Gen 1, USB 3.2 Gen 2, and USB 3.2 Gen 2X2.
- IPX7/IPX8 waterproof options available.
- Deliver power up to 100W at 20V.
- Backward compatible to other USB connectors using converter cable or adaptor,



# Engineer Capability



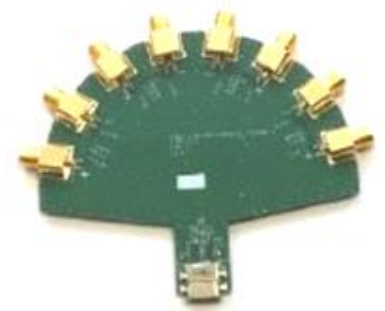
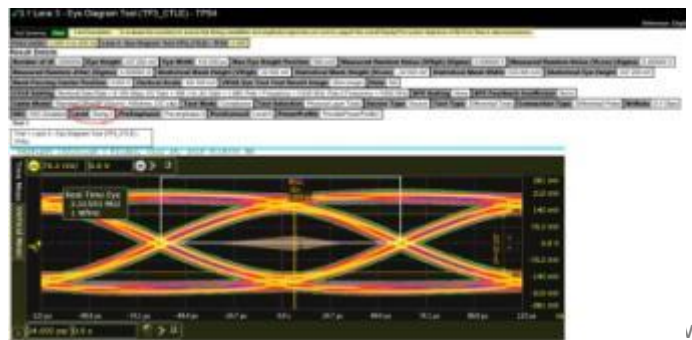
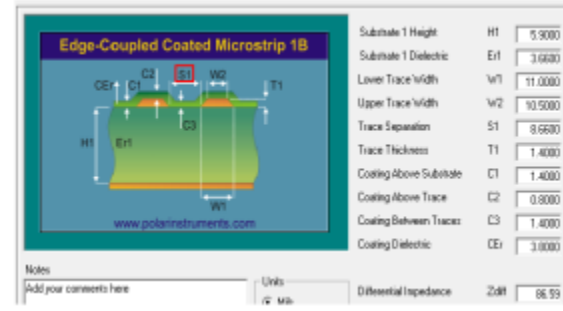
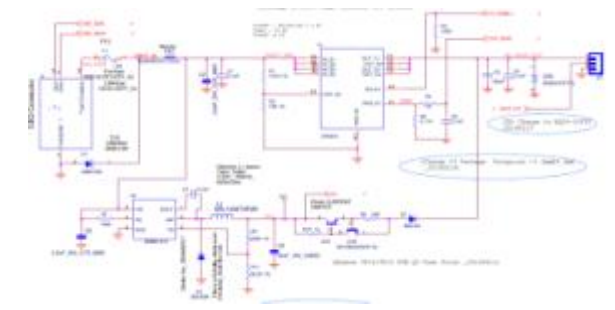
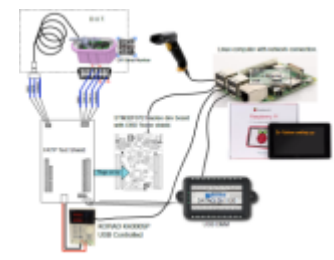
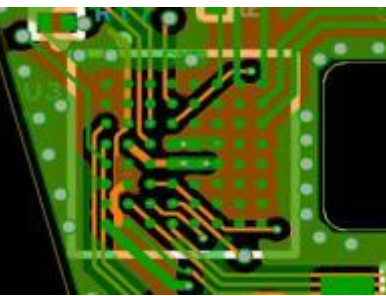
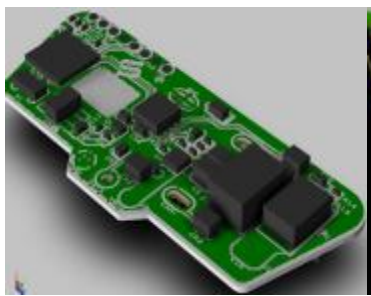
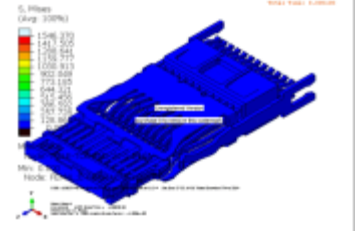
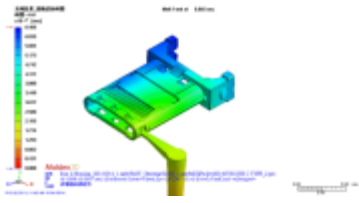
Solution & Application

Computer Aided Engineering & Verification

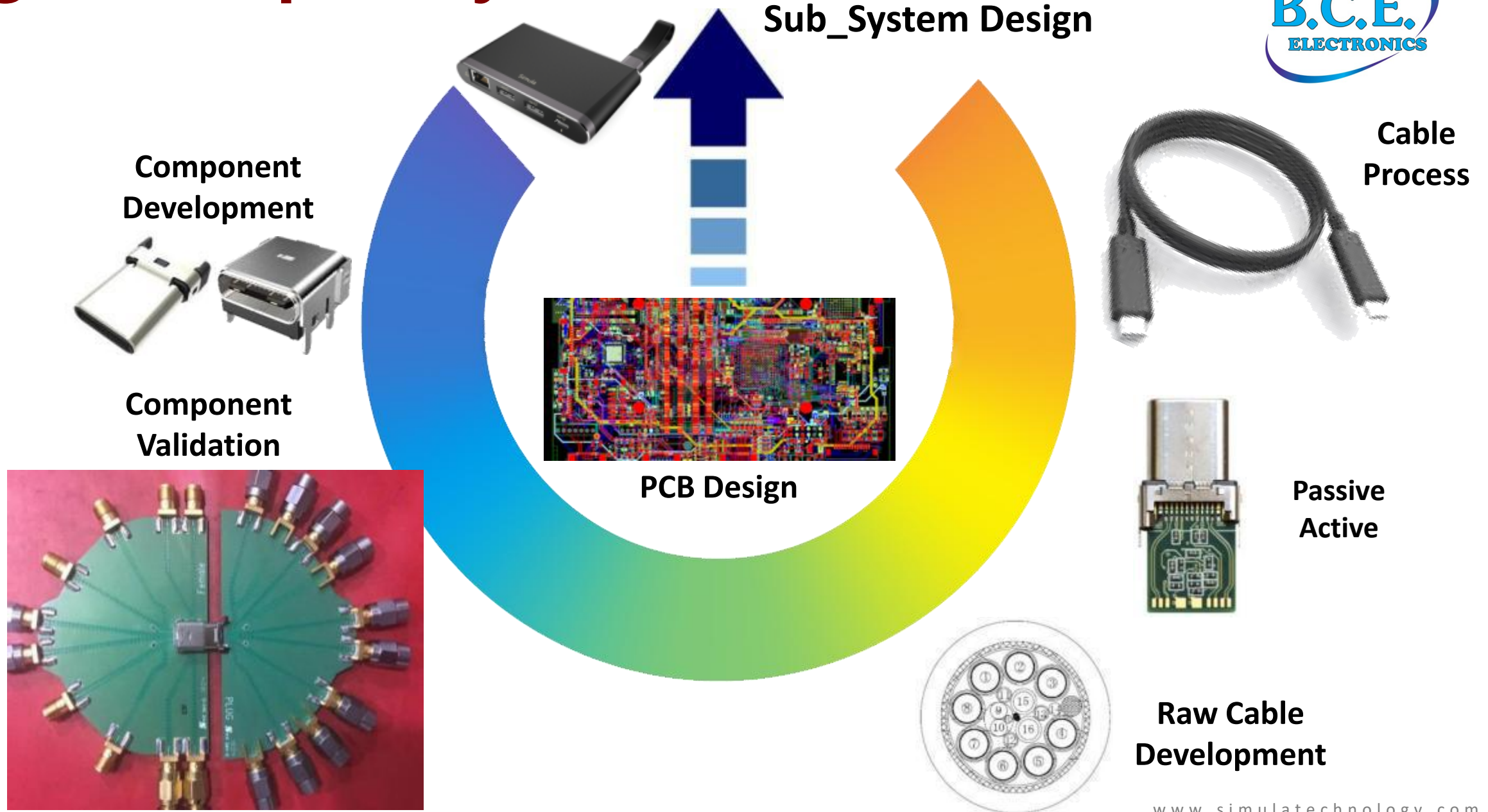
AE/EE

CKT Design

Validation & FATP



# Engineer Capability





# Engineer Capability

Connector under test



Build PCB

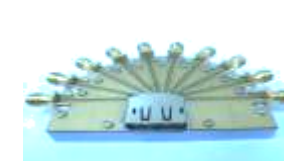


Test fixture design  
• Layout design  
• Verified by simulation



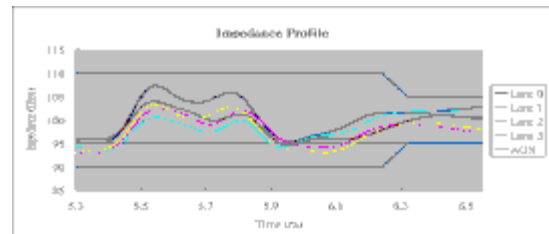
Simulation for fixture design

Fixture development



fixture

Time domain measurement



## Time-Domain Reflectometer (TDR)

- Impedance profile
- Crosstalk
- Eye-pattern

Frequency domain measurement



## Vector Network Analyzer (VNA)

- Insertion / Return Loss
- S-Parameters

# Production Capability



## China Factory\_ Vertical Integrated

### Stamping Department

Total 16 machines 50T~25T, KYORI, AIDA  
For connector cable shield, terminals  
Capacity: 112,752,000 pcs/Month



## Injection Department

Total 35 machines 50T~120T (FANUC, NIIGATA)  
include vertical machine for plastic parts and 30 cable  
molding machines. Monthly capacity: 24,888,686 pcs  
plastic parts, 5,252,000 pcs cables.



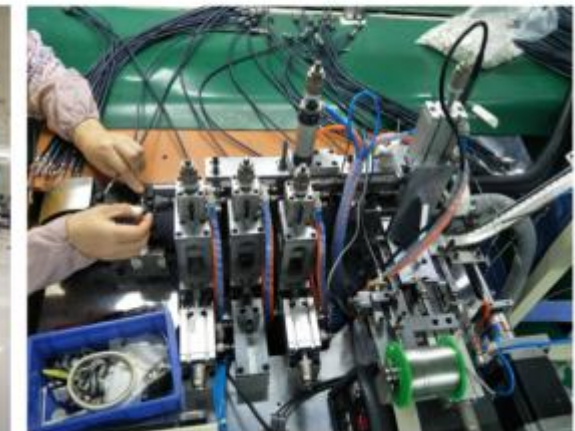
## Machining Department

Simula had over 80% in house process for new tooling build normally. Can be 100% in house when necessary to avoid long national holiday impact to schedule. (PG, Wire cutting, EDM...)







## Auto-Machine Department

Connector and cable assembly, inspection process- apply to auto-machine for over 50 set of different auto-machines and almost all machine can be change code for various P/N product.



# USB 3.2 Gen 2X2 receptacle

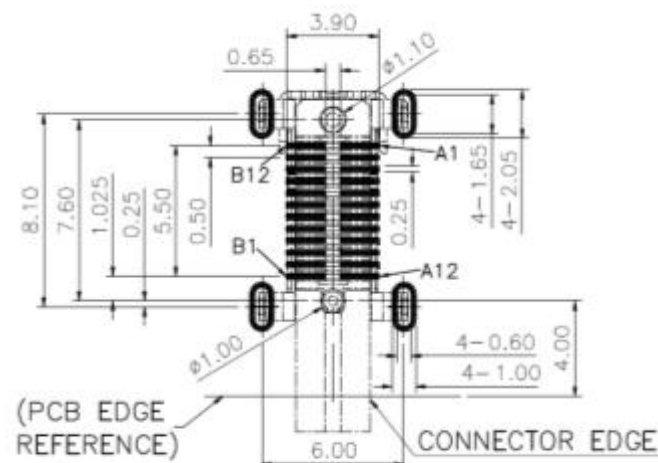
Photo	Part No	Version	Contact Gender	Orientation	Pin No.	PCB mounting	Height Above PCB(mm)	Length (mm)	GND Pin Length (mm)
	MJ8E0A-T180-412	USB 3.2	Female	Right Angle	24	Hybrid	5.20	9.4	1.85
	MJ8E0B-T280-422	USB 3.2	Female	Right Angle	24	Hybrid	3.38	9.4	1.85
	MJ8E0C-T480-412	USB 3.2	Female	Right Angle	24	Hybrid	3.38	9.4	0.9
	MJ8E0D-T360-412	USB 3.2	Female	Right Angle	24	Hybrid	3.26	9.6	0.8



NEW

# USB-C Gen 2 receptacle

(MJ8A8C-T080-40Q)



Recommend of PC Board Holes

Tolerance :  $\pm 0.05$ (Top view)

## ■ Material & Finish

- ✓ Housing Material : Nylon (Black)
- ✓ Terminal Material : Copper Alloy

## ■ Performance

- ✓ Bandwidth : USB 3.2 Gen 2
- ✓ Rated Current : 3A



NEW

# USB-C Gen 2X2 receptacle

(MJ8E0 Series)



## ■ Material & Finish

- ✓ Housing Material : Nylon (Black)
- ✓ Terminal Material : Copper Alloy

## ■ Performance

- ✓ Bandwidth : USB 3.2 Gen 2X2
- ✓ Rated Current : 5A

# Thank you!



**B.C.E. s.r.l.**

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