SPECIFICATIONS

CUSTOMER	:	
SAMPLE CODE	:	SIA128800T004ZZC06
MASS PRODUCTION CODE	:	HIA128800T004ZZC06
SAMPLE VERSION	:	01
SPECIFICATIONS EDITION	:	002
DRAWING NO. (Ver.)	:	LMD-HIA128800T004ZZC06 (Ver.002)
PACKAGING NO. (Ver.)	:	PKG-HIA128800T004ZZC06 (Ver.001)

Customer Approved

Date:

Approved	Checked	Designer
林裘中 Daniel Lin	呂清溪 Marcs Lu	黃煜庭 Yuting Huang

POWERTIP
2022.02.25
TW RD APR

☐ Preliminary specification for design input

■ Specification for sample approval

POWERTIP TECH. CORP.

Represented by:

first FC components
FIRST Components s.r.l.
www.first-components.com
technical@first-components.com
+39 0332 1888005

1. SPECIFICATIONS

1.1 Features

Hardware

CPU	RISC Processor	i.MX8M Mini Quad Cortex-A53 @ 1.6 GHz
Memory	On Board RAM	2GB LPDDR4 SDRAM
	On Board ROM	8GB eMMC Flash
	External Storage	1x Micro SD (max. 32G)
Display	Resolution	1280 (RGB) x 800 DOTS
	Display mode	Transmissive, Normally Black
	Screen Size	10.1 inch
	Touch Panel	Projected Capacitive Touch (USB)
I/O	Display Interface	1x MIPI DSI 1x LVDS
	USB	1x USB OTG 2x USB1.1/2.0 Compliant Host 1x USB1.1/2.0 in Mini-PCIe Connector
	PCI Express	1x Mini-PCIe Connector(1-lane)
	Ethernet	10/100/1000 Mbps
	Analog Audio	1 x Headphone Jack 1 x Input
	Wireless	WIFI IEEE 802.11 a/b/g/n/ac Bluetooth 4.2
	Serial	2 x UART (one for Debug Used) 4 x I2C 1 x SPI
Power Input	DC	9V ~ 24V

Software

OS	Embedded	Android / Yocto Linux

1.2 Mechanical Specifications

Item	Standard Value	Unit
Board Outline Dimension	118.5(W) x 87.5 (L) x 25.0(H) MAX	mm
Display Active Area	216.96 (W) * 135.6 (L)	mm

1.3 Absolute Maximum Ratings

Ta = 25℃

Item	Symbol	Condition	Min.	Max.	Unit
Power Supply	V_{IN}	—	-0.3	26.0	V
Operating Temperature	T_{OP}	—	-20	70	°C
Storage Temperature	T_{ST}	—	-30	80	°C
Humidity	H_D	Ta=60 °C	10	90	%RH

1.4 DC Electrical Characteristics

Ta = 25℃

Item	Symbol	Condition	Min.	Typ.	Max.	Unit
Power Supply Voltage	V_{IN}	-	9	12	24	V
Power Supply Current	I_{IN1}	V_{IN} = 12V	-	890	-	mA
IO High-Level input voltage	V_{IH}	-	0.7xV_{DD3V3}	-	V_{DD3V3}+0.3	V
IO Low-Level input voltage	V_{IL}	-	-0.3	-	0.3xV_{DD3V3}	V
IO High-Level output voltage	V_{OH}	-	-	-	3.6	V
IO Low-Level output voltage	V_{OL}	-	-0.3	-	-	V

Note 1: V_{IN} is connected to 'J4' connector.

1.5 Optical Characteristics

Ta=25°C

Item		Symbol	Condition	Min.	Typ.	Max.	unit	-
Response time		Tr + Tf	-	-	25	50	ms	Note2
Viewing angle	Top	θY+	CR ≥ 10	-	85	-	Deg.	Note4
	Bottom	θY-		-	85	-		
	Left	θX+		-	85	-		
	Right	θX-		-	85	-		
Contrast ratio		CR	-	600	800	-	-	Note3
Color of CIE Coordinate （With B/L and TP）	White	X	IF= 20mA	0.26	0.31	0.36	-	Note1
		Y		0.30	0.35	0.40		
	Red	X		0.55	0.60	0.65		
		Y		0.29	0.34	0.39		
	Green	X		0.27	0.32	0.37		
		Y		0.54	0.59	0.64		
	Blue	X		0.10	0.15	0.20		
		Y		0.11	0.16	0.21		
Average Brightness Pattern=white display （With B/L and TP）		IV	IF= 20mA	700	800	-	cd/m^2	
Luminance Uniformity		YU	-	70	-	-	%	

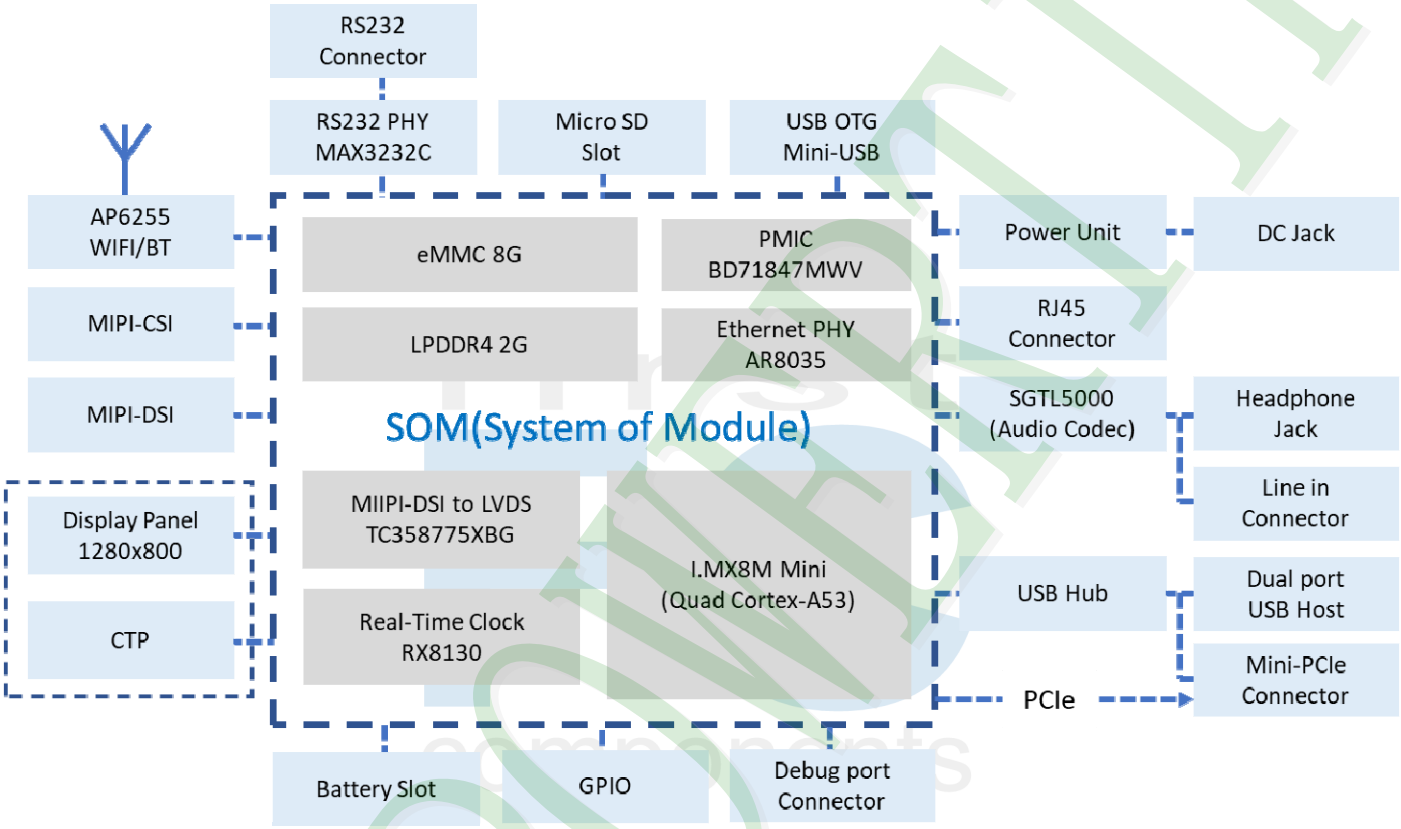
2. MODULE STRUCTURE

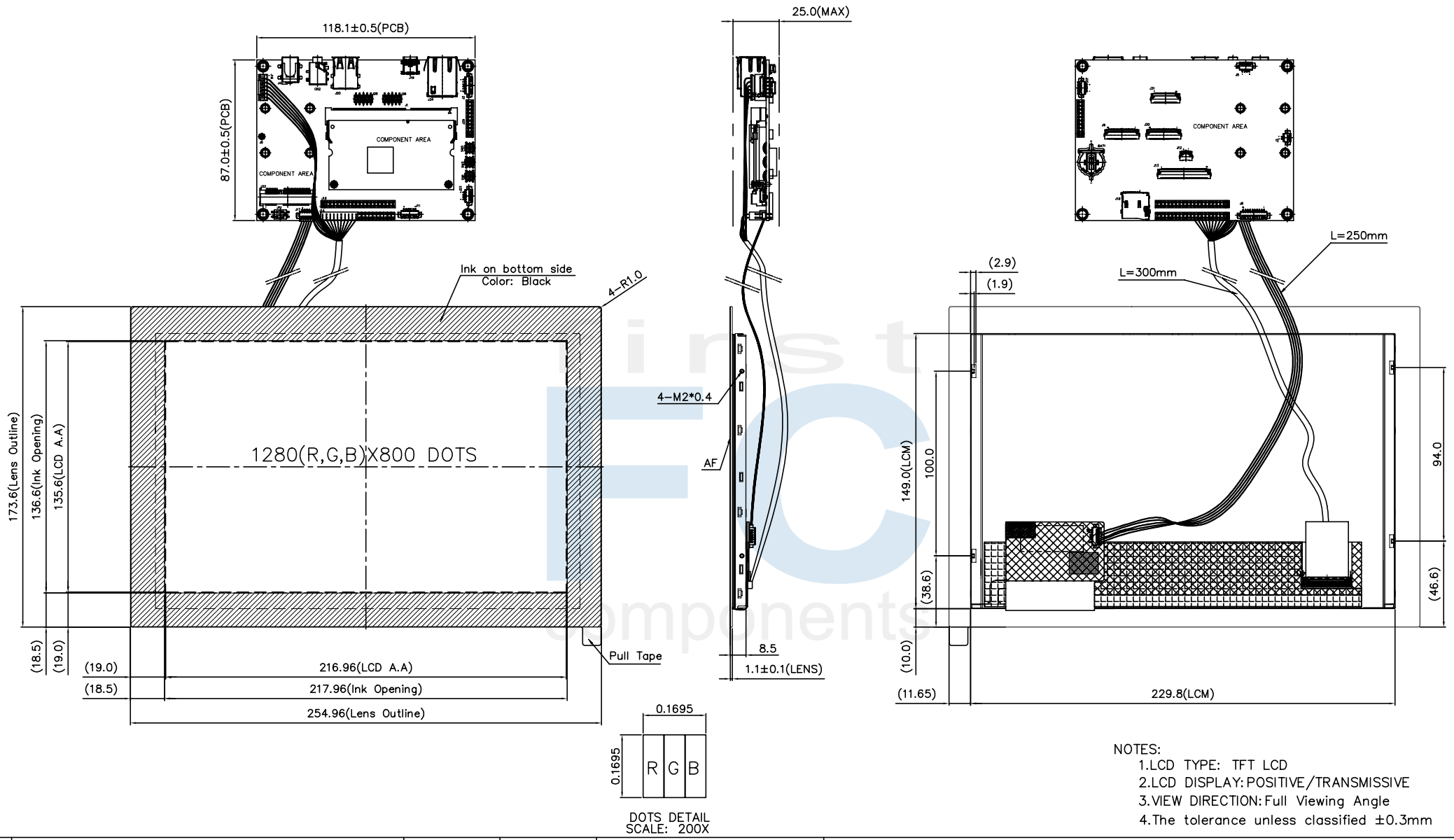
2.1 Counter Drawing

2.1.1 LCM Mechanical Diagram

* See Appendix

2.1.2 Block Diagram





NOTES:
1. LCD TYPE: TFT LCD
2. LCD DISPLAY: POSITIVE/TRANSMISSIVE
3. VIEW DIRECTION: Full Viewing Angle
4. The tolerance unless classified ±0.3mm

REV	REV BY	REVISER	DATE
007			
006			
005			
004			
003			
002	REMOVE J7、J10、J27	Nini	2021/12/14
001	NEW DRAWING	Nini	2021/05/05

PART NO: HIA128800T004ZZC06

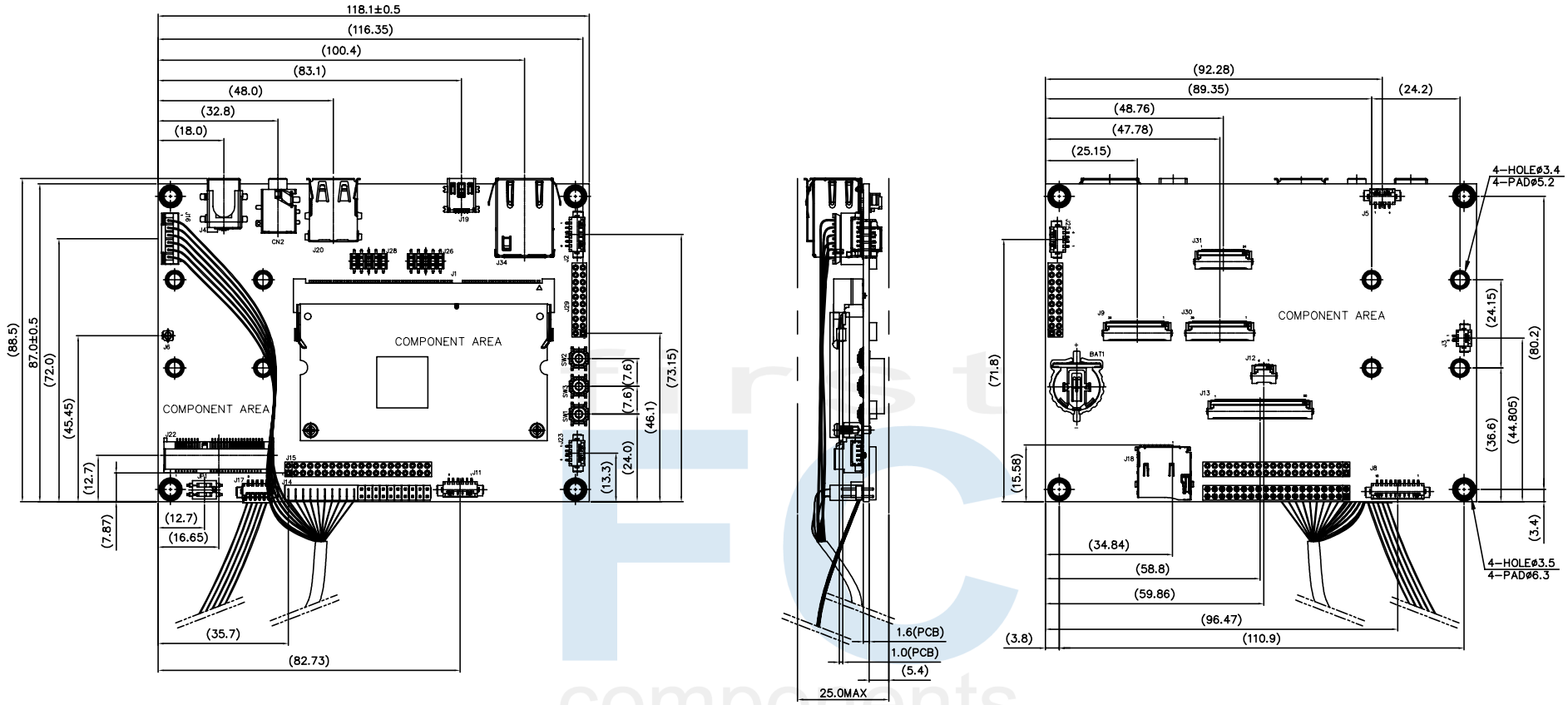
DRAWING NAME : LMD-HIA128800T004ZZC06

TITLE: LCD MODULE DRAWING

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Design	Nini Chen	(3)	Surface		
Check	Marcs Lu	Unit	MM	Material	
Approve	Daniel Lin	Scale	FIT	Thickness	
		Page	1/2	Quantity	

Length(Min) (mm) \ Tolerance \ Precision	Level
1 ~ 4	-
4 ~ 16	-
16 ~ 63	-
63 ~ 250	-
250 ~ 1000	-



Detail SBC Board
Scale 1X

NOTES:

5. The tolerance unless classified ±0.2mm
6. J2 ,J11: Molex 532610671 or Compatible
7. J3: Molex 532610271 or Compatible
8. J5 ,J23 ,J25: Molex 532610471 or Compatible
9. J8: Molex 532611071 or Compatible
10. J9 ,J30: OMRON XF2M-3015-1A or Compatible
11. J12: OMRON XF2M-0615-1A or Compatible
12. J13: OMRON XF2M-5015-1A or Compatiblele
13. J16: Molex 894000610 or Compatible
14. J17: Molex 532610571 or Compatible
15. J31: OMRON XF2M-2415-1A or Compatiblele

REV	REV BY	REVISER	DATE
007			
006			
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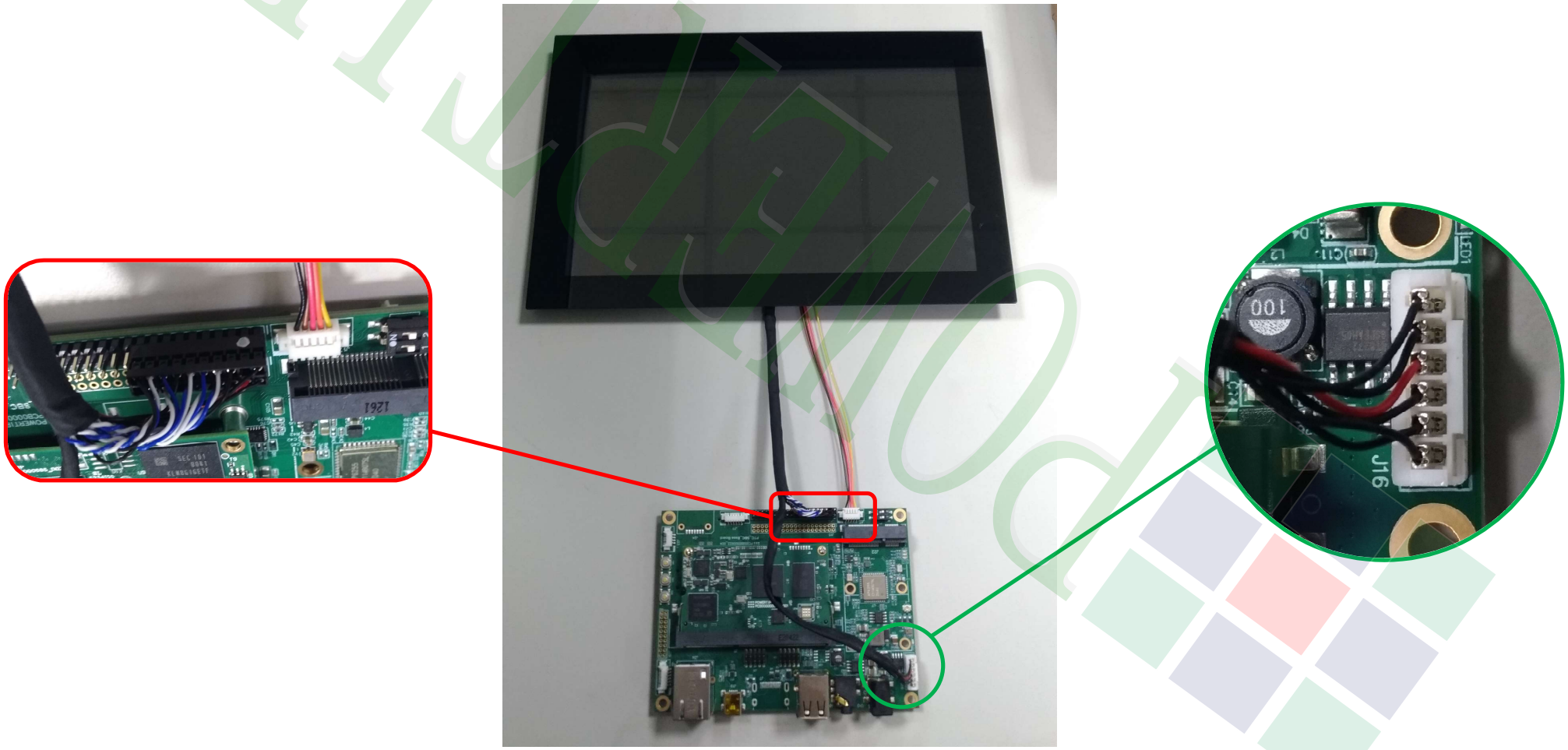
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Design	Nini Chen	(3)	Surface		
Check	Marcs Lu	Unit	MM	Material	
Approve	Daniel Lin	Scale	FIT	Thickness	
		Page	2/2	Quantity	

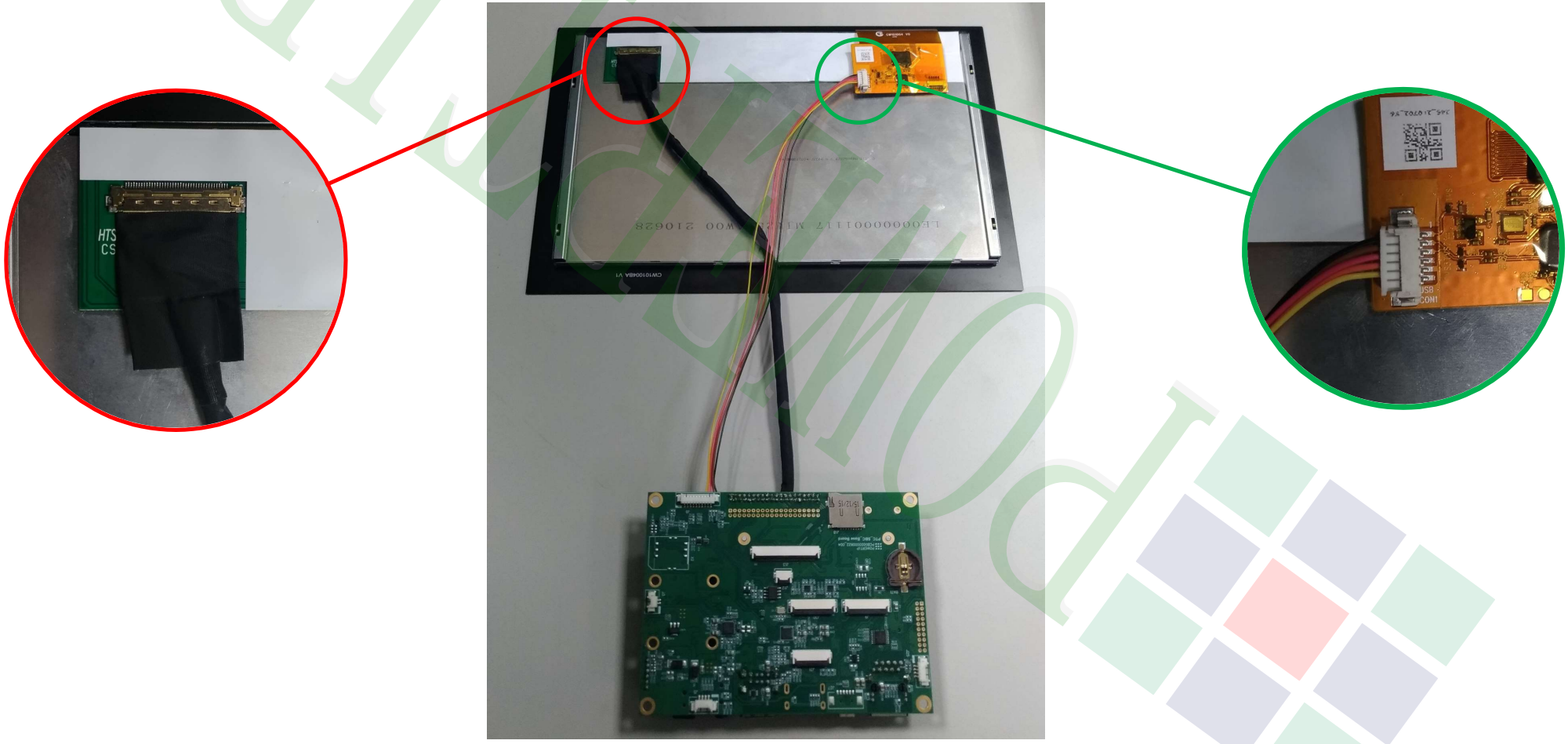
Length(Min) (mm) \ Tolerance \ Precision	Level
1 ~ 4	-
4 ~ 16	-
16 ~ 63	-
63 ~ 250	-
250 ~ 1000	-

HIA128800T004ZZC06 Assembly Guide (TOP)



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HIA128800T004ZZC06 Assembly Guide (BOTTOM)



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