SMART DISPLAY SPECIFICATION



WINSTAR Display Co.,Ltd.

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SPECIFICATION

CUSTOMER : Winstar

MODEL NO. : WWSSDEMOBOX-03#

APPROVED BY: (FOR CUSTOMER USE ONLY)	

SALES BY	APPROVED BY	CHECKED BY	PREPARED BY
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VERSION	DATE	REVISED PAGE NO.	SUMMARY
0	2025/12/19		First issue

RECORDS OF REVISION			**DOC. FIRST ISSUE**
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1. Summary

WWSSDEMOBOX-03# Features

1. Support 5V~28V power supply input.
2. 8 set of GPIO (input/output) or support 8 set of drive.
3. 8 set of button.
4. 8 set of LED.
5. With power jack.
6. Compatible for Smart Display RS485 with GIPO housing series.

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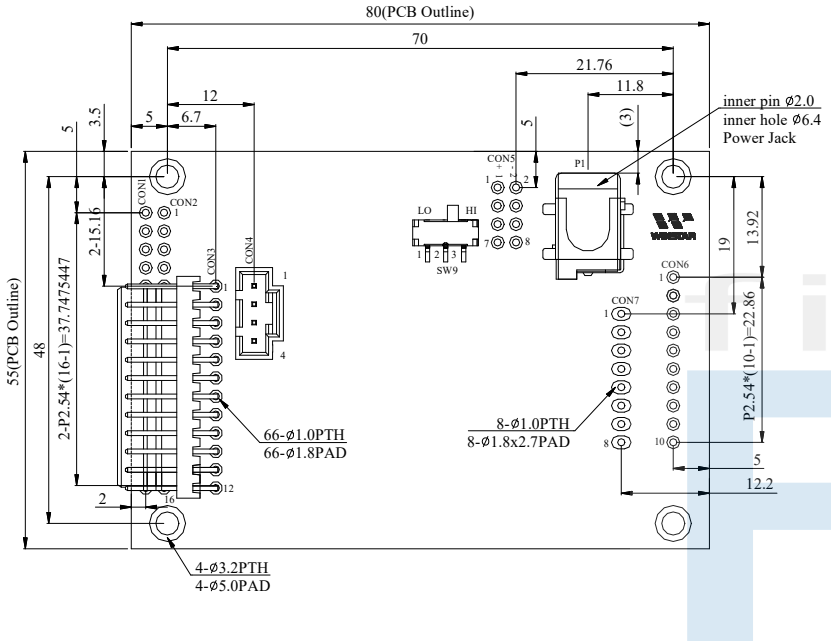
2. Product information

General information

Item	Standard Value	Unit
Operating voltage	5V~28V dynamic	Vdc
Module dimension	80(W) x 55(H) x 13.5(D)	mm

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3. Contour Drawing



CON1 / CON2	
PIN	SYMBOL
1	+3V3
2	SWCLK
3	GND
4	SWDIO
5	NRST
6	GND
7	WKUP
8	BOOT0
9	IO_0
10	IO_1
11	IO_2
12	IO_3
13	IO_4
14	IO_5
15	IO_6
16	IO_7

CON3	
PIN	SYMBOL
1	VIN
2	GND
3	SIGI
4	SIG2
5	IO_0
6	IO_1
7	IO_2
8	IO_3
9	IO_4
10	IO_5
11	IO_6
12	IO_7

CON4	
PIN	SYMBOL
1	VIN
2	GND
3	SIGI
4	SIG2

CON5			
PIN	SYMBOL	PIN	SYMBOL
1	VIN	2	GND
3	VIN	4	GND
5	VIN	6	GND
7	VIN	8	GND

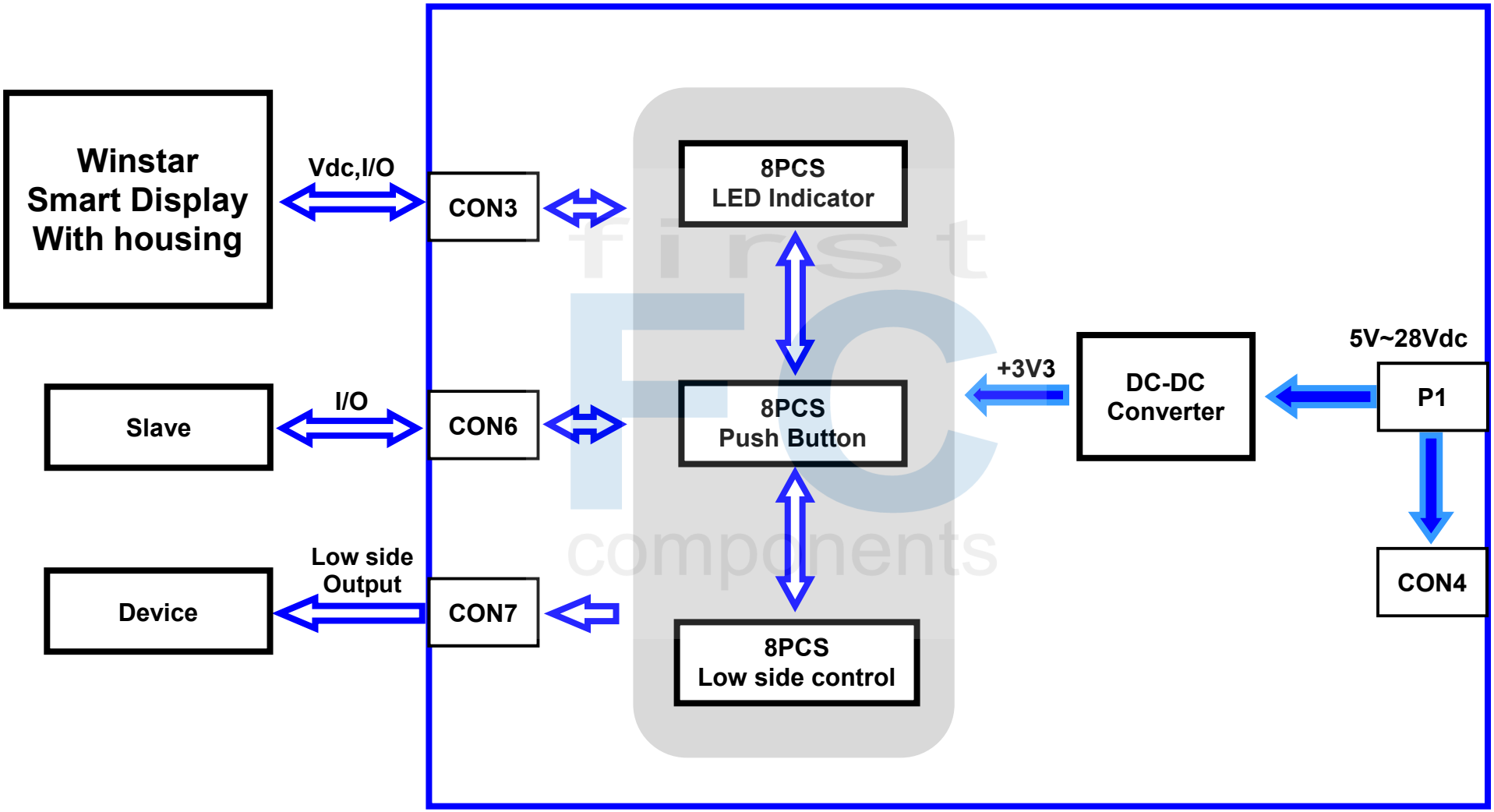
CON6	
PIN	SYMBOL
1	Vref
2	GND
3	SG_0
4	SG_1
5	SG_2
6	SG_3
7	SG_4
8	SG_5
9	SG_6
10	SG_7

CON7	
PIN	SYMBOL
1	OUT_0
2	OUT_1
3	OUT_2
4	OUT_3
5	OUT_4
6	OUT_5
7	OUT_6
8	OUT_7

The non-specified tolerance of dimension is ±0.3mm.

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4.Block diagram



5. Interface

CON1 / CON2 definition: (for smart display module)

Pin	Symbol	Function	Remark
1	+3V3	3.3V power for JTAG interface	
2	SWCLK	CLK pin for JTAG interface	
3	GND	GND for JTAG interface	
4	SWDIO	Data pin for JTAG interface	
5	NRST	Reset pin for JTAG interface	
6	GND	Power GND	
7	WKUP	For Smart display weak up pin	
8	BOOT0	For Smart display Boot control	
9	IO_0	I/O signal below 3.3V	I/O
10	IO_1	I/O signal below 3.3V	I/O
11	IO_2	I/O signal below 3.3V	I/O
12	IO_3	I/O signal below 3.3V	I/O
13	IO_4	I/O signal below 3.3V	I/O
14	IO_5	I/O signal below 3.3V	I/O
15	IO_6	I/O signal below 3.3V	I/O
16	IO_7	I/O signal below 3.3V	I/O

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CON3 definition: (for smart display with housing)

Pin	Symbol	Function	Remark
1	VIN	Power VIN 5~28V	
2	GND	Power GND	
3	SIG1	For Smart display communication pin RS485_A	
4	SIG2	For Smart display communication pin RS485_B	
5	IO_0	I/O signal below 3.3V	I/O
6	IO_1	I/O signal below 3.3V	I/O
7	IO_2	I/O signal below 3.3V	I/O
8	IO_3	I/O signal below 3.3V	I/O
9	IO_4	I/O signal below 3.3V	I/O
10	IO_5	I/O signal below 3.3V	I/O
11	IO_6	I/O signal below 3.3V	I/O
12	IO_7	I/O signal below 3.3V	I/O

CON4 definition:

Pin	Symbol	Function	Remark
1	VIN	Power VIN 5~28V	
2	GND	Power GND	
3	SIG1	For Smart display communication pin	I/O
4	SIG2	For Smart display communication pin	I/O

CON5 definition:

Pin	Symbol	Function	Remark
1	VIN	Power VIN 5~28V	
2	GND	Power GND	
3	VIN	Power VIN 5~28V	
4	GND	Power GND	
5	VIN	Power VIN 5~28V	
6	GND	Power GND	
7	VIN	Power VIN 5~28V	
8	GND	Power GND	

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CON6 definition:

Pin	Symbol	Function	Remark
1	Vref	Slave device I/O reference voltage input	Input
2	GND	Power GND	
3	IO_0	I/O signal flow reference level input	I/O
4	IO_1	I/O signal flow reference level input	I/O
5	IO_2	I/O signal flow reference level input	I/O
6	IO_3	I/O signal flow reference level input	I/O
7	IO_4	I/O signal flow reference level input	I/O
8	IO_5	I/O signal flow reference level input	I/O
9	IO_6	I/O signal flow reference level input	I/O
10	IO_7	I/O signal flow reference level input	I/O

CON7 definition:

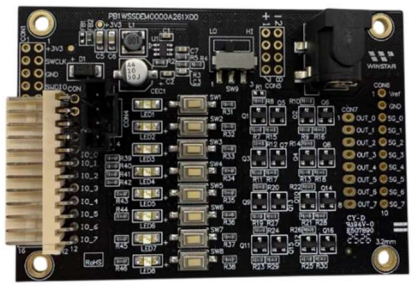
Pin	Symbol	Function	Remark
1	OUT_0	Low side control of device.	Output
2	OUT_1	Low side control of device.	Output
3	OUT_2	Low side control of device.	Output
4	OUT_3	Low side control of device.	Output
5	OUT_4	Low side control of device.	Output
6	OUT_5	Low side control of device.	Output
7	OUT_6	Low side control of device.	Output
8	OUT_7	Low side control of device.	Output

P1 definition:

Pin	Symbol	Function	Remark
1	VIN	Power VIN 5~28V	
2	GND	Power GND	

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6. Checking list



GPIO Board



Cable
(CB050029121XXXXXXX00)



RS485 Dongle



4 PIN to 2PIN Short Cable



USB to type C cable

-Please prepare power adapter (5~28V)

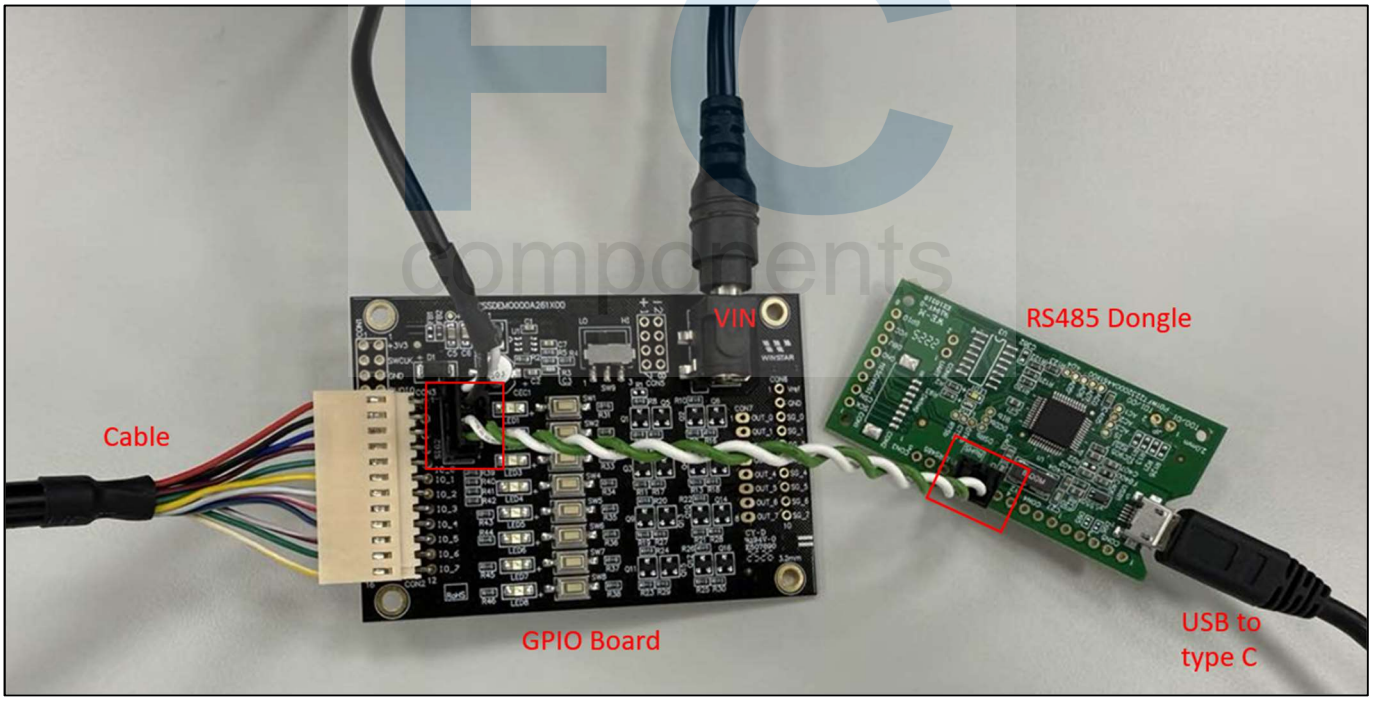
7. Connection

Steps for hardware connection

1. Connect and screw up the housing with cable.



2. Connect the GPIO board, short cable, RS485 Dongle, USB to type C cable, and power adapter as below photo.



3. Power on