華凌光電股份有限公司
WINSTAR WINSTAR Display Co., Ltd.

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SMART DISPLAY SPECIFICATION



Think good, Do good, Be good !

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WINSTAR WINSTAR Display Co., Ltd.

SPECIFICATION

CUSTOMER	WINSTAR
MODEL NO.	WWSSDEMOBOX-02#
CURRENT VERSION	0
RELEASE DATE	2026/06/01

SALES BY	APPROVED BY	CHECKED BY	PREPARED BY

APPROVED BY: **(FOR CUSTOMER USE ONLY)**	

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RECORDS OF REVISION

VERSION	DATE	REVISED PAGE NO.	SUMMARY
0	2026/06/01		First issue
A			
B			
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1. Summary

WWSSDEMOBOX-02# 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 UART with GIPO housing series.

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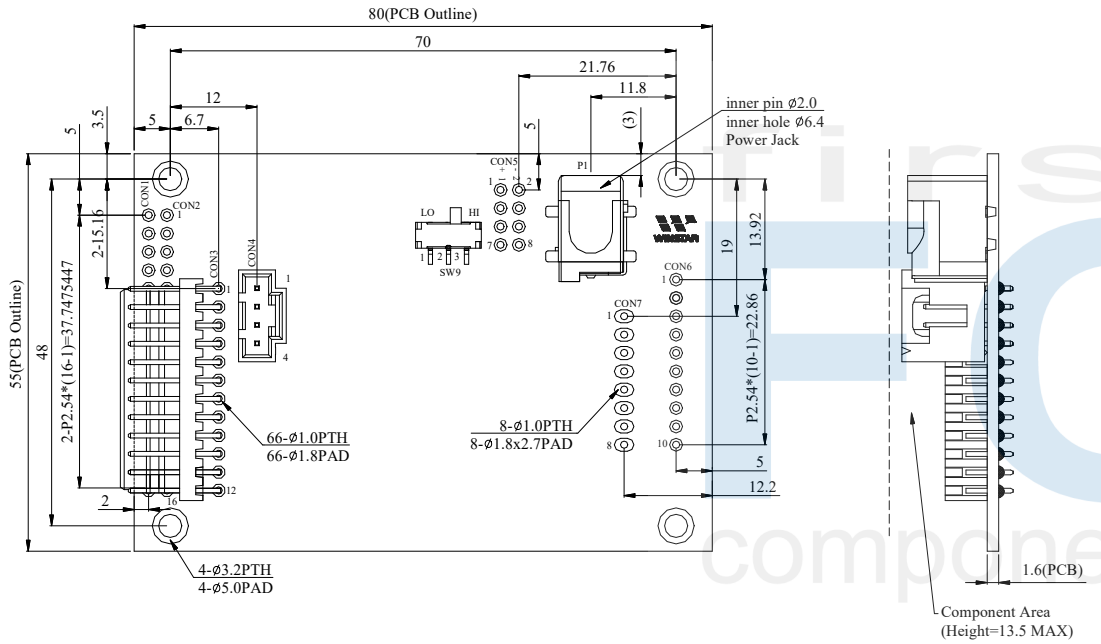
2. Product Information

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

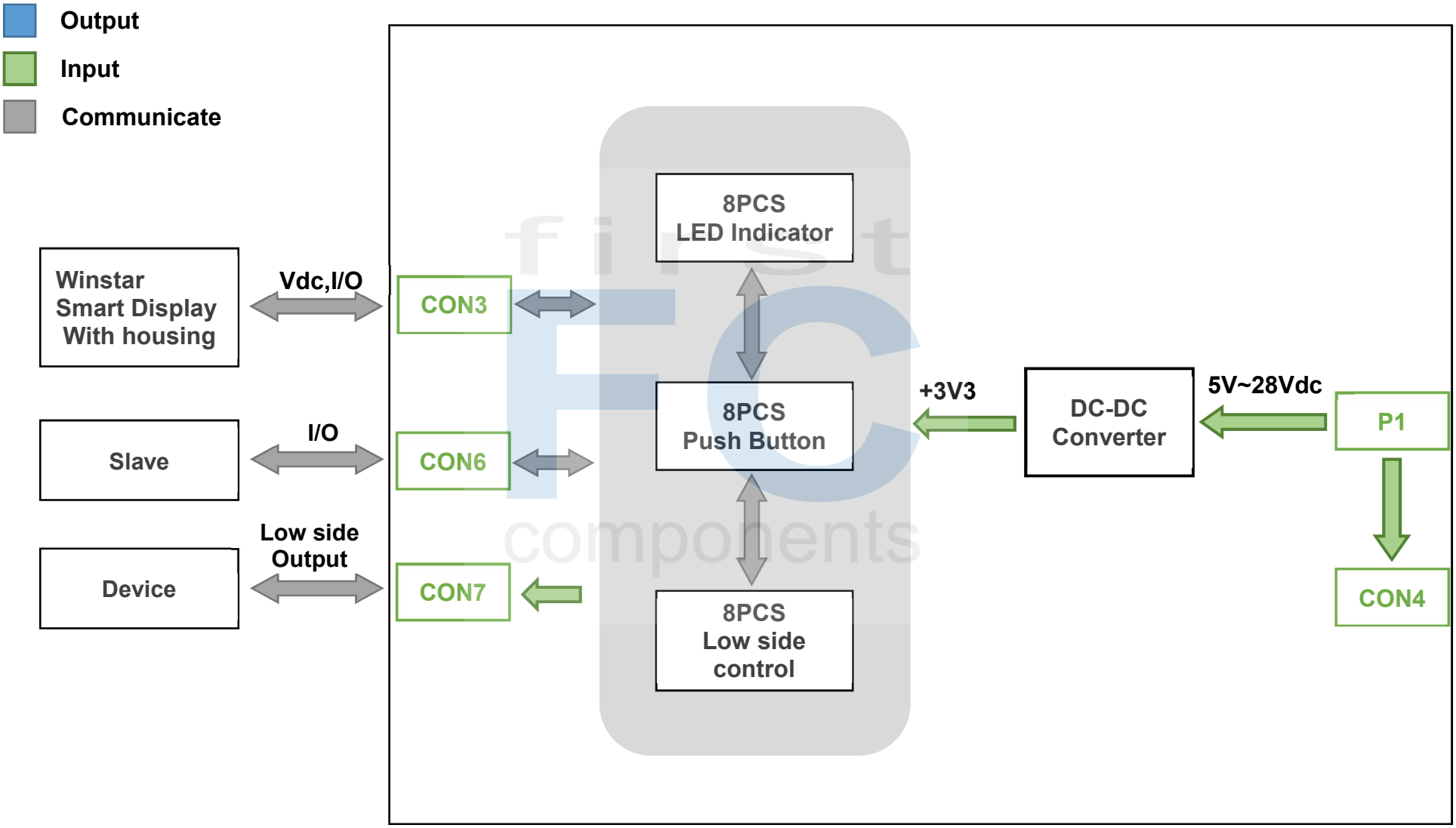
CON6	
PIN	SYMBOL
1	Vref
2	GND
3	SG_0
4	SG_1
5	SG_2
6	SG_3
7	SG_4
8	SG_5
9	SG_6
10	SG_7

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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8. Block Diagram



5. Interface

CON1/ CON2 definition:

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 wake 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:

Pin	Symbol	Function	Remark
1	VIN	Power VIN 5~28V	-
2	GND	Power GND	-
3	SIG1	For Smart display communication pin UART_TX	-
4	SIG2	For Smart display communication pin UART_RX	-
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

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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:

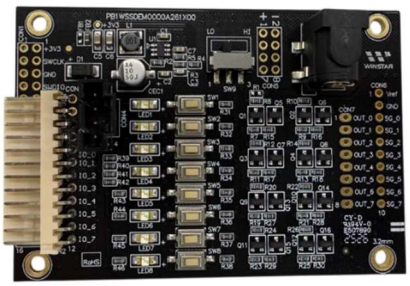
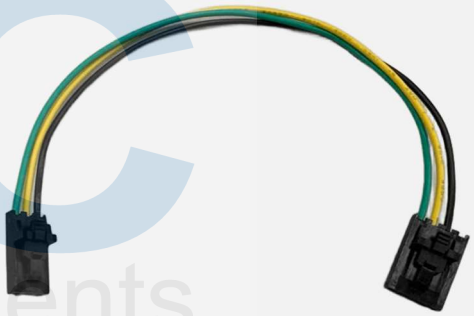
Pin	Symbol	Function	Remark
1	OUT_0	Low side control of device.	Output
2	OUT_1	Low side control of device.	Output
3	OUT_2	Low side control of device.	Output
4	OUT_3	Low side control of device.	Output
5	OUT_4	Low side control of device.	Output
6	OUT_5	Low side control of device.	Output
7	OUT_6	Low side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

 GPIO Board	 Cable (CB050029121XXXXXXX00)
 UART Dongle	 4 PIN to 3PIN Short Cable
 Mini USB to USB Cable	

-Please prepare power adapter (5~28V)

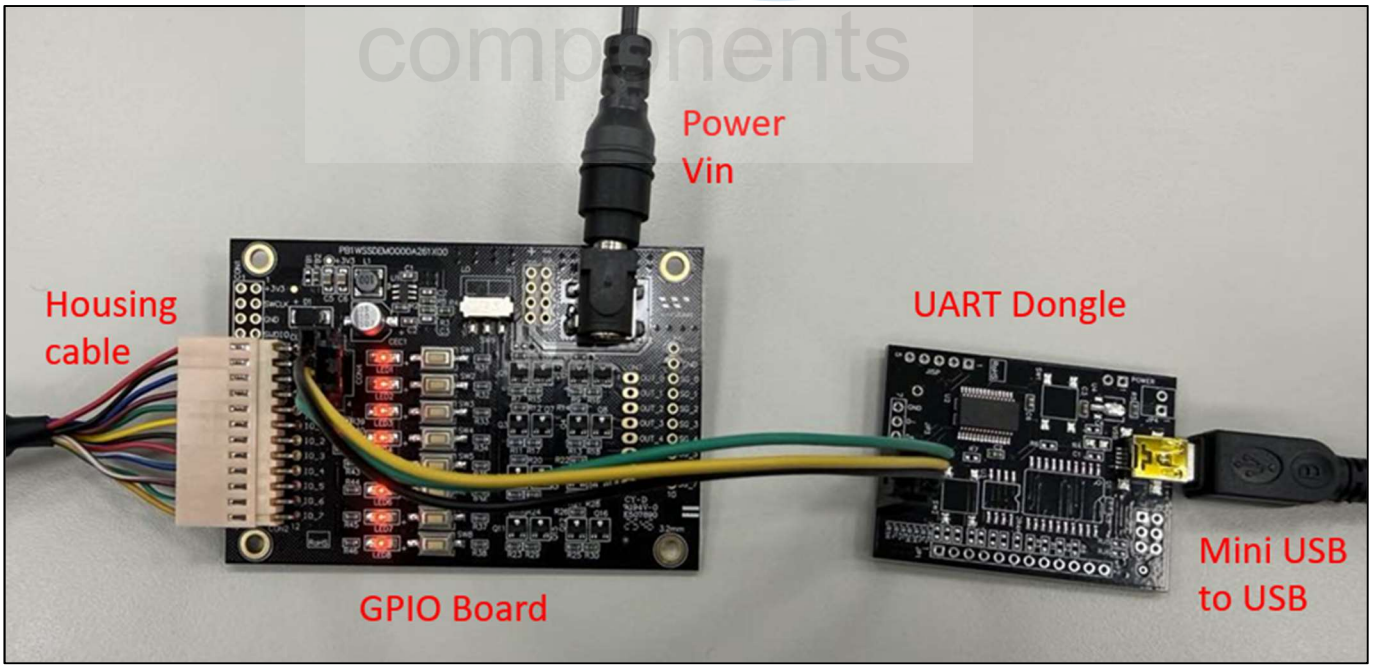
7. Connection

Steps for hardware connection

1. Connect and screw up the housing with cable.



2. Connect the GPIO board, short cable, UART Dongle, Mini USB to USB Cable, and power adapter as below photo.



3. Power on