SMART DISPLAY SPECIFICATION



WINSTAR Display Co.,Ltd.
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SPECIFICATION

MODEL NO. : WL0F00101000JGAAASA00-FC

Summary

10.1 Inch Smart Display (CAN series) Features

1. +12V power supply input, the power consumption is around 6W.
2. Self testing after booting function.
3. CAN bus communication interface.
4. Support CANopen negotiation. Default baud rate is 250KB.
5. Built in flash memory, store the font and Object Dictionary Data.
6. Support capacitive touch panel (CTP).
7. Smart Display scenario is slave device display and action from Master Device instruction.
8. Embedded buzzer controlled by Master Device.
9. Demo set HOST can be used on multiple platforms, such as Computer (with USB to CAN Dongle), MCU, Raspberry Pi (with PiCAN2).

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Product information

Mechanical Data

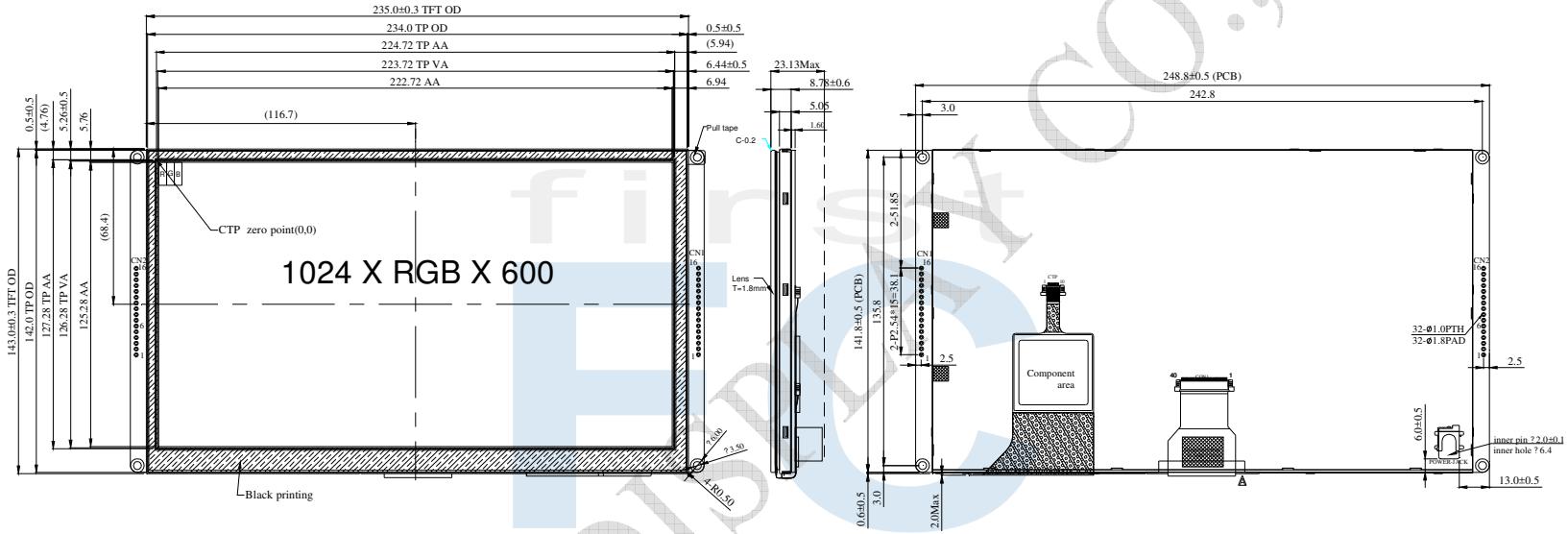
Item	Standard Value	Unit
LCD panel	235(W) x 143(H) x 8.78(D)	mm
PCB	248.8(W) x 143(H) x 1.6(D)	mm
Housing outline	NA	mm

General information

Item	Standard Value	Unit
Operating voltage	12	Vdc
Communication Interface	CAN bus differential ± 3.3	Vpp
MCU	STM32F746	N/A
Flash Memory	16	MB
SDRAM Frequency	166	MHz
LCD display size	10.1	inch
Dot Matrix	1024 x RGBx600(TFT)	dot
Module dimension	235(W) x 143(H) x 8.78(D)	mm
Active area	222.72 (H) x 125.28(V)	mm
Dot pitch	0.2175(W) x 0.2088(H)	mm
LCD type	LED, Normally White	
View Direction	85/85/85/85	
Aspect Ratio	16:9	
Touch Panel	Projected Capacitive Touch Screen (PCAP)	
Surface	Glare	

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Contour Drawing



CN2

PIN	SYMBOL
1	VDD3V
2	JTAG_SWCLK
3	GND
4	JTAG_SWDIO
5	NRST
6	GND
7	BOOT
8	BOOT0
9	PA5
10	PA6
11	PA7
12	PA8
13	NC
14	NC
15	PA11
16	PA12

CN1

PIN	SYMBOL
1	12V
2	GND
3	CAN_High
4	CAN_Low
5	GND
6	GND
7	NC
8	NC
9	NC
10	RX
11	TX
12	GND
13	5V
14	RS485_B
15	RS485_A
16	GND

POWER JACK

PIN	SYMBOL
1	12V
2	GND
3	NC

2 (GND) — 1 (5V)

1	Lcd Type	TFT
2	Viewing Angle	85/85/85/85
3	Surface	Glare
4	Screen size	10.1"(diagonal)
5	Display format	1024 x RGB x 600
6	Operating Temperature	-20℃ ~70℃
7	Storage Temperature	-30℃ ~80℃
8	Active area	222.72(H) x 125.28(V) mm
9	Pixel pitch	0.2175(H) x 0.2088(V) mm
10	Color arrangement	RGB-STRIPE
11	Brightness	300min. 400typ. cd/m2
12	CTP Driver IC	ILI2511 or equivalent

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

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Absolute Maximum Ratings

Item	Symbol	Min	Typ	Max	Unit
Operating Temperature	TOP	-20	—	+70	℃
Storage Temperature	TST	-30	—	+80	℃

Electrical Characteristics

Item	Symbol	Condition	Min	Typ	Max	Unit
Supply Voltage	VCC	—	11.4	12	12.6	V
Supply LCM current	I(mA)	-	-	435	-	mA

BOM

Item	Description	Remark
LCM	WF101-1024600JL#0P8-FC	
PCBA	SV100101000JA00N0100	

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Interface

CON1 definition:

Pin	Symbol	Function	Remark
1	+12V	Power supply12V input	Power
2	GND	Power supply GND input	Power
3	CAN_High	CAN bus D+	I/O
4	CAN_Low	CAN bus D-	I/O
5	GND	Power supply GND input	Power
6	GND	Power supply GND input	Power

CON2 definition:

Pin	Symbol	Function	Remark
1	VDD3V	3.3V power for JTAG interface	_
2	JTAG_SWCLK	CLK pin for JTAG interface	_
3	GND	GND for JTAG interface	_
4	JTAG_SWDIO	Data pin for JTAG interface	_
5	NRST	Reset pin for JTAG interface	_
6	GND	GND	_

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Display Usage

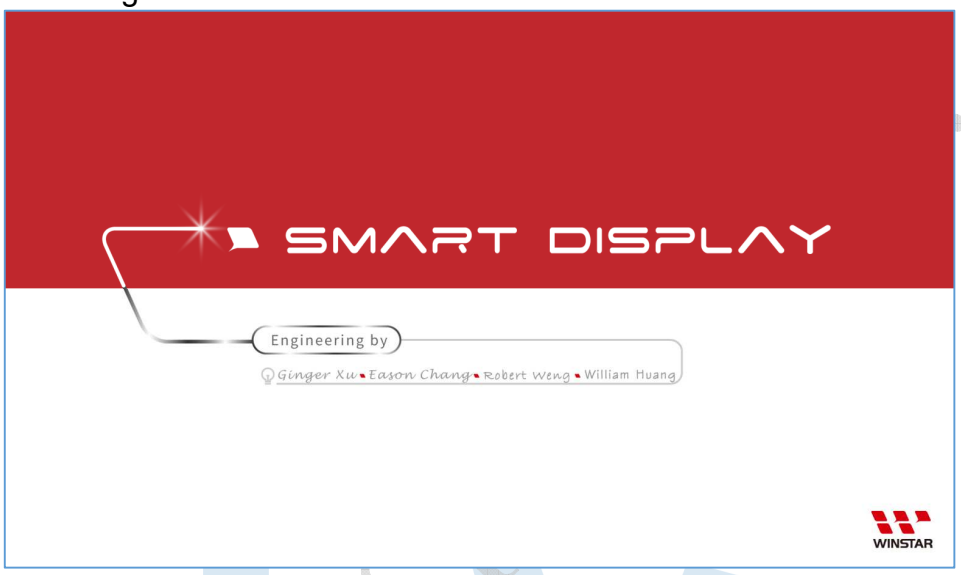
Functional description

Smart Display can be used to display the coordinate, status and data information provided by the connected HOST device. Customers can configure the position coordinates they want to display in normal operation mode (Node ID = 0x7B).

The Display is designed to be easily connected to a controller network, and to operate with minimum setup or knowledge of the SDO configuration on the controllers.

Splash Screen

The default splash image is shown below.



✓ This product is produced as a generic product. If you require a custom splash image for your application, contact us to discuss.

Default Selection

Press the preferred application and hold for 3 seconds for the first time power on.



Acquisition of Displayed Data

The Smart Display can acquire the data that it displays by using the CANopen SDO protocol.

On Pre-operational mode, customers can set the coordinates of objects through SDO; On operational mode, customers can send data of objects through SDO.

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Configuring the Display
Winstar Smart Display CAN series offers an out-of-the-box CANopen development experience that will lower customers' development costs and speed time-to-market expectations.

The Smart Display can use wide-temperature are designed to support control applications in harsh operating conditions, which designed to be connected to a variety of different situation combinations, such as automotive, marine, power generation and oil-and-gas.

The Smart Display comes with standard UI objects to get customers project off the ground quickly. If customers need custom UI objects support, our engineers are here to help. Send over your contents in PNG/JPG format, we will send over a new set of UI objects within 3~5 working days.

The Smart Display is defined as a slave device, which is controlled by master device via CAN bus command to render display content on the display screen and return touch event data with protocol objects.

Example Screen Layout (Industry application)

Example Layout
The screen layout described in this section is intended to demonstrate the settings of screen items that can be used in an industry application situation.



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Example Screen Layout (Vehicle automotive)

Example Layout

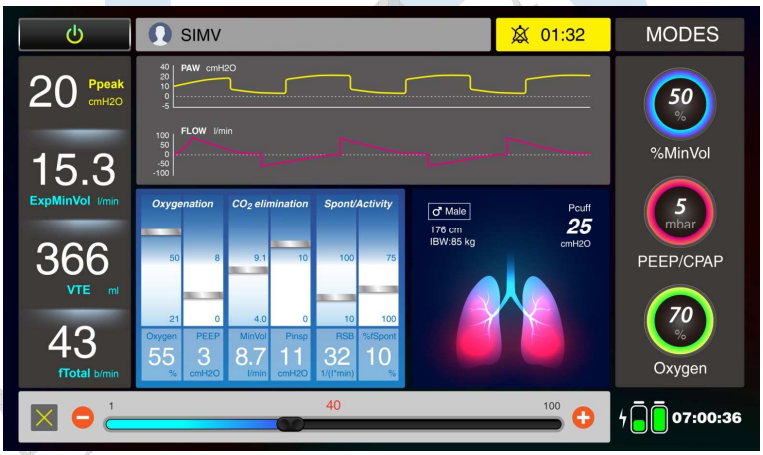
The screen layout described in this section is intended to demonstrate the settings of screen items that can be used in a vehicle automotive situation.



Example Screen Layout (Medical application)

Example Layout

The screen layout described in this section is intended to demonstrate the settings of screen items that can be used in a Medical application situation.



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