

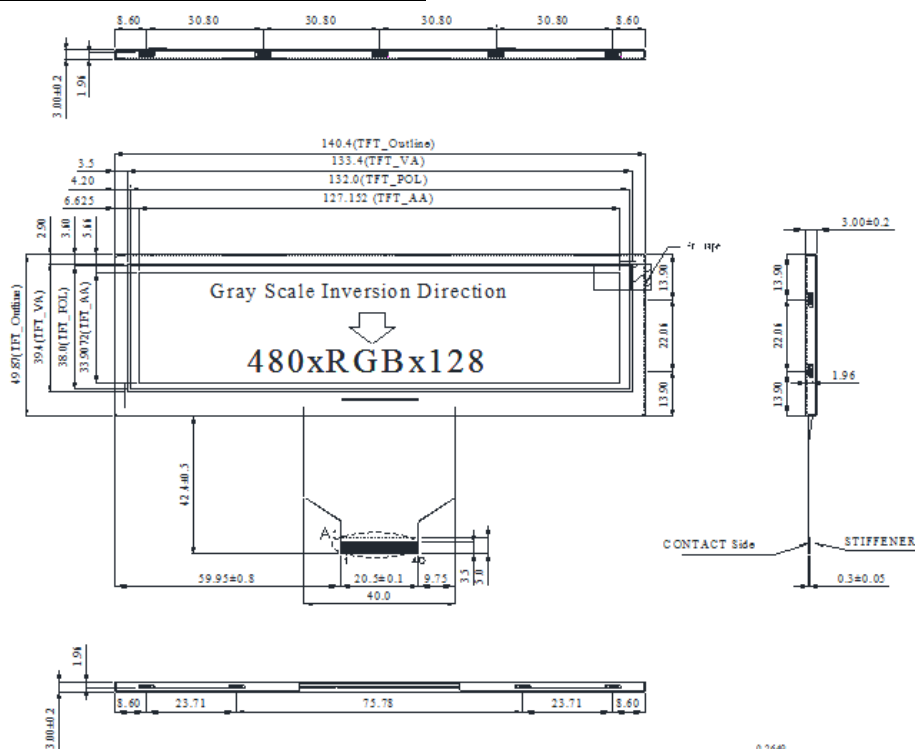
Oct., 2016

Product Introduction - 5.2" TFT WF52A with O Film Technology

Winstar Display released a series of bar type 5.2" TFT LCD display; it's a new size and resolution of TFT displays resolution which exclusively offered by Winstar. This 5.2 inch bar type TFT WF52A LCD display offers high quality and colorful image made of resolution 480x128 pixels; it is especially suitable for industrial equipment & automotive applications, server system, POS system, dynamic information displays, audio system and advertising display.

WF52ATZASDNN0 is having module dimension of 140.4 x 49.87 mm and Active Area of 127.152 x 33.9072 which with the same size as WF52ATLASDNN0 but having wider viewing angle. This TFT display is featured with O-Film on panel having the advantages of wider viewing angle of Left: 75 / Right: 75 / Up: 75 / Down: 75 degree (typical). WF52ATLASDNN0 is built in with ST7252 or equivalent driver IC; it supports RGB 24 bits parallel interface SYNC mode. This TFT LCD WF52A module can be operating at temperatures from -20°C to +70°C; its storage temperatures range from -30°C to +80°C.

Item-WF52ATZASDNN0	Dimension- with O Film
Size	5.2 inch
Dot Matrix	480 x RGBx128
Module dimension	140.4 x 49.87 x 3.0 mm
Active area	127.152 x 33.9072 mm
Dot pitch	0.0883 x 0.2649 mm
LCD type	TFT, Normally White, Transmissive
View Direction	6 o'clock
Gray Scale Inversion Direction	12 o'clock
Aspect Ratio	7:2
Backlight Type	LED, Normally White
Driver IC	ST7252 or equivalent
Interface	RGB 24bit
Touch Panel	CTP option (Under development)
Surface	Glare

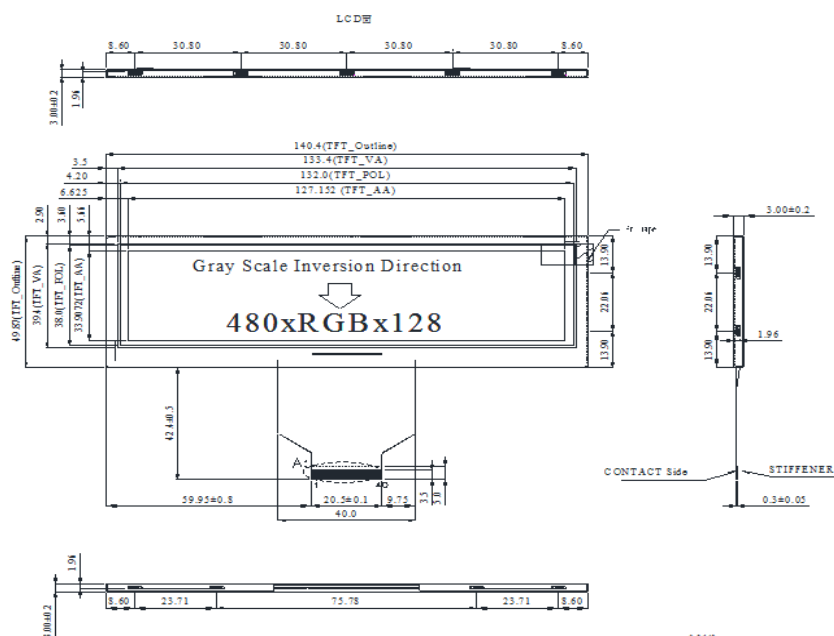


Product Introduction - 5.2" WF52A O-Film with High Brightness .

WF52ASZASDNN0 is a diagonal size 5.2 inch bar type TFT LCD display which featured with High Brightness and wider viewing angle of O-Film technology on module. This display is having module dimension of 140.4 x 49.87 mm and Active Area of 127.152 x 33.9072 which with the same size as WF52ATLASDNN0 but having wider viewing angle and high brightness of 800 ~850 cd/m². This TFT display is featured with O-Film on panel having the advantages of wider viewing angle of Left: 75 / Right: 75 / Up: 75 / Down: 75 degree (typical). WF52ATLASDNN0 is built in with ST7252 or equivalent driver IC; it supports RGB 24 bits parallel interface SYNC mode. This TFT LCD WF52A module can be operating at temperatures from -20°C to +70°C; its storage temperatures range from -30°C to +80°C.

This 5.2 inch bar type TFT WF52A LCD display offers high quality and colorful image made of resolution 480x128 pixels; it is especially suitable for industrial equipment & automotive applications, server system, POS system, dynamic information displays, audio system and advertising display.

Item-WF52ASZASDNN0	Dimension-O Film+ High brightness
Size	5.2 inch
Dot Matrix	480 x RGBx128
Module dimension	140.4 x 49.87 x 3.0 mm
Active area	127.152 x 33.9072 mm
Dot pitch	0.0883 x 0.2649 mm
LCD type	TFT, Normally White, Transmissive
View Direction	6 o'clock
Gray Scale Inversion Direction	12 o'clock
Aspect Ratio	7:2
Backlight Type	LED, Normally White
Driver IC	ST7252 or equivalent
Interface	RGB 24bit
Touch Panel	CTP option (Under development)
Brightness	850cd/m ²



Winstar Embedded Series Introduction

Embedded systems control many devices in common use nowadays especially for industrial applications. Winstar, a professional industrial display manufacturer, launched a series of Embedded System products; we offer a variety of TFT LCD modules with motherboard solutions. Winstar ARM based Embedded series are suitable for various application fields such as POS system, medical instrument, security control, and industrial automation and automotive control electronics. Our 1st version Embedded series use the NXP processor iMx6 Series (Dual core Lite, Quad Core option) to be the control Kernel of the Motherboard. Below are features of our Winstar Embedded motherboard:

- ▶ ARM Base motherboard
- ▶ NXP Cortex-A9 Dual core 1.0GHz
- ▶ On-board DDR3 up to 2GB & 8GB eMMC NAND Flash
- ▶ Support LVDS high solution display & RGB interface
- ▶ Low power consumption
- ▶ Support Android 4.2 /Linux
- ▶ Support 5 types TFT Module from 5"~12.1"
- ▶ Support RGB & LVDS interfaces
- ▶ Temperature: -10 °C ~+60 °C / -20 °C ~+70 °C



Winstar Embedded Series motherboard supports 5 types Winstar TFT modules; from 5" ~ 12.1", the following list is our Part Numbers for quick selection. Detail information, please contact with our sales persons or mail to sales@winstar.com.tw.

Quick Selection:

Part No.	CPU	TFT Module	Resolution	Touch Panel	Power Supply
WU-AAAA120VXXXXXXXXX00	ARM	Motherboard only		N/A	DC12V
WU-AAAA120V050BTIGX00	ARM	WF50B (5.0")	800x480	Capacitive	DC12V
WU-AAAA120V050BTITX00	ARM	WF50B (5.0")	800x480	Resistive	DC12V
WU-AAAA120V070BTIGX00	ARM	WF70B (7.0")	1024x600	Capacitive	DC12V
WU-AAAA120V070BTITX00	ARM	WF70B (7.0")	1024x600	Resistive	DC12V
WU-AAAA120V070GTIGX00	ARM	WF70G (7.0")	800x480	Capacitive	DC12V
WU-AAAA120V070GTITX00	ARM	WF70G (7.0")	800x480	Resistive	DC12V
WU-AAAA120V101ATIGX00	ARM	WF101A (10.1")	1024x600	Capacitive	DC12V
WU-AAAA120V101ATITX00	ARM	WF101A (10.1")	1024x600	Resistive	DC12V
WU-AAAA120V121ATITX00	ARM	WF121A (12.1")	1024x768	Resistive	DC12V

Winstar Embedded Series Specification

Winstar Embedded system is an ARM based motherboard. It supports Android 4.2 and Linux operating systems. The Android system is available now, as to the Linux porting is under development and will be released in 2017. Below is the hardware specification for Winstar motherboard.

	Cpu	NXP Cortex-A9 Dual core 1.0GHz (Quad core is optional)
Processor System	Technology	DDR3 1GB x64 bit at 400MHz
	Capacity	Onboard DDR3 1GB(2GB Max)
	Flash	4GB(8GB Max) eMMC NAND Flash for Advantech boot loader
Graphic	LVDS	Dual output 24 bit LVDS(1024*600 or 1024*768)
	RGB	18-bits/24-bits TTL with DE+H/V sync(800*480)
	Graphic engine	3D GPU with 1 shadow
	H/W Vodeo codec	Support MPEG 1/2/4, H.262 Hardware Decoder.
	MIPI	Reserved
Ethernet	Speed	Ethernet 10/100/1000
I/O	USB	2 x USB 2.0 Host ;1 x USB 2.0 OTG 2 x pin header
	Audio	Wolfson (Line out)
	Serial port	RS232 (1*DB9) ; RS485/422/232 (1 * pin header)
	SPI	2 (Host, option)
	IIC	2 (Client, option)
	Touch	4-wire Resistive type(onboard)/ CTP is driven IIC inter- face
	GPIO	16-pin 3.3V TTL Level GPIOs
	Expansion	SD Socket
Power	Voltage	DC12V
	Consumption	2.5W
Environment	Temperature	-10°C~60°C / -20°C~70°C
Dimension	Motherboard	114mm * 95mm*20mm

► [Link to Winstar Embedded Series web page](#)