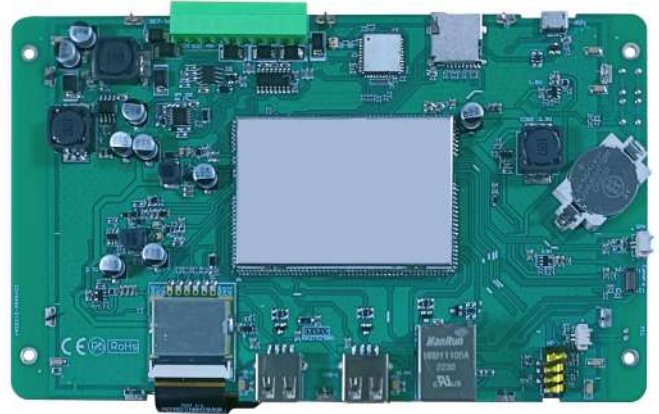
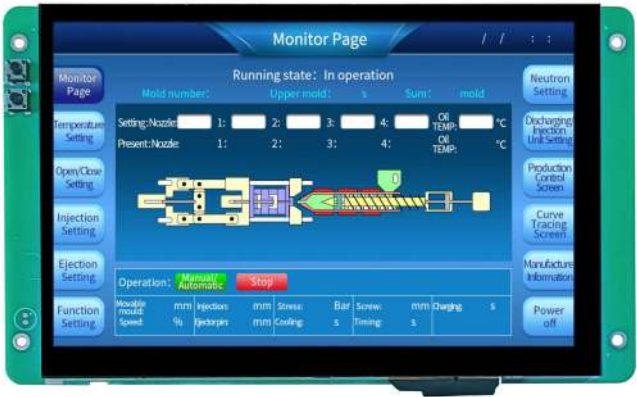


# AFYL070AV21



## Features:

- Industrial Linux intelligent display terminal based on RK3566, Linux version 4.19.
- 7.0-inch, 1280\*800 pixels resolution, 16.7M colors, IPS-TFT-LCD, wide viewing angle, capacitive touch.
- Adopt QT environment for secondary development.
- Available for multi-language, vector font library, picture library, video library and audio library.
- Compatible with network cable connection with PC to download update project.
- Available for RS232, RS485 and Ethernet port to connect and communicate with external devices.



- **Master Control Parameters**

Properties	Parameters
Motherboard Level	Industrial
CPU	RK3566, Cortex-A55, quad-core
Kernel Version	4.19
OS	Linux
FLASH	8Gbytes EMMC
RAM	2Gbytes LPDDR4

- **Display Parameters**

Properties	Parameters	Description
Color	16.7M(16777216)colors	24 bit color 8R8G8B
Panel Type	IPS	IPS process, TFT LCM with wide viewing angle
Viewing Angle	85/85/85/85 (L/R/U/D)	Best View: symmetrical
Active Area (A.A.)	149.76mm (W)*93.60mm (H)	1280*800 Pixel
Visible Area (V.A.)	150.76mm (W)*94.60mm (H)	1280*800 Pixel
Resolution	1280*800 Pixel	Available for 0°/90°/180°/270°rotated display
Backlight	LED	≥20000H(time of the brightness decaying to 50% on the condition of continuous working with the maximum brightness)
Brightness	250nit	100 levels adjustment(It's not recommend to set brightness to 1%~30% of the maximum, which may lead to LCD flicker.)

Note: You can use dynamic screen saver wallpapers to avoid afterimages caused by fixed page display for a long time.

- **Voltage & Current**

Properties	Conditions	Min	Typ	Max	Unit
Power Voltage	-	7.0	12.0	36.0	V
Operation Current	VCC = +12V, Backlight on	-	310	-	mA
	VCC = +12V, Backlight off	-	140	-	mA

Recommended power supply: 12V 0.5A DC

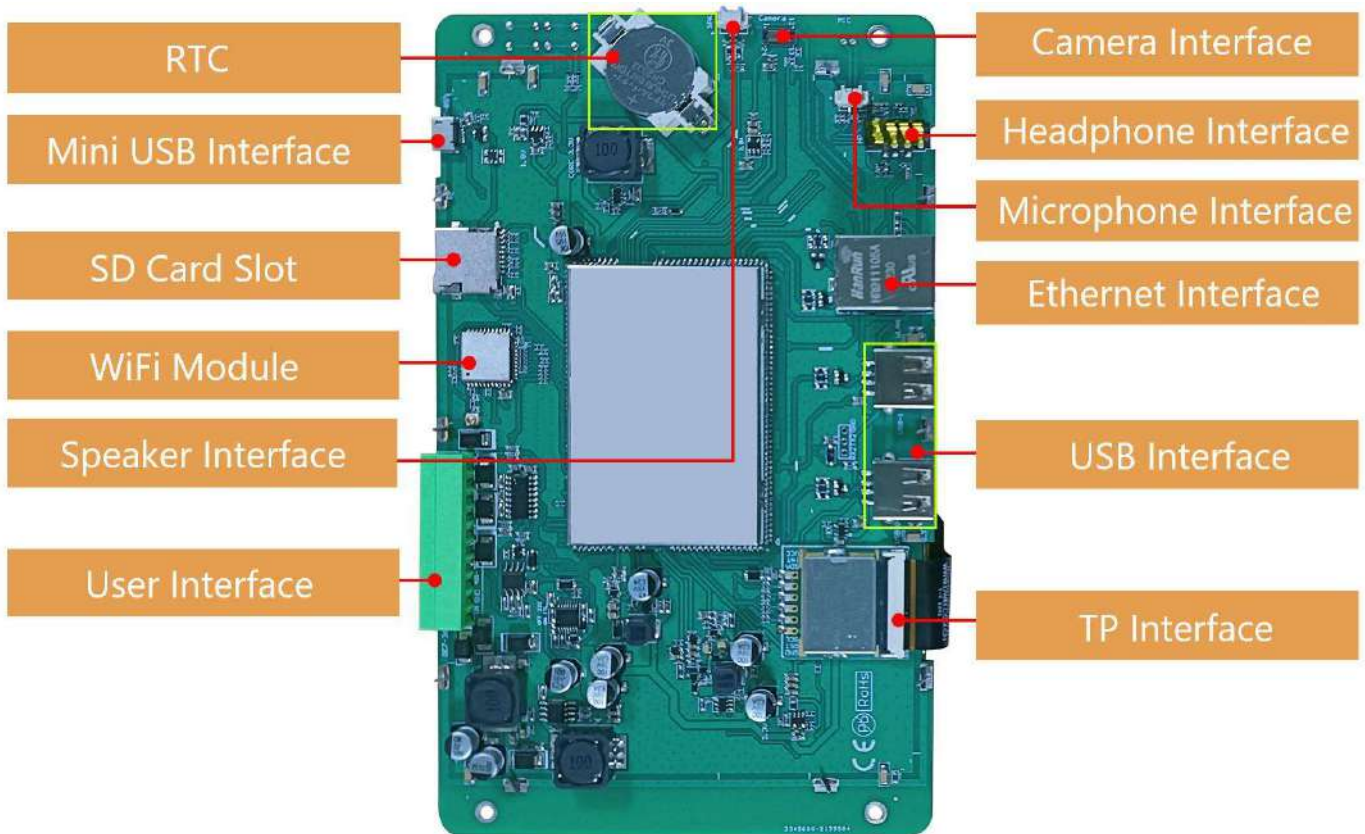
- **Reliability Test**

Properties	Conditions	Min	Typ	Max	Unit
Working Temperature	60%RH at 12V voltage	-20	25	70	°C
Storage Temperature	-	-30	25	80	°C
Working Humidity	25°C	10%	60%	90%	RH
Protective Paint	Yes				
ESD	Air discharge ±8KV; Contact discharge ±6KV				
EFT	Group pulse interference ±2KV				



● **Peripherals and Interfaces**

Properties	Parameters	Description
COM	2-way RS232	UART5 & UART9
	1-way RS485	UART8
	1-way TTL/COMS	UART0(Debug interface)
USB Interface	3-way	HOST*2,OTG*1
Headphone Interface	1-way	3.5mm spacing interface
Speaker Interface	1-way	2Pin_1.25mm interface
Microphone Interface	1-way	2Pin_1.25mm interface
Camera Interface	1-way	USB, Not supported by Mipi
SD Card Slot	1-way	Drawer type card slot(Max 64G)
Ethernet Interface	1-way	10/100Mbps
WIFI Module	1-way	IEEE 802.11Bb/g/n,2.4G,Bluetooth
RTC	1-way	Button cell for power supply. Accuracy: $\pm 20\text{ppm @}25^{\circ}\text{C}$



● **Interface**

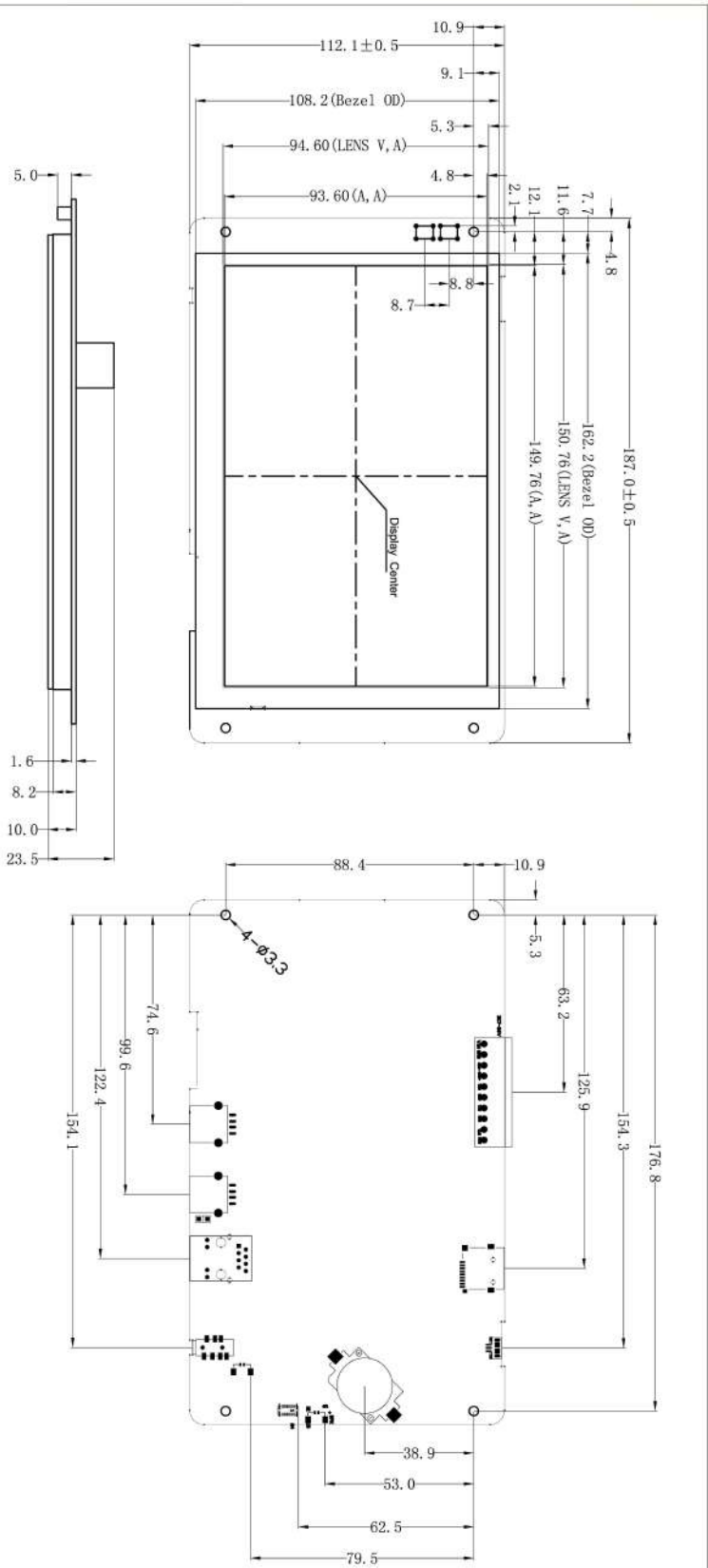
Properties	Conditions	Min	Typ	Max	Unit
Baud Rate	User Set	2400	115200	230440	bps
Output Voltage (TXD)	Output 1	-	-5.0	-	V
	Output 0	-	5.0	-	V
Input Voltage (RXD)	Input 1	-	-5.0	-	V
	Input 0	-	5.0	-	V
Baud Rate	User Set	2400	115200	921600	bps
(V_AB)	Output 1	2.5	5.0	-	V
	Output 0	-	-5.0	-2.5	V
(V_AB)	Input 1	0	2.5	-	V
	Input 0	-	-2.5	-0.2	V
Interface	Support TTL/COMS,RS232 or RS485 level				
Socket	10Pin_3.81mm Socket				

● **Packing Capacity & Dimension**

Dimension				
Dimension	187.0(W)*112.1(H)*23.5(T)mm			
Net Weight	310g			
Packing Capacity				
Model	Size	Layer	Quantity/Layer	Quantity(Pcs)
Carton1:	220mm(L)*160mm(W)*47mm (H)	-	-	-
Carton2:	250mm(L)*200mm(W)*80mm (H)	2	1	2
Carton3:	320mm(L)*270mm(W)*80mm (H)	2	2	4
Carton4:	450mm(L)*350mm(W)*300mm(H)	1	20	20
Carton5:	600mm(L)*450mm(W)*300mm(H)	1	34	34

Disclaimer: The product design is subject to alternation and improvement without prior notice.





Definition	Pin#	Type	Description
VIN	1	P	Power Input
GND	2	P	GND
485-	3	B	RS485-
485+	4	A	RS485+
TX9	5	0	UART 9 Output
RX9	6	I	UART 9 Input
TX0	7	0	UART 0 Output
RX0	8	I	UART 0 Input
TX5	9	0	UART 5 Output
RX5	10	I	UART 5 Input

1. Location hole is used as position reference.
2. Unmarked Tolerance is  $\pm 0.3\text{mm}$

Active area is marked in Dash Lines

Model	AFVLO70AV21		
Drawing	A 4	Drawn	J.G
Scale	1:1	Review	
Date		Date	20230302
MM	MM	Approval	
Date		Date	



---

**Record of Revision**

<b>Ver</b>	<b>Revise Date</b>	<b>Content</b>	<b>Editor</b>
00	2023-03-14	First edition	YML

