



ELEVATOR  
TFT PICTURE DISPLAY /  
TFT MULTIMEDIA DISPLAY



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**WELM** 威尔曼  
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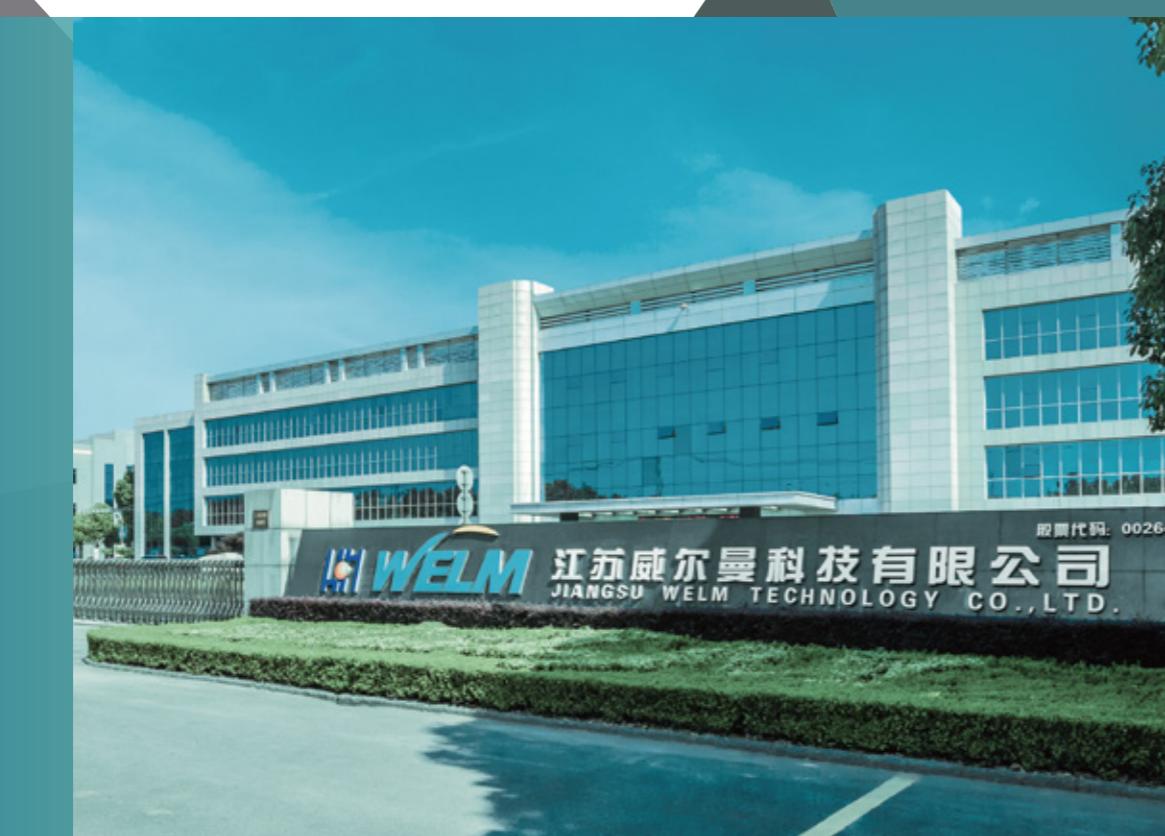
MAKE INTERACTION  
MORE INTELLIGENT

# 江苏威尔曼科技有限公司

JIANGSU WELM TECHNOLOGY CO.,LTD.

- 成立于2000年
- 600多名员工
- 专业从事智慧交互
- 国家高新技术企业
- 为客户提供人机界面、智能楼宇、多媒体、按钮等系列产品
- 业务遍及亚洲、美洲、欧洲、非洲等多个国家和地区

- Established in 2000
- More than 600 employees
- Specialize in intelligent interactive solutions
- The National High & New Tech Enterprise
- Provide a series of products for clients such as human-machine interface, intelligent buildings, multimedia devices, buttons, etc
- Develop business in Asia, America, Europe, Africa and many other countries and regions



## 三大服务 全面领先

COMPREHENSIVE LEADER IN THREE MAJOR SERVICES



### 全球化服务

GLOBAL SERVICE

- 提供符合全球标准的产品和服务  
Deliver products and services that meet global codes

### 定制化服务

CUSTOMIZED SERVICE

- 为客户提供量身定做差异化的解决方案  
Tailor differentiated solutions for customers

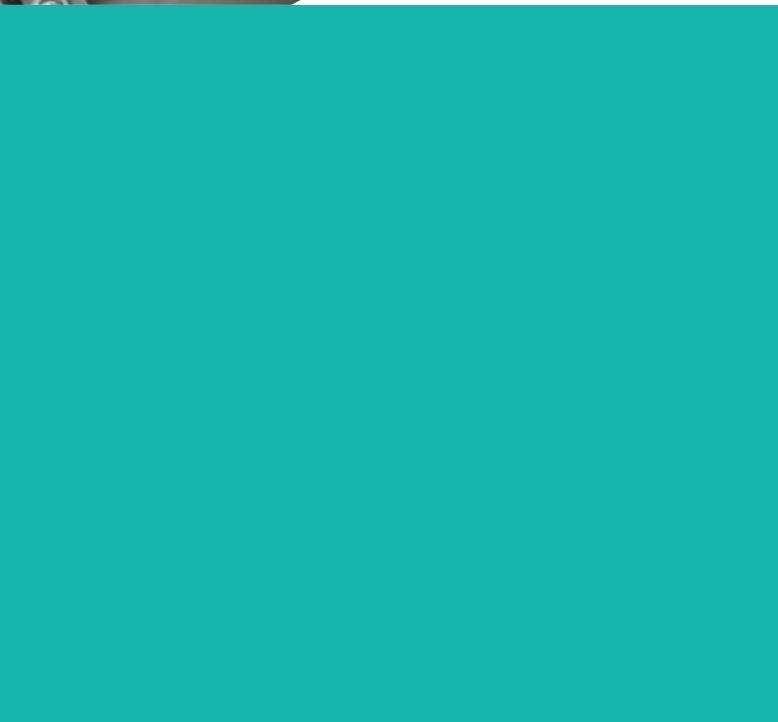
### 全产业链服务

FULL PRODUCTS SERVICE

- 整体的解决方案  
Package solution on products and service
- 可追溯的全链式的产品服务  
Traceability on the full chain service

# Overview for TFT-LCD

TFT-LCD is a thin-film transistor liquid crystal display, which is also known as the “Real Color” LCD screen. It is currently the most mainstream display on the market. TFT LCD provides each pixel with a semiconductor switch, so that every pixel can be directly controlled through the point pulse. Therefore, each node is relatively independent, and can be continuously controlled. This not only improves the response speed of the display, but also controls the displayed color gradation accurately, so color displayed on TFT-LCD is more real.



# TFT Elevator Picture Display

The WELM TFT picture display machine is a liquid crystal display designed for elevator equipment. It can display the elevator's intrinsic information such as floor number, direction and warning. It can also loop static advertisement pictures to promote and publicize, which provides value-added services for property management.

The WELM Welm elevator TFT-LCD display adopts the “Real Color” LCD. With the brighter colors, flexible customizable interface content, and excellent interface design, it brings a good visual experience to all passengers.



## Main functions

- To display elevator intrinsic information such as the floor number, direction, text, warning message, etc.
- To display corresponding advertisement pictures according to customized floor information
- To display real-time information such as date, time, announcement, festival greetings, slogan, etc.
- To real time voice prompt the elevator running status and warning information

Supported sizes	LCD of 4.3, 7.0, 10.4, 12.1, 15.0, etc.
Supported resolution ratio	480*272 800*480 800*600 1024*768
Customized functions	Elevator up and down arrowhead effect customization
	Elevator floor number prompt customization
	Elevator warning information customization
	Picture content information customization
	Date, time, and displaying format customization
	Display interface customization



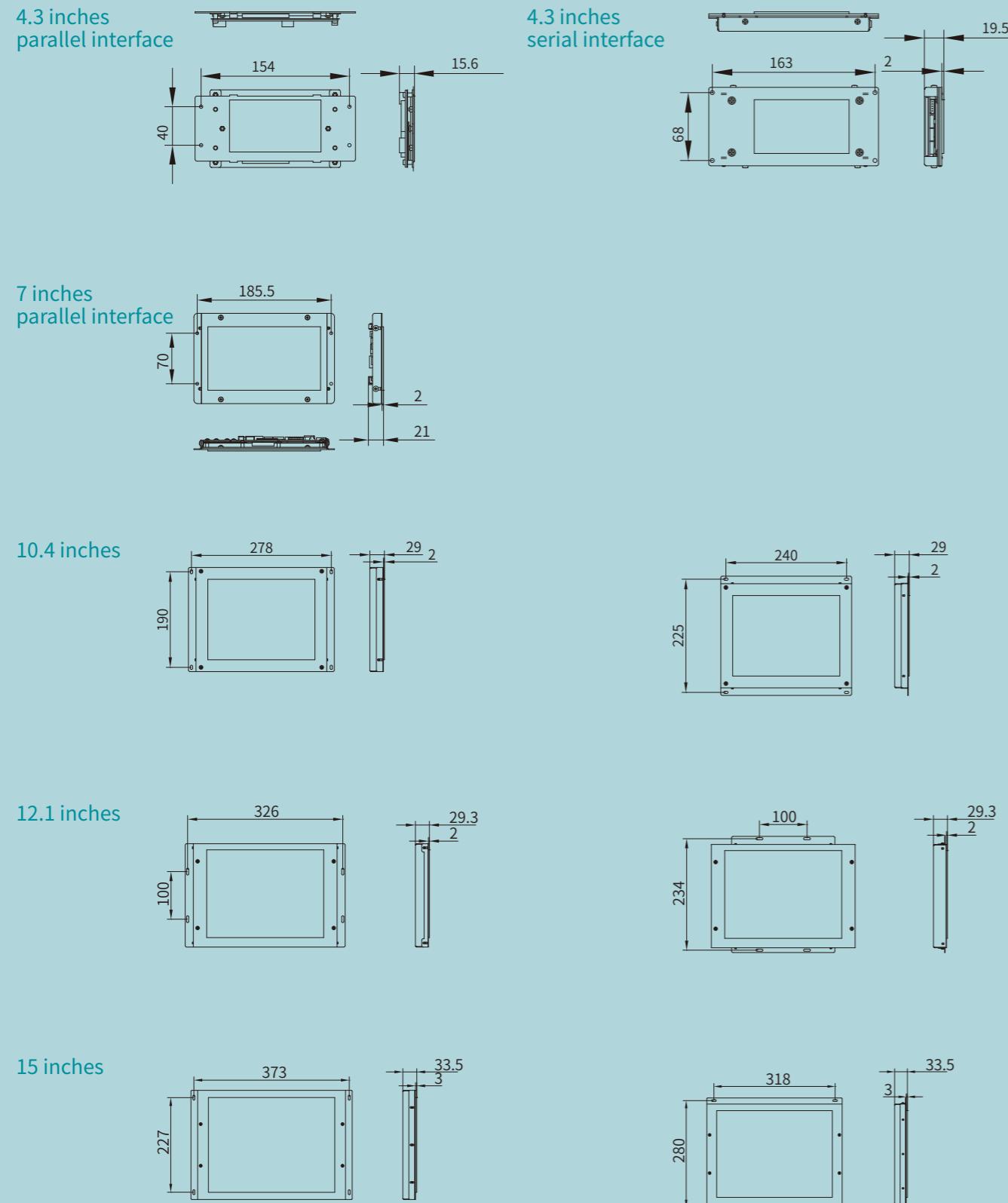
# TFT Elevator Picture Display Sizes and Parameters



## TFT picture display machine parameter table

Models Parameters	WTFT-P043S	WTFT-P043K	WTFT-P070	WTFT-P084	WTFT-P104	WTFT-P121	WTFT-P150
Operating voltage	DC24V±6V	DC24V±6V	DC24V±6V	DC24V±6V	DC24V±6V	DC24V±6V	DC24V±6V
Power consumption	3W	2.5W	4W	9W	7.5W	8W	12W
Color depth	16.7M	16.7M	16.7M	16.7M	16.7M	16.7M	16.7M
Resolution ratio	480X272	480X272	800X480	800X600	800X600	800X600	1024X768
Brightness	450	450	450	350	400	450	300
Contrast ratio	500:1	500:1	1000:1	600:1	900:1	800:1	1500:1
Horizontal view angle	70/70	70/70	80/80	80/80	80/80	80/80	85/85
Vertical view angle	50/70	50/70	60/70	60/80	60/70	65/75	85/85
Visible area	95*54	95*54	154*86	170*128	211*158	246*185	304*228
Screen lifetime	20000h	20000h	20000h	500000h	500000h	60000h	30000h
Operating temperature	-10°C~60°C	-10°C~60°C	-10°C~60°C	-10°C~60°C	-10°C~60°C	-10°C~60°C	-10°C~60°C
Operating humidity	< 90%	< 90%	< 90%	< 90%	< 90%	< 90%	< 90%
Signal interface	Gray code	SPI/CAN/RS485	Gray code /SPI/CAN/RS485				
Loudspeaker	External	External	External	External	External	External	External

# TFT Elevator Picture Display Diagram



## Picture display interface functions

### WTFT-P043s (parallel interface)

Interface	PIN	Name	Instructions
USB		USB	Be used for system upgrade
485	1-4	485	From left to right, they are defined as
GONG		gong	
Power supply	1	DC 24V+	Anode of power supply
	2	GND	Grounding
Parallel interface	PAR1, PAR2		Detailed data refer to the follow-up description on parallel interface extension



### WTFT-P043K (serial interface)

Interface	PIN	Name	Instructions
SPI		SPI	Ports from left to right: as 24V, CS, CLK, DATA, and GND
Biswitch			Used for elevator locking, fire controlling, etc.
Push-button interface		Push-button interface	Used for external call for elevator up or down



### WTFT-P070/104/121/150

Interface	PIN	Name	Instructions
LED		Status light	Red: power light, constant light Blue: data indicator light, breathing normally, flashing when transmitting data
Press-key		Press-key	Right shift key, adjustment key
CAN/485		Coincident to interface	485 simulation definition: 24V, A, B, GND CAN simulation definition: 24V, H, L, GND
Parallel interface	PAR1, PAR2		Detailed data refer to the follow-up description on parallel interface extension

## Picture display machine interface customization



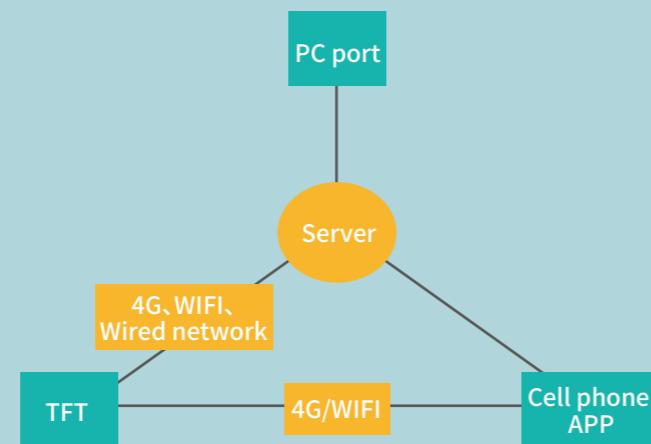
Through the host computer, users are able to edit the date, time, elevator up and down arrowhead effect, floor number reminder, warning message information, picture content information, and the overall program UI layout

# TFT Elevator Multimedia Display



The WELM TFT elevator multimedia display applied to all types of modern intelligent elevators. With WELM's own developed software operating system and hardware, its series products can realize the functions of displaying elevator running status, real-time information, customized information and multimedia playing.

The WELM TFT elevator multimedia display allows information dissemination effectively, provides value-added services to the property management, and enables the elevator to enter the era of digitization and mediatisation, which improves the quality of the buildings. Clear color display and beautiful interface design make every ride a relaxed and enjoyable audio-visual journey.



## Main functions

- Multimedia information play: video, music, pictures, subtitles, etc.
- Network video playback
- Real-time information release: time, date, announcement, news, holiday greeting, etc.
- Customized information prompt: customized information updated by users
- Voice prompt: real-time voice prompt of the elevator running information and warning information
- Elevator information display: floor number, direction, warning information, etc.

Supports multi-size of LCD screens	Supports 7, 8.4, 10.4, 12.1, 15, 17LCD
Video interface	Supports LVDS, HDMI, and other video output interfaces
Display resolution ratios	SVGA, XGA, SXGA etc.
Picture formats	BMP/JPG/PNG etc.
Video formats	MP4/MKV/AVI/WMV etc.
Audio formats	MP3/WMA/MP4/ACC/3GP/WAV etc.
User theme customization	Elevator up and down arrowhead effect customization, dynamic effects are supported Elevator floor numbers prompt customization, various picture formats are supported Elevator warning information customization, picture display is supported Rolling information customizable. The information texts customization such as font, size, and color are supported Customized elements display: pictures, video, and text Date and time customization: format of date and time, text size, color and font Video source customization: local or from internet The overall program UI layout, including all elements' location, size, etc.

# TFT Multimedia Display and Parameters



## TFT multimedia parameter table

Models Parameters	WTFT-V070	WTFT-V104	WTFT-V121	WTFT-V150	WTFT-V170
Operating voltage	18~36V(DC)	18~36V(DC)	18~36V(DC)	18~36V(DC)	18~36V(DC)
Power	3.84 W	8 W	10W	12 W	17 W
Standby power consumption	2.4W	4 W	4 W	4 W	4 W
Color depth	16.7M	16.7M	16.7M	16.7M	16.7M
Resolution ratio	800x480	800x600	800x600	1024x768	1280x1024
Brightness	450cd/m <sup>2</sup>	400cd/m <sup>2</sup>	450cd/m <sup>2</sup>	300cd/m <sup>2</sup>	250cd/m <sup>2</sup>
Contrast ratio	1000:1	900:1	800:1	1500:1	1000:1
Horizontal view angle	80/80	80/80	80/80	85/85	85/85
Vertical view angle	60/80	80/80	60/80	85/85	80/80
Visible area	154.1*85.9	211.2*158.4	246.0*184.5	304.1*228.1	337.9*270.3
Screen lifetime	20000h	50000h	60000h	35000h	30000h
Operating temperature	-10~60°C	-10~60°C	-10~60°C	-10~60°C	0~50°C
Operating humidity	<90%	<90%	<90%	<90%	<90%
Signal interface	Gray code /SPI/CAN/RS485				
Network interface	R4J5/WIFI /4G(Optional)				
Main and secondary screen display	Unsupported	Support	Support	Support	Support
Installation direction	Horizontal screen/vertical screen				
Loudspeaker	External	Built-in	Built-in	Built-in	Built-in

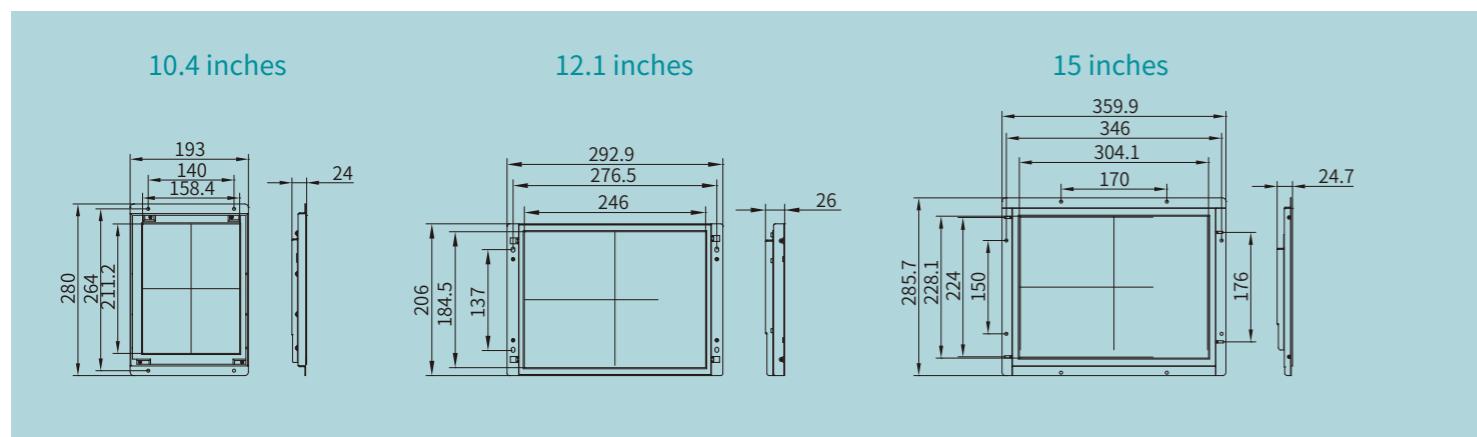
# TFT Multimedia Display and Parameters



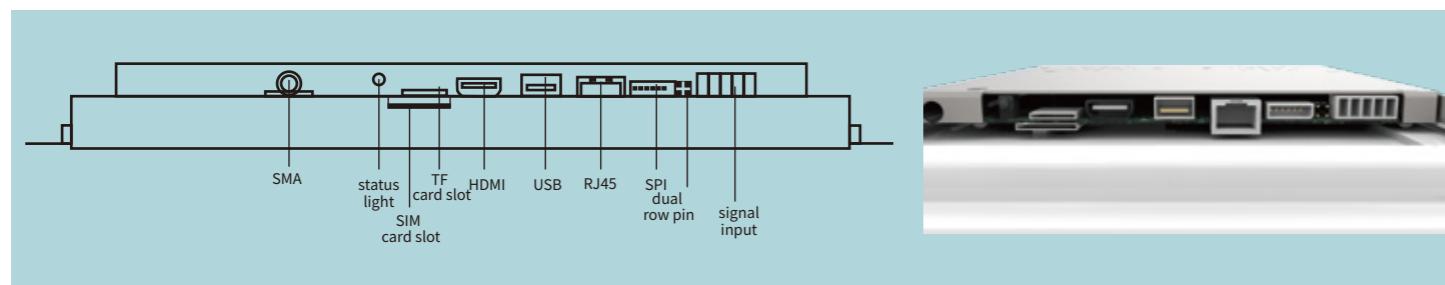
## TFT multimedia parameter table

Models Parameters	WDV123-0001	WDV280-0001	WDV320-0001
Operating voltage	24V	24V	24V
Power	18W	35W	45W
Standby power consumption	6W	10W	10W
Color depth	16.7M	16.7M	16.7M
Resolution ratio	1920*720	1920*360	1920*1080
Brightness	850cd/m <sup>2</sup>	700cd/m <sup>2</sup>	400cd/m <sup>2</sup>
Contrast ratio	1000	1200	1100
Horizontal view angle	85/85	89/89	89/89
Vertical view angle	85/85	89/89	89/89
Visible area	292.032*109.512	699.84*131.22	698.4*392.85
Screen lifetime	30,000h	30,000h	30,000h
Operating temperature	-30~85°C	0~50°C	0~50°C
Operating humidity	10%~90%	10%~80%	10%~90%
Signal interface	SPI/RS485/ GrayCode	SPI/RS485/ GrayCode	SPI/RS485/ GrayCode
Network interface	RJ45/4G	RJ45/4G	RJ45/4G
Main and secondary screen display	Support	Support	Support
Installation direction	Horizontal screen/ vertical screen	Horizontal screen/ vertical screen	Horizontal screen/ vertical screen
Loudspeaker	Optional	Optional	Optional

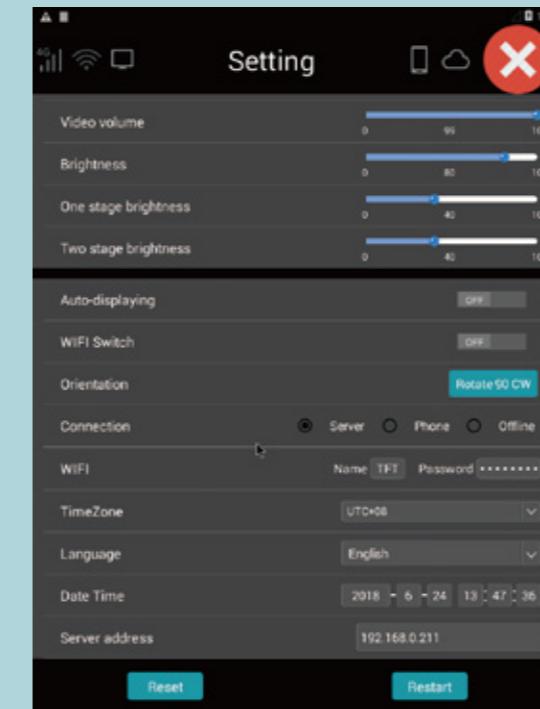
# TFT Multimedia Display Diagram



## Multimedia display interface function



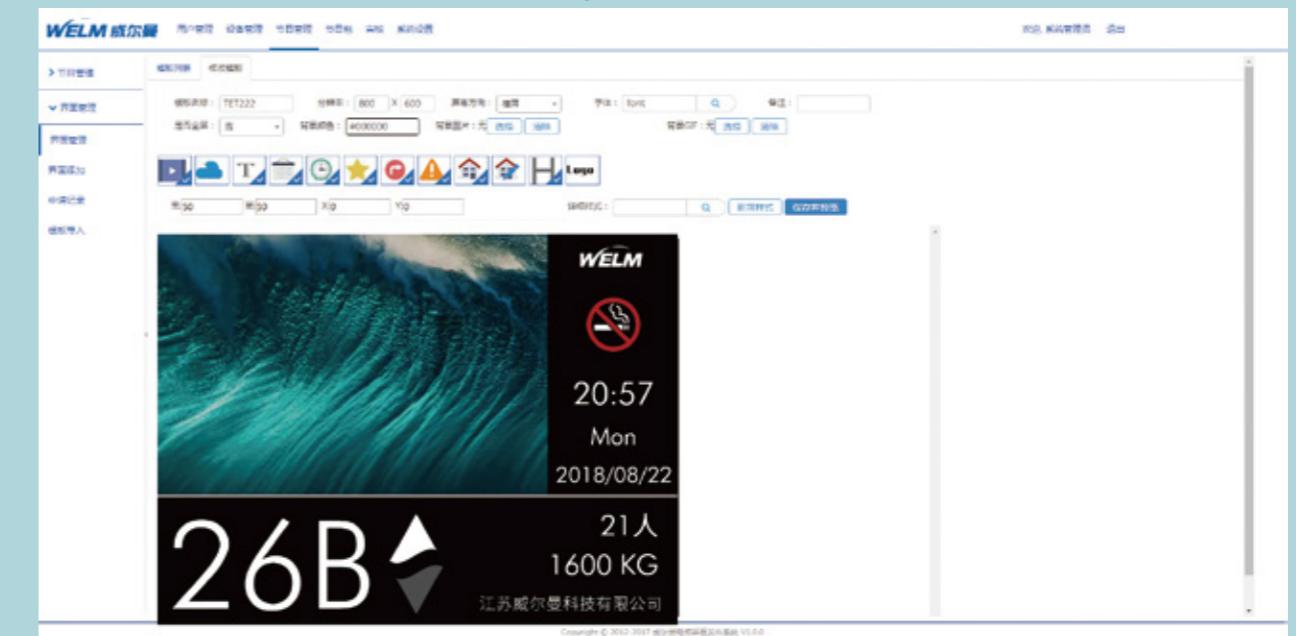
Interface	PIN	Name	Description
Signal input	1	DC24V+	Power supply anode
	2	DC24V-	Power supply cathode
	3	A	RS485 A
	4	B	RS485 B
	5	PE	Protective grounding
Dual row pin	left	NC	When the terminal resistance is not used, the jumper cap is inserted on the left side
	right	Terminal Resistor	Short circuit: enable open circuit: unable
SPI		SPI	Pin definition from left to right: GND, DATA, CLK, CS, 24V
RJ45		Ethernet	Ethernet
USB		USB Interface	USB 2.0
HDMI		HDMI Ethernet	HDMI video output
TF card slot		TF card slot	TF card
SIM card slot		SIM Slot	4G SIM card slot, when connecting to 4G network, 4G card needs to be inserted
LED status light		Red	Flashing: the system is in operation
SMA interface		SMA Interface	4G antenna interface



## User customization settings

User settings: users are able to set screen backlight, screensaver time, volume, time calibration, IP settings, WiFi settings, language settings and other functions by clicking mouse, which is simple and convenient, and requires no professional tools.

## Customization settings of multimedia display interface



User theme customization: users are able to edit date and time format, elevator up and down arrowhead effects (dynamic effects are supported), floor number prompt, warning information, rolling text information, pictures, videos, video sources, the overall program UI layout, etc. The interface is capable to show more personalized information based on different time and occasion.