

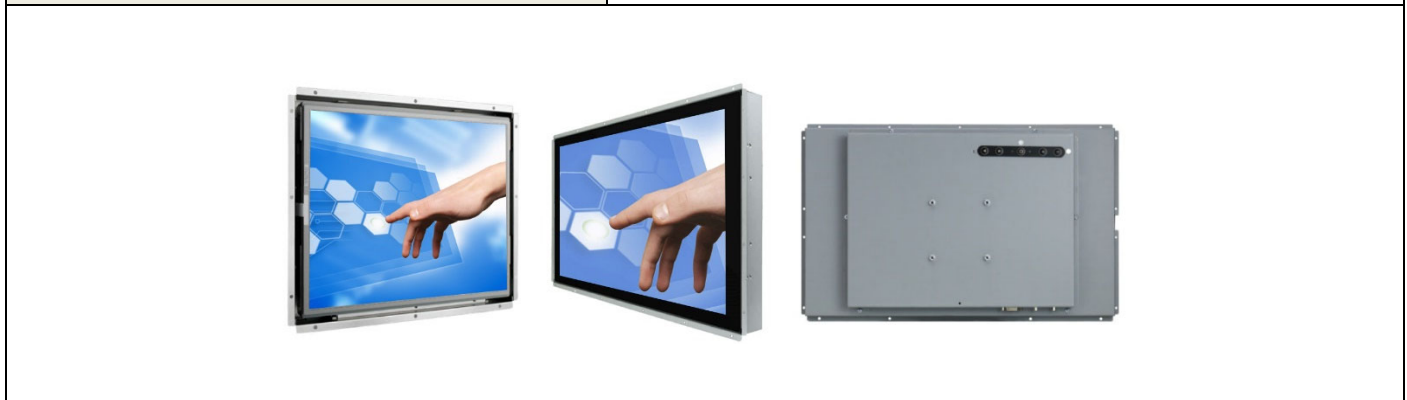


SPECIFICATION

	Industrial Open Frame LCD Monitor
MODEL	TSOPA
PRODUCT MODEL NAME	TSOPA-2413
CUSTOMER	
DATE	2020-03-22

APPROVED BY TOUCH AND DISPLAYS CO.,LTD	
ENGINEER	Kyeong Min Lee
REVIEWER	
CONFIRMED	



MONITOR

Key Feature

- High Brightness 1000 nits(optional)
- LED Backlight
- Wide Temperature (-20 °C ~80 °C)(Optional)
- DC adapter) 9V~36V(Optional)
- Low Power Consumption
- BL MTBF: 100,000 hour
- IPS(Wide Viewing Angle LCD(optional)

ITEMS	SPECIFICATION	
LCD	Size	24" TFT LCD, LED Back light
	Active Area(mm)	518.4mm(H) x324mm(V)
	Resolution	1920X1200@60Hz
	Contrast Ratio	1000:1(Typ)
	Display Color	16.7M
	Response Time	14ms(Typ)
	Brightness(cd/m2)	300cd/m2
	Viewing Angle(L/R/U/D)	89'/89'/89'/89'
	Operating Temperature	0'~50'C
	Storage Temperature	-20~60'C
	Panel Interface	LVDS
	OSD key	5key(Menu/Down/Up/Enter/Power)
	Frame	Open Frame VESA mount/Open mount Bracket
	Signal Connector	VGA,DVI, HDMI
Power source	DC12V in With External AC to DC 9V~36V(Optional)	
Audio	Speaker	2x 3W(Optional)
IO Ports	Video	1xDVI
		1xHDMI

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		1xVGA
		1X DP (Optional)
		1XDVI-D, DVI-I(optional)
	Audio	Speaker(optional)
Mechanical	Enclosure	Metal
Audio	Speaker	Optional
Touch Screen(optional)		Resistive Touch Screen
		Touch Chip: EETI/Litek/Weida
		Touch Point: Multi touch(1~10points standard, 50 points option)
		Touch Supply Voltage: 5V
		Touch Interface: USB
		Touch Support OS: Window/Android/ Linux/Mac
Accessories	1x24v dc cable, 1x3m HDMI cable, 1x 3m USB cable 100~240V AC to DC Adapter Power Cord	
Weight (Net)	5.2kg	
Surface Treatment	AG/AR/AF(Optional)	
Water/Dust Protection	IP65(front)/ IK08(front)	
Customer Request		
<p>Display Port: Customization</p> <p>LCD Brightness(Dimming): High Brightness / Sunlight Readable/Dimming : Auto,Knob,Manual - Industrial monitor : 5% Dimming (Zero Dimming : please ask to Sales team) - High-brightness monitor : 50% Dimming (5%, Zero Dimming : please ask to Sales team)</p> <p>Touch Screen : PCAP touch screen/Resistive Touch Scree/ IR Touch Screen/SAW Touch Screen</p> <p>Glass :Tempered Glass, AR/AG coating , Optical/Air Bonding</p> <p>Power: DC voltage/AC voltage/Connector type</p> <p>Cable/Connector: Length of Cable and connector type</p> <p>Mechanical Housing/ IP grade/ Easy Mounting Design</p> <p>All in One PC CPU Option : J1900 , J4125, J6412 i3-6100U ,i3-8145u,i3-10110u, i5-6200u, i5-7200u,i5-8262u,i5-10210u, I7-6500U,I7-7500U,I7-8565U,I7-10510U</p> <p>For RAM: 4g/8g /16G RAM.</p> <p>For Hard Disk: 64G/128G/256G/512G SSD, or 500G/1T HDD.</p>		

PC-RGB Supported Model Table

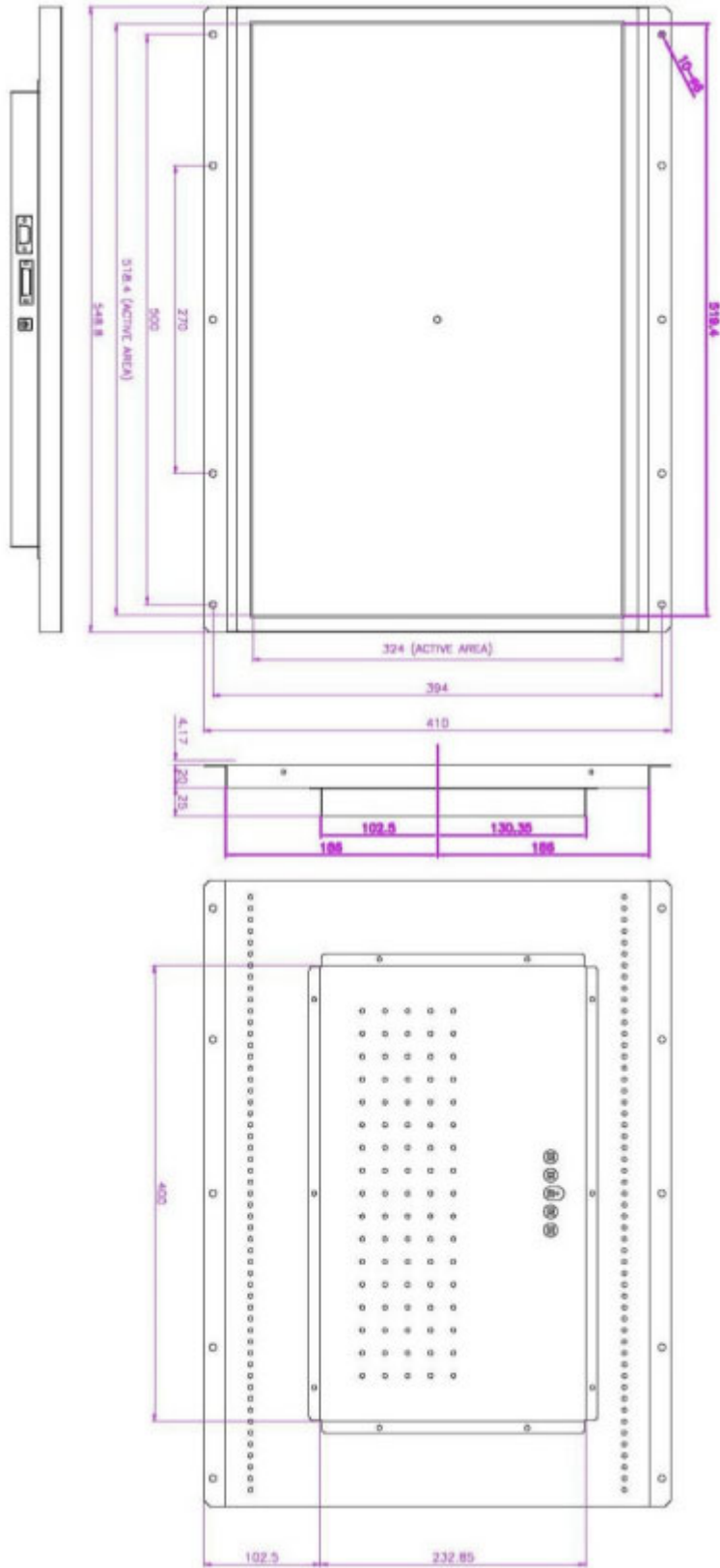
This section lists some of the PC-RGB modes supported by this product, including their vertical frequency, horizontal frequency, and resolution.

PC-RGB Mode Table (This table is for the reference only, due to differences in signal source output, the data may vary from the table)

	Resolution	Horizontal frequency (KHz)	Vertical frequency (Hz)	Standard
WUXGA	1920X1200	74.5	60	
		94.0	75	
UXGA	1600X1200	74.5	60	VESA
		94.0	75	
WSXGA+	1680X1050	65.2	60	
		82.2	75	
WXGA+	1440X900	55.9	60	---
		70.5	75	
WXGA	1280X800	49.7	60	---
		62.6	75	
SXGA+	1400X1050	65.2	60	---
		82.2	75	
SXGA	1280X1024	63.6	60	VESA
		80.2	75	
XGA	1024X768	47.7	60	VESA
		56.0	70	
		60.1	75	
SVGA	800X600	37.3	60	VESA
		43.8	70	
		47.3	75	
VGA	640X480	29.8	60	VESA
		35.0	70	
		37.7	75	
DOS	640X480	29.8	60	VESA
	720X400	29.2	70	

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MECHANICAL DRAWING



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NOTE

1. This is a simplified drawing, and some components are not marked in detail.
2. Please contact our sales representative if you need further product information.
3. All specifications are subject to change without prior notice.
4. The product shown in this datasheet is a standard model. For diagrams that contain customized or optional I/O , please contact our Team(TDS) for more information.