



# Product Specifications

<b>Customer</b>	
<b>Model Name</b>	<b>NTWP238-2 V500E</b>
<b>Model Number</b>	NTWP238 <u>XX2XX</u> -GP <u>XX8XX</u> - <u>XXXX</u> -500E

\* X = A~Z, 0~9 (Depends on Options.)



Records of Revision			
Vision	Modifying	Old Description	New Description
v2110.1	Preliminary Specification		



## Features

- ★ 23.8" Industrial Grade Panel, 16:9/1920x1080 (FHD) Resolution
- ★ AHVA Wide Viewing Angle Technology (178°/178°)
- ★ Intel® Quad-Core N3450/N4200 CPU
- ★ DDR3 8G DRAM
- ★ Serial ATAIIIx1, mSATA/mPCIe x1
- ★ Narrow Bezel, True Flat Projected Capacitive Touch Screen
- ★ 7H Hardness Tempered Cover Glass
- ★ 10 points Multi-touch , Supports Active Stylus
- ★ Metal Cabinet with Diverse Combine Options
- ★ Made in Taiwan, 3 Years Warranty
- ★ Optional High Brightness 1500nits, for Outdoor Environment
- ★ Optional AG Coating/Antibacterial/Privacy Filter Surface Treatment



PSE



BSMI



RoHS



CE



ISO9001



FCC



Desktop Stand



Wall Mounting



Open-frame Brackets



Panel Mount



## System Specifications

CPU	Intel® Quad-Core Pentium®
Memory	DDR3 SO-DIMM 8G
Storage	mSATA/mPCIe2 x1
GPU	Realtek ALC255 Audio CODEC
Network	Realtek Gbe LAN Chips x1
Hardware Monitoring	Voltage / Temperature / Fan Speed Detection, Control
OS	Windows 10 64-bit

## Display Specifications

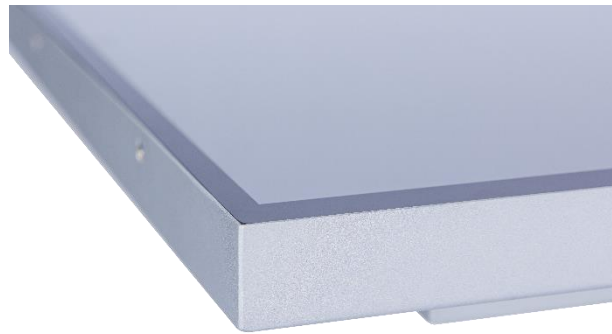
Screen Diagonal	23.8 inch	Display Mode	AHVA Mode, Normally Black
Display Area	527.04x296.46 mm	Backlight Unit	LED (white LED)
Resolution	1920x1080 (FHD)	Viewing Angle (L/R, U/D)	178°/178° (CR=10)
Contrast Ratio	1000:1	Backlight Lifetime	>50,000 Hours
Display Ratio	16:9	Operating Temp.	0~50°C
Support Colors	16.7M Colors	Storage Temp.	-20~60°C
Pixel Pitch	274.5x274.5 um	Surface Treatment	Anti-glare, Hardness 3H
Response Time	14 msec.		

## Display Options

Brightness			
	Brightness	Environment	Model Name
Standard	400nits	General	NTWP238NX2XX-GPXX8XX-XXXX-500E
Option 1	1000nits	Outdoor Environment	NTWP238AX2XX-GPXX8XX-XXFX-500E
Option 2	1500nits	Sunlight Readable	NTWP238FX2XX-GPXX8XX-XXFX-500E

## Touch Options

Projected Capacitive			
Model Name	NTWP238 <u>P</u> <u>2XX</u> -GPXX8XX-XXXX-500E		
Touch Technology	Projected Capacitive	Thickness of Cover Lens	2.9±0.2mm
Allowed Touch Points	10 points	Hardness of Cover Lens	7H
Transparency	≥87%	IK Ratings	IK07
Accuracy	99.00%		

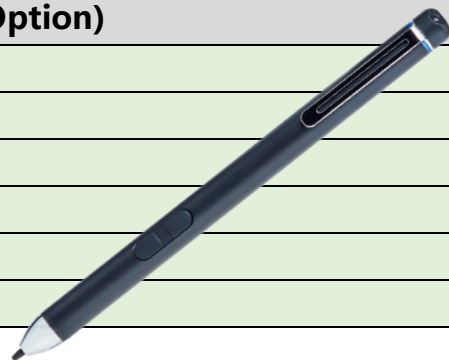


\* True Flat, 1mm Bezel

Non-Touch	
Model Name	NTWP238 <u>0</u> <u>2XX</u> -GPXX8XX-XXXX-500E

Surface Treatment Options		
	Description	Model Name
<b>Standard</b>	<b>(none)</b>	<b>NTWP238XX2<u>00</u>-GPXX8XX-XXXX-500E</b>
Option 1	Anti-Glare Coating	NTWP238XX2 <u>GG</u> -GPXX8XX-XXXX-500E
Option 2	Antibacterial (AB Film)	NTWP238XX2 <u>AB</u> -GPXX8XX-XXXX-500E
Option 3	Anti-Spy (AS Film)	NTWP238XX2 <u>SF</u> -GPXX8XX-XXXX-500E

Active Stylus (Option)	
Technology	Active Capacitive Coupled
Working Frequencies	90~250 KHZ
Pressure Level	256~1024 Levels
Side Buttons	2 Side Buttons (Eraser, Barrel)
Active Tip Force	5~25g
Max. Tip Force	400g





## System Options

CPU		
	Item	Model Name
<b>Standard</b>	<b>N3450</b>	<b>NTWP238XX2XX-GP<u>C</u>28XX-XXXX-500E</b>
Option	N4200	NTWP238XX2XX-GP <u>C</u> 48XX-XXXX-500E

Storage		
	Item	Model Name
<b>Standard</b>	<b>SSD 128G</b>	<b>NTWP238XX2XX-GPXX8<u>S</u>1-XXXX-500E</b>
Option 1	SSD 256G	NTWP238XX2XX-GPXX8 <u>S</u> 2-XXXX-500E
Option 2	SSD 512G	NTWP238XX2XX-GPXX8 <u>H</u> 5-XXXX-500E
Option 3	SATA HDD 1T	NTWP238XX2XX-GPXX8 <u>H</u> 1-XXXX-500E

Material of Cabinet		
	Description	Model Name
<b>Standard</b>	<b>SECC</b>	<b>NTWP238XX2XX-GPXX8XX-<u>S</u>XXX-500E</b>
Option 1	Stainless Steel	NTWP238XX2XX-GPXX8XX- <u>L</u> XXX-500E
Option 2	Aluminum	NTWP238XX2XX-GPXX8XX- <u>A</u> XXX-500E

Color of Cabinet		
	Description	Model Name
<b>Standard</b>	<b>Silver</b>	<b>NTWP238XX2XX-GPXX8XX-<u>X</u>SXX-500E</b>
Option 1	White	NTWP238XX2XX-GPXX8XX- <u>X</u> WXX-500E
Option 2	Black	NTWP238XX2XX-GPXX8XX- <u>X</u> BXX-500E
Options	Other Color	NTWP238XX2XX-GPXX8XX- <u>X</u> XXX-500E

\* X = A~Z, 0~9 (Depends on Color)

### System Options (Continued)

Cooling Fan		
	Description	Model Name
Standard	7 Blades/4000r.p.m/28.3dB	NTWP238XX2XX-GPXX8XX-XXFX-500E
Option	Fanless	NTWP238XX2XX-GPXX8XX-XX0X-500E

Power Input		
	Description	Model Name
Standard	9~36VDC-in, with AC/DC Adapter	NTWP238XX2XX-GPXX8XX-XXX4-500E
Option	100~240V AC, C14 AC Power Socket	NTWP238XX2XX-GPXX8XX-XXXA-500E

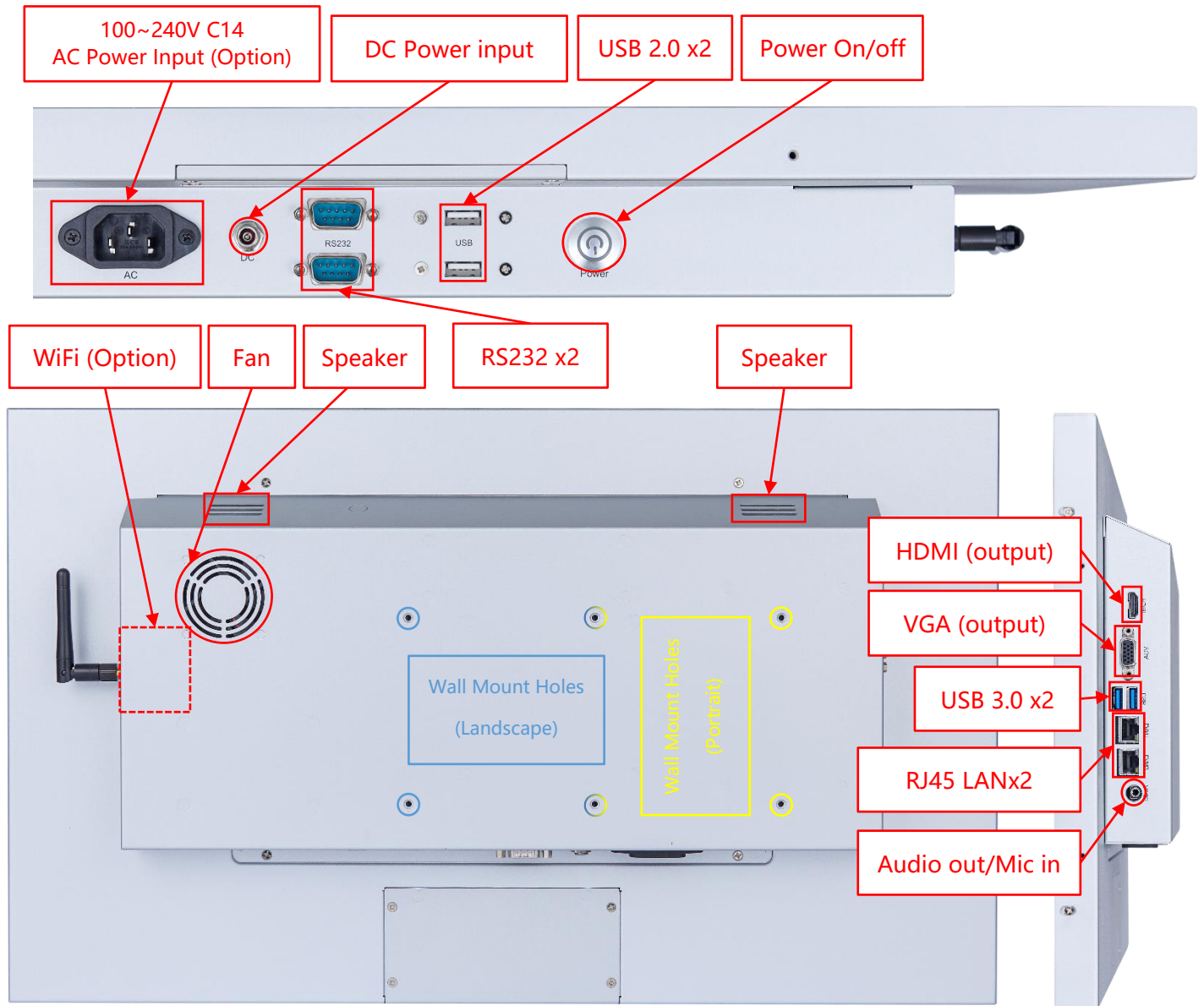


DC-in



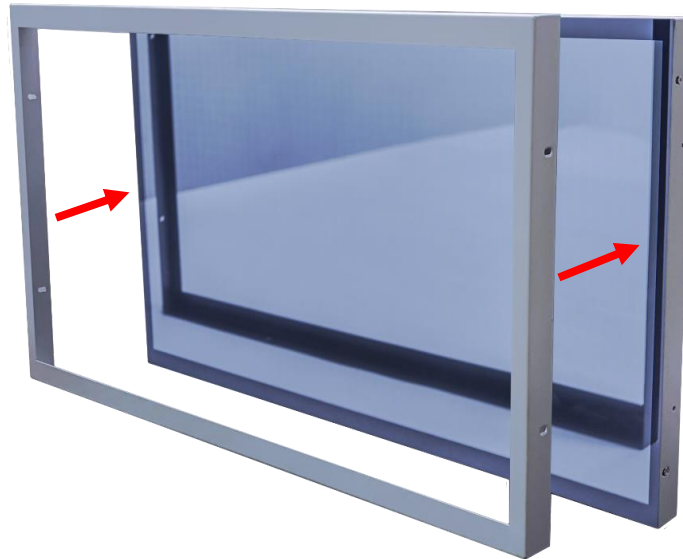
AC-in

## Input /Output System



Input / Output	Connectors	Input / Output	Connectors
HDMI (Output)	1	USB 3.0	2
VGA (Output)	1	USB 2.0	2
Audio Output /Mic Input (3.5mm)	1	RS232	2
DC Power Input	1	LAN (RJ45)	2
AC Power Input	<b>Option</b>	Wi-Fi/Bluetooth & Antenna	<b>Option</b>
Speakers	<b>2W x2</b>		

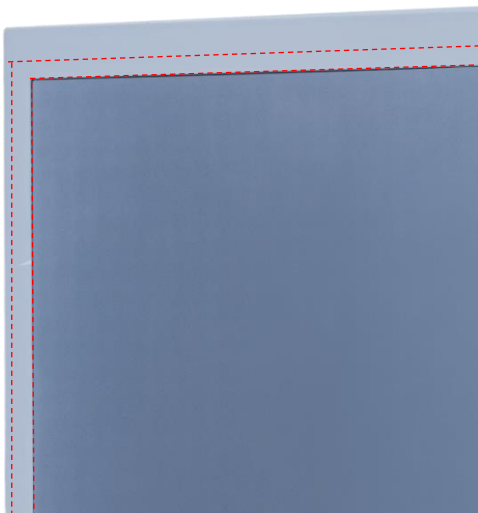
## Front Cover (Option)



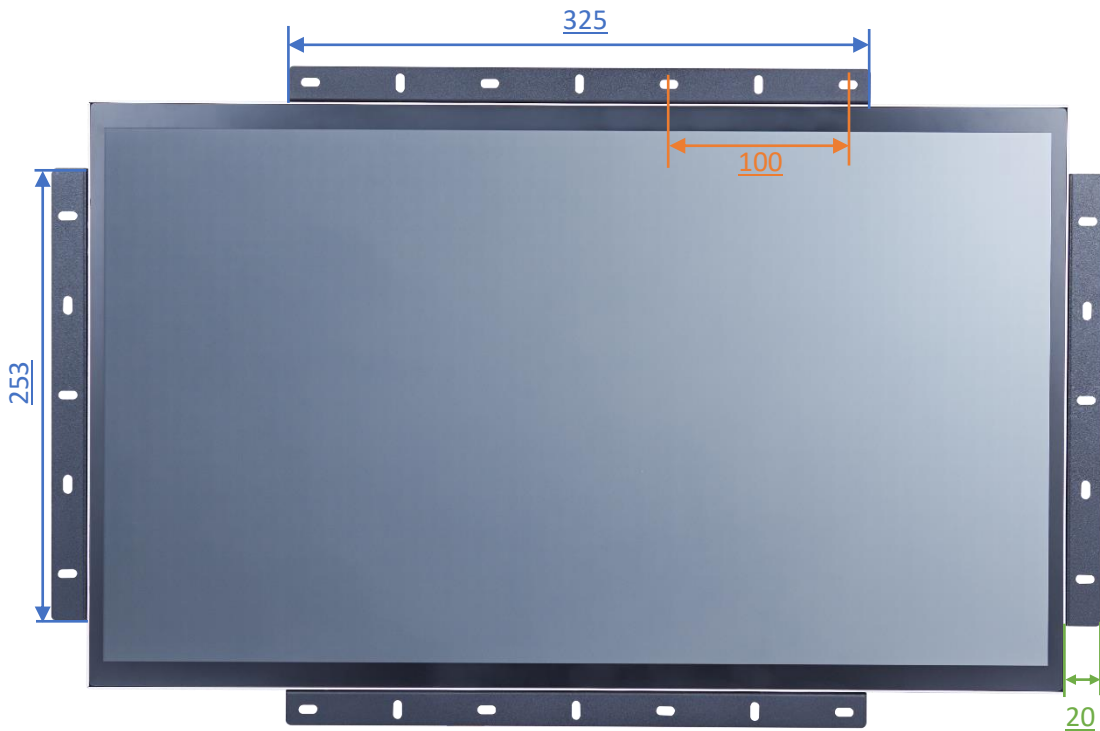
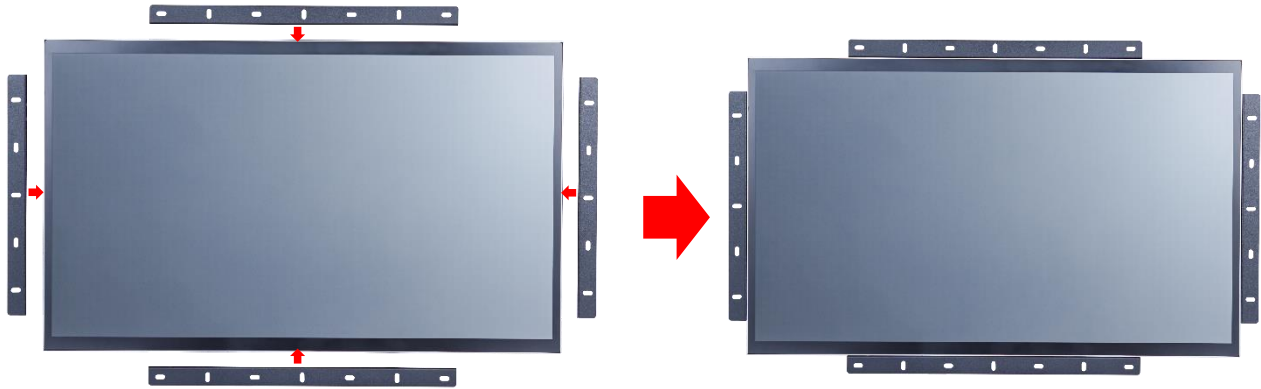
The standard **NTWP238** is true flat surface, with only 1mm metal bezel.  
To protect the corners of the touch screen, the **Front Cover** can be added.



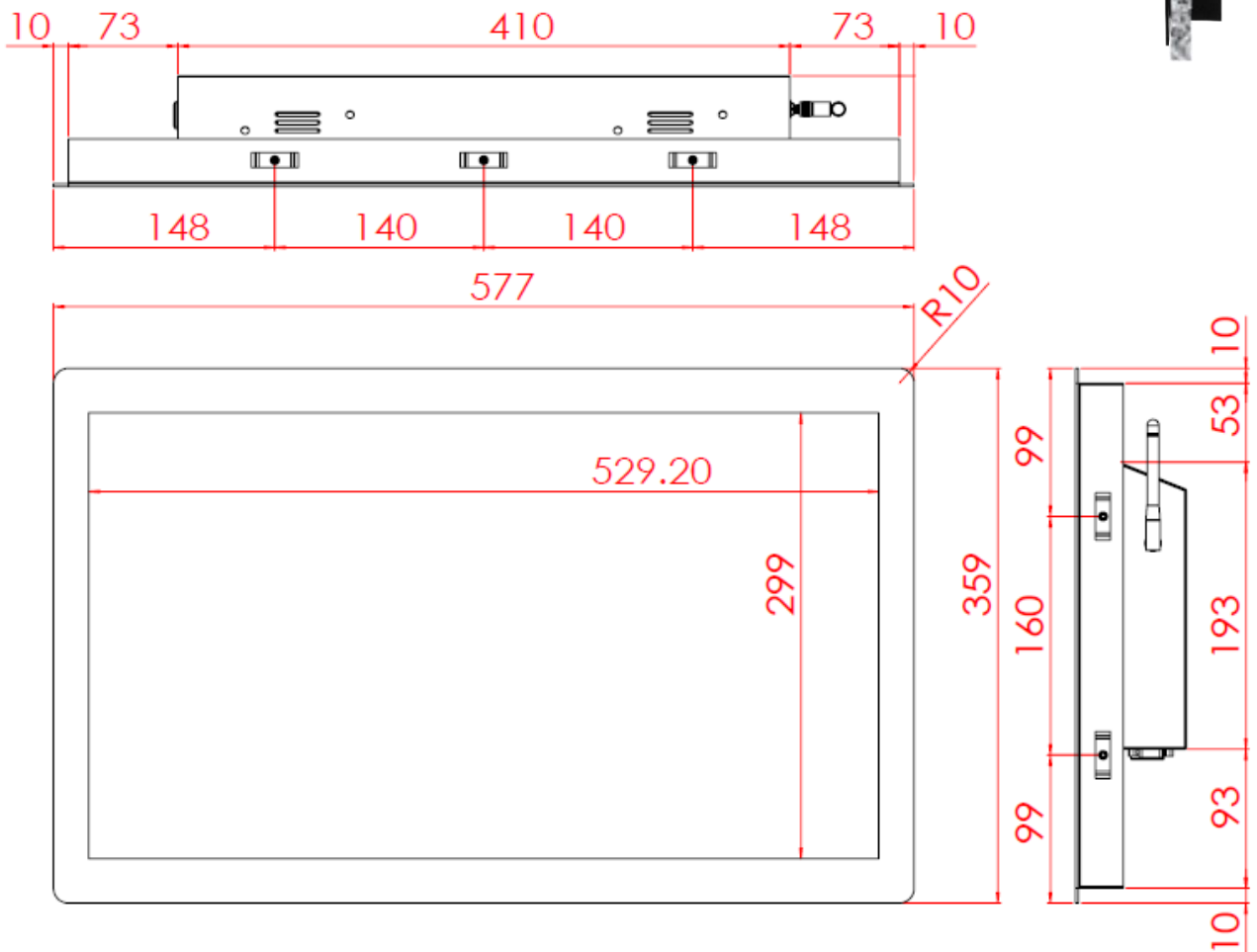
The watertight gasket can be added between the **Front Cover** and **NTWP238**.  
It complies **IP65** on front.

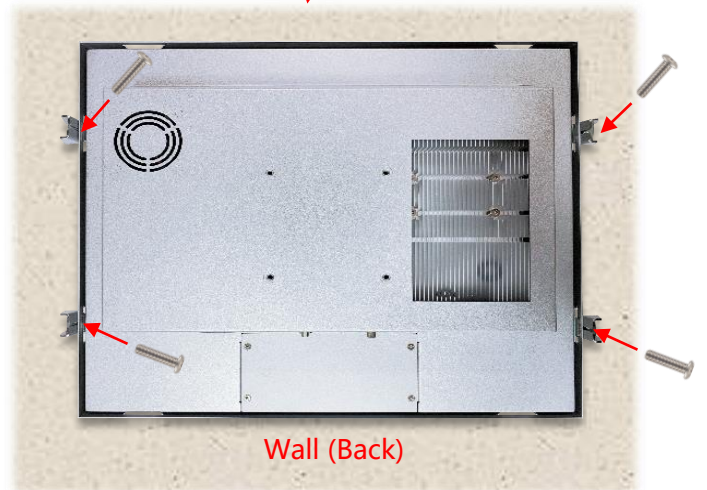
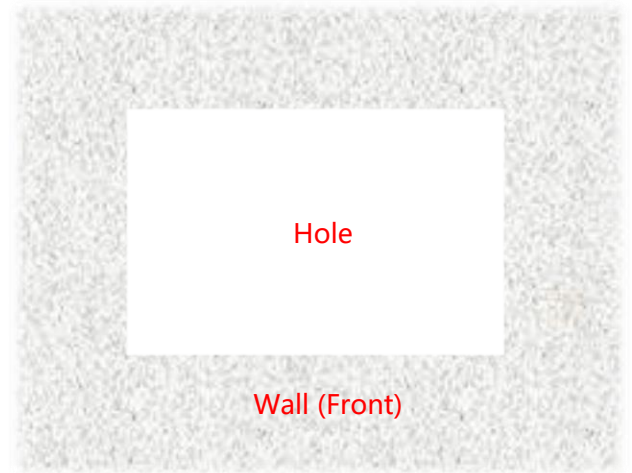
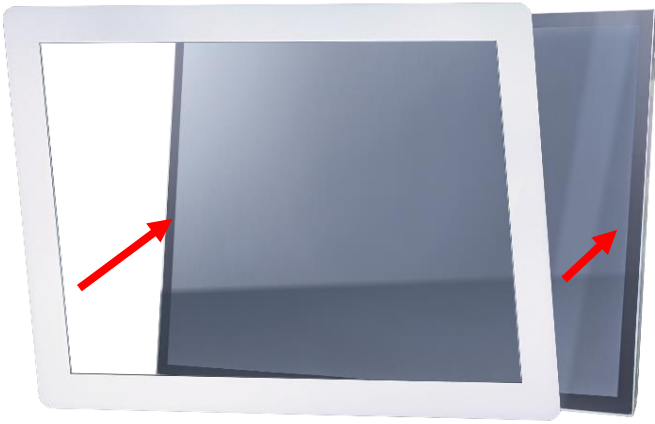


## Open-frame Brackets (Option)



### Panel Mount Kits (Option)



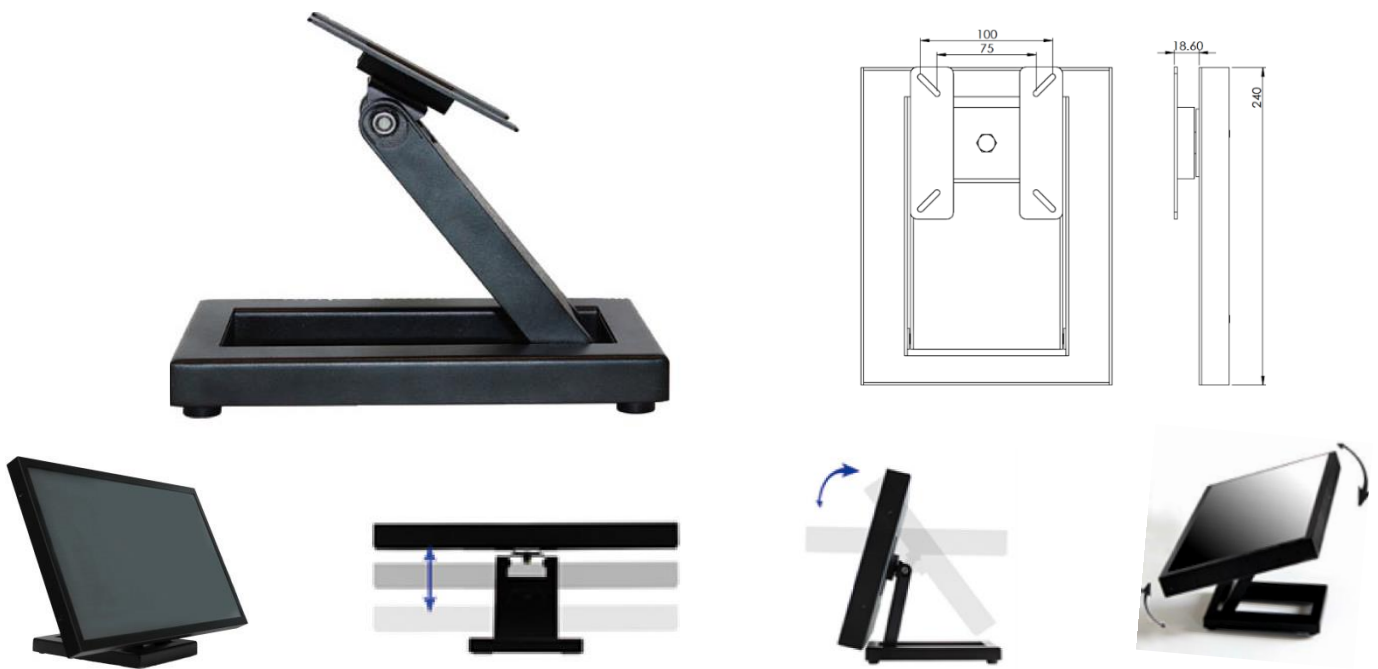


### Desktop Stand (Option)

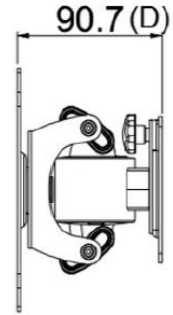
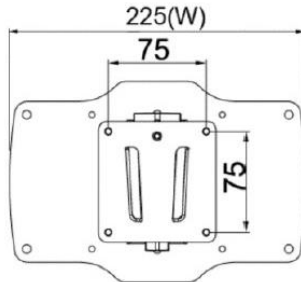
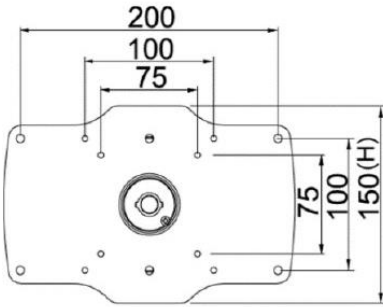
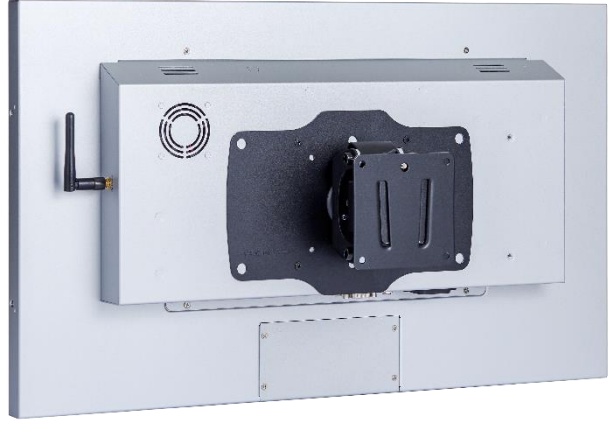
Item	B Stand	Part No.	DST-0B002/DST-1B002
Mounting Pattern	100x100 / 75x75 mm	Dimension (WxHxD)	203x275x227 mm
Material	Steel/Plastic/Aluminum	Net Weight	1.8 KG
Tilt (Hinge)	-2° ~ +180°	Support Max. Weight	15 KG



Item	Z Stand	Part No.	DST-0BZ01/DST-1BZ01
Mounting Pattern	100x100 / 75x75 mm	Dimension (WxHxD)	190x240x41.6
Material	SECC	Net Weight	2.6 KG
Tilt (Hinge)	±360°	Support Max. Weight	15 KG



## Wall Mount Bracket (Option)



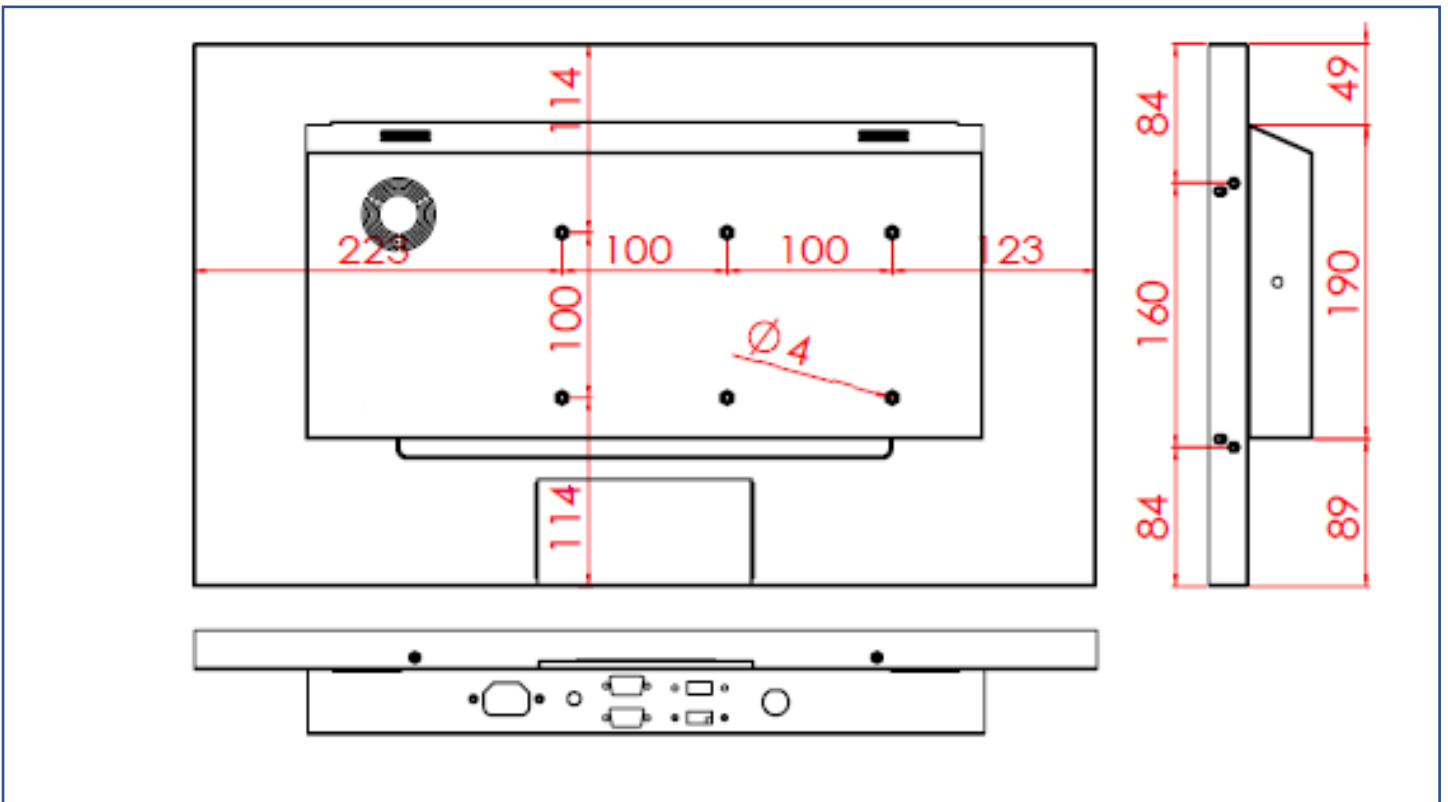
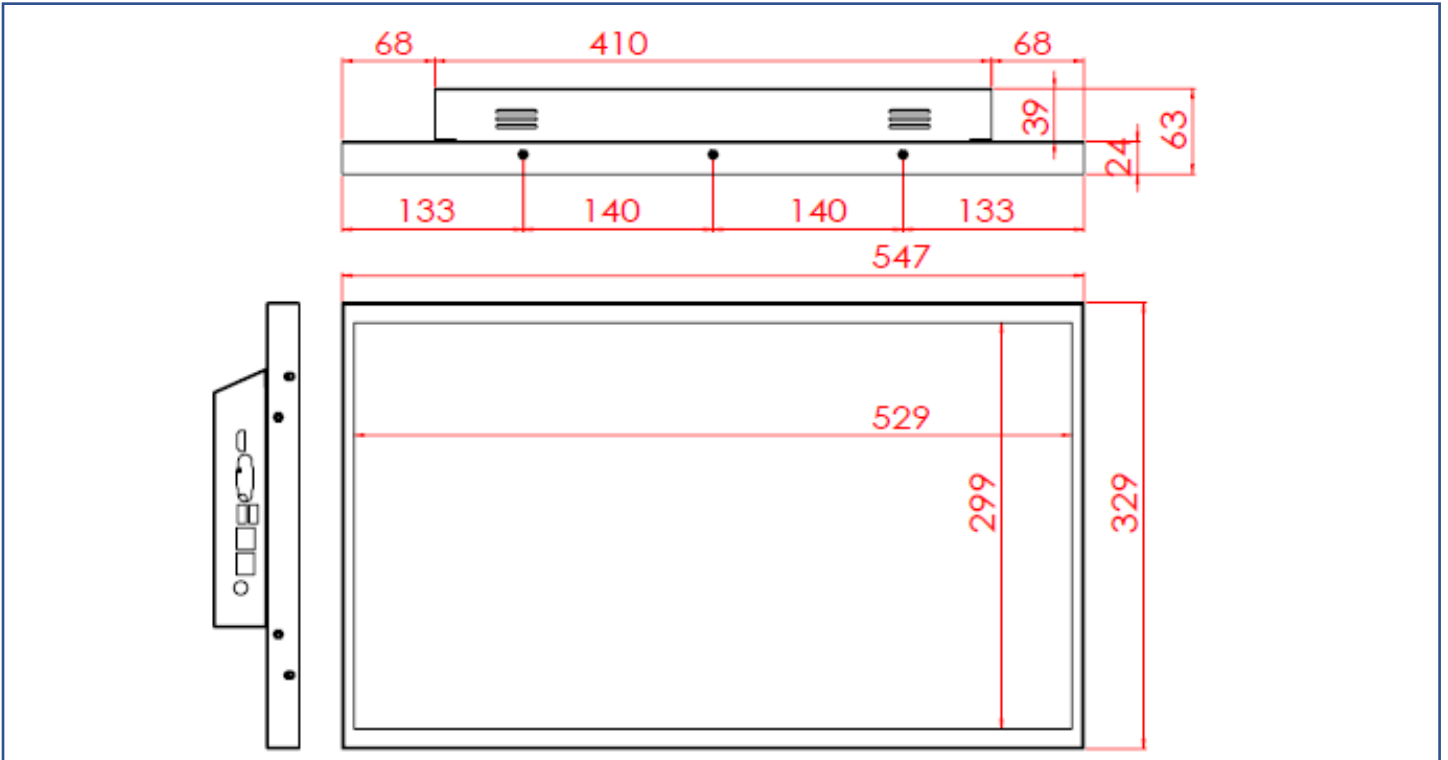
## Packing Information



Dimensions of Carton	<b>772x200x523 mm</b>
Net Weight	<b>≤6.4 KG</b>
Gross Weight	<b>≤8.8 KG</b>

## Physical Specifications

Dimension	<b>547x329x63(±2)mm</b>	Net Weight	<b>≤6.4 KG</b>
VESA Mounting	<b>100x100 mm</b>	Gross Weight	<b>≤8.8 KG</b>



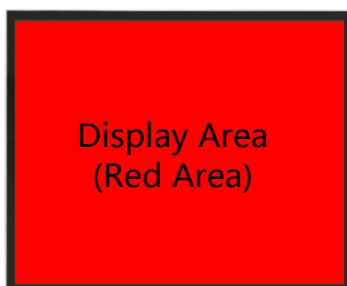
## Cosmetic Inspection Standard

Display Area Allowance			
Defect description	Defective Specifications	Allowance	Remarks
Dot Defect (including dark dot, particles, bubbles, pits, dust, foreign matter)	$D \leq 0.2\text{mm}$	Ignored	D=Diameter
	$0.2 < D \leq 0.7\text{mm}$	$N \leq 5$	N=Quantity
	$0.7 < D \leq 1\text{mm}$	$N \leq 3$	
	$D > 1\text{mm}$	$N \leq 0$	
Linear Defect (including scratches, fluff, particles)	$W \leq 0.15\text{mm}$	Ignored	W=Width
	$0.15 < W \leq 0.5\text{mm}, L \leq 15\text{mm}$	$N \leq 2$	L=Length
	$W > 0.5\text{mm}$ or $L > 15\text{mm}$	NG	

\* Visual inspection distance: 60cm, 90 degree (same for front/side/back)

Front Appearance Allowance (Including Coating)			
Defect description	Defective Specifications	Allowance	Remarks
Dot Defect (including particles, bubbles, pits...etc.)	$D \leq 0.7\text{mm}$	Ignored	D=Diameter
	$0.7 < D \leq 1.5\text{mm}$	$N \leq 3$	N=Quantity
	$D > 1.5\text{mm}$	$N \leq 0$	
Linear Defect (including scratches, fluff, particles)	$W \leq 0.2\text{mm}, L \leq 15\text{mm}$	Ignored	W=Width, L=Length
	$0.2 < W \leq 0.7\text{mm}, L \leq 15\text{mm}$	$N \leq 1$	
	$W > 0.7\text{mm}$ or $L > 15\text{mm}$	NG	

Side / Back Appearance Allowance (Including Coating)			
Defect description	Defective Specifications	Allowance	Remarks
Dot Defect (including particles, bubbles, pits...etc.)	$D \leq 1.5\text{mm}$	Ignored	D=Diameter
	$1.5 < D \leq 3\text{mm}$	$N \leq 8$	N=Quantity
	$D > 3\text{mm}$	$N \leq 2$	
Linear Defect (including scratches, fluff, particles)	$W \leq 0.8\text{mm}, L \leq 15\text{mm}$	Ignored	W=Width, L=Length
	$0.8 < W \leq 1.5\text{mm}, L \leq 15\text{mm}$	$N \leq 5$	
	$W > 1.5\text{mm}$ or $L > 15\text{mm}$	NG	



Display Area  
(Red Area)



Front Appearance (Red Area)



Back Appearance