Product Specifications

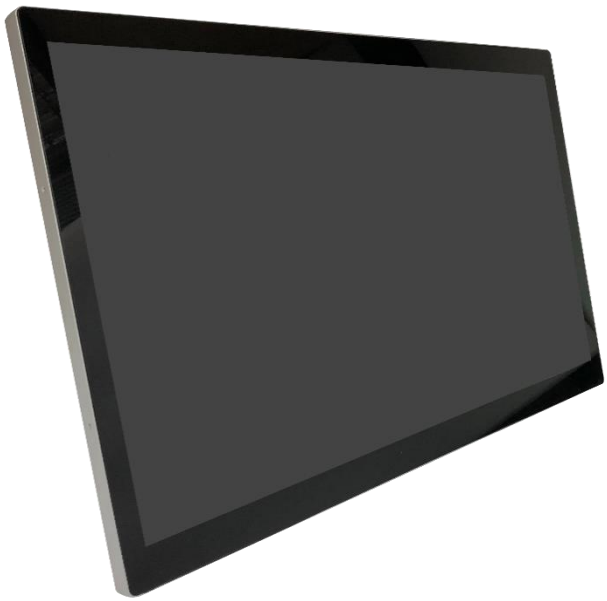
Customer	
Model	**NTSP270XXXB V500**

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

Records of Revision			
Vision	**Modifying**	**Old Description**	**New Description**
V2003.1	**Preliminary Specifications**		

Features

★ The NTSP270XXXB is a barebone of 27" PCAP touch bonded on 27" TFT LCD.
★ 1920x1080 (FHD) Resolution, LVDS interface.
★ Wide Viewing Angle Technology (178°/178°)
★ True Flat USB 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
★ Designed for Harsh Environments
★ Optional High Brightness/Sunlight Readable
★ Optional AG/AR/AF/AS Film
★ **Optional Antibacterial Film Option, disinfects 99.99% of Harmful Bacteria**



PSE BSMI FCC CE RoHS ISO9001

Display Specifications

Model Name	**NTSP270XXXB-XXXXX-500***	Display Mode	**VA Type, Normally Black**
Screen Diagonal	**685.6mm (27.0 inch)**	Response Time	**5 msec.**
Display Area	**597.6x336.2 mm**	Backlight Unit	**LED (white LED)**
Resolution	**1920x1080 (FHD)**	Viewing Angle (L/R, U/D)	**178°/178° (CR=10)**
Contrast Ratio	**3000:1**	Backlight Lifetime	**30000 Hours**
Display Ratio	**16:9**	Operating Temp.	**0~50℃**
Support Color	**16.7M Colors**	Storage Temp.	**-20~60℃**
Pixel Pitch	**311.25x311.25 um**	Surface Treatment	**Anti-glare, Hardness 3H**

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

General Options

Brightness			
	Brightness	**Environment**	**Model Name**
Standard	**300nits**	**General (Indoor Environment)**	**NTSP270NXXB-XXXXX-500**
Option	1000nits	Outdoor Environment	NTSP270AXXB-XXXXX-500

Material of Cabinet		
	Description	**Model Name**
Standard	**Galvanized steel (SECC)**	**NTSP270XXXB-XXXXS-500**
Option 1	Stainless Steel	NTSP270XXXB-XXXXL-500
Option 2	Aluminum	NTSP270XXXB-XXXXA-500

Color of Cabinet		
	Description	Model Name
Standard	**Sliver**	**NTSP270XXXB-XXSXX-500**
Option 1	Black	NTSP270XXXB-XXBXX-500
Option 2	White	NTSP270XXXB-XXWXX-500
Options	Other Color	NTSP270XXXB-XXXXX-500

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

TFT-LCD Module

LVDS Pin Assignment		
Pin #	**Symbol**	**Description**
1	RxO0-	Negative LVDS Differential Data Input (Old Data)
2	RxO0+	Positive LVDS Differential Data Input (Old Data)
3	RxO1-	Negative LVDS Differential Data Input (Old Data)
4	RxO1+	Positive LVDS Differential Data Input (Old Data)
5	RxO2-	Negative LVDS Differential Data Input (Old Data, H-Sync, V-Sync, DSPTMG)
6	RxO2+	Positive LVDS Differential Data Input (Old Data, H-Sync, V-Sync, DSPTMG)
7	GND	Ground
8	RxOCLK-	Negative LVDS Differential Clock Input (Old Clock)
9	RxOCLK+	Positive LVDS Differential Clock Input (Old Clock)
10	RxO3-	Negative LVDS Differential Data Input (Old Data)
11	RxO3+	Positive LVDS Differential Data Input (Old Data)
12	RxE0-	Negative LVDS Differential Data Input (Even Data)
13	RxE0+	Positive LVDS Differential Data Input (Even Data)
14	GND	Ground
15	RxE1-	Negative LVDS Differential Data Input (Even Data)
16	RxE1+	Positive LVDS Differential Data Input (Even Data)
17	GND	Ground
18	RxE2-	Negative LVDS Differential Data Input (Even Data)
19	RxE2+	Positive LVDS Differential Data Input (Even Data)
20	RxECLK-	Negative LVDS Differential Clock Input (Even Clock)
21	RxECLK+	Positive LVDS Differential Clock Input (Even Clock)
22	RxE3-	Negative LVDS Differential Data Input (Even Data)
23	RxE3+	Positive LVDS Differential Data Input (Even Data)
24	GND	Ground
25	NC	No Connection
26	NC	No Connection
27	NC	No Connection
28	VDD	+5V Power Supply
29	VDD	+5V Power Supply
30	VDD	+5V Power Supply

* Connector : P-TWO AL230F-A0G1D-P or STM MSCKT2407P30HB

* Mating Connector : JAE FI-X30HL Locked Type or Compatible.

Recommended Operating Condition					
Symbol	Description	Min.	Typ.	Max.	Remark
VDD	Power Supply Input Voltage	4.5V	5.0V	5.5V	
IDD	Power Supply Input Current (RMS)	-	0.93A	1.22A	VDD=5V, All White Pattern at 60Hz
			1.22A	1.46A	VDD=5V, All White Pattern at 75Hz
PDD	VDD Power Consumption	-	4.65W	6.1W	VDD=5V, All White Pattern at 60Hz
			6.1W	7.3W	VDD=5V, All White Pattern at 75Hz
IRush	Inrush Current	-	-	3.0A	
VDDrp	Allowable VDD Ripple Voltage	-	-	500mV	VDD=5V, Black Pattern, Fv=75Hz

Input Timing							
Symbol	Description		Min.	Typ.	Max.	Unit	Remark
Tv	Vertical Section	Period	1092	1130	1793	Th	
Tdsip (v)		Active	1080	1080	1080	Th	
Tblk (v)		Blanking	12	50	713	Th	
Fv		Frequency	50	60	76	Hz	
Th	Horizontal Section	Period	1004	1050	1100	Tclk	
Tdisp (h)		Active	960	960	960	Tclk	
Tblk (h)		Blanking	44	90	140	Tclk	
Fh		Frequency	55	68	90	KHz	
Tclk	LVDS Clock	Period	11.1	14.0	18.2	ns	I/Fclk
Fclk		Frequency	54.8	71.2	90.0	MHz	

Input Timing					
Symbol	Min.	Typ.	Max.	Unit	Remark
T1	0.5	-	10	ms	
T2	0	-	50	ms	
T3	500	-	-	ms	
T4	100	-	-	ms	
T5	0		50	ms	
T6	0		200	ms	
T7	1000	-	-	ms	

Backlight Unit

Connector Assignment			
Pin #	**Symbol**	**Description**	**Remark**
1	**Ch1**	**LED Current Feedback Terminal (Channel 1)**	
2	**Ch2**	**LED Current Feedback Terminal (Channel 2)**	
3	**V_{SLED}**	**LED Power Supply Voltage Input Terminal**	
4	**V_{SLED}**	**LED Power Supply Voltage Input Terminal**	
5	**Ch3**	**LED Current Feedback Terminal (Channel 3)**	
6	**Ch4**	**LED Current Feedback Terminal (Channel 4)**	

* Connector : Entry Industrial 3707K-S06N-21 (Black) (Locking type, Wire Harness)

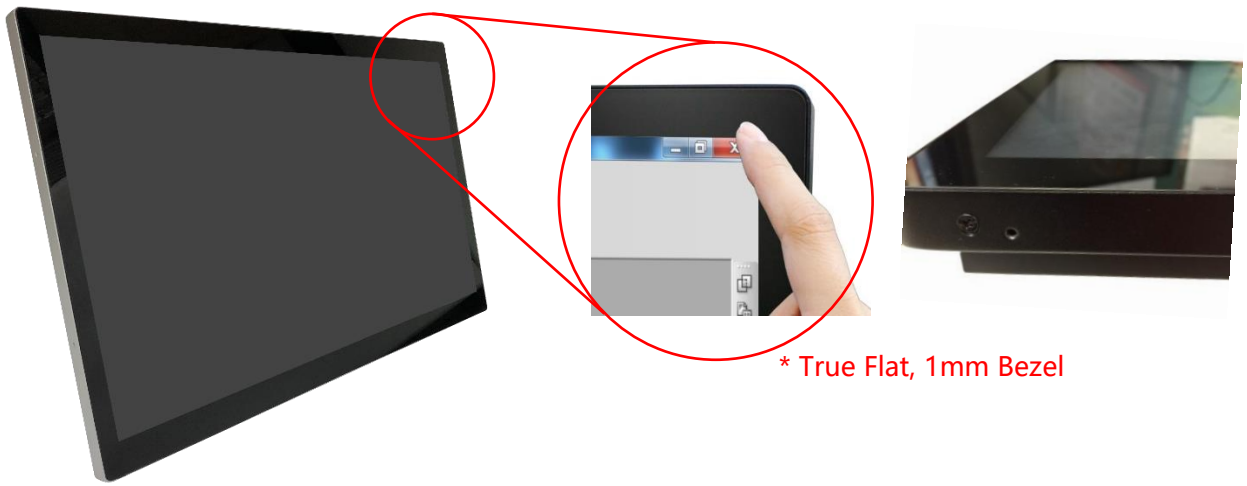
Recommended Operating Condition					
Symbol	**Description**	**Min.**	**Typ.**	**Max.**	**Remark**
Is	LED String Current	-	70mA	77mA	100% Duty Ratio of LED Chip.
Vs	LED String Voltage	40V	42.87V	48.59V	Is=90mA@100% Duty Ratio.
△Vs	Maximum Vs Voltage Deviation of Light Bar	-	-	3V	Is=90mA@100% Duty Ratio.
P_{BLU}	LED Light Bar Power Consumption	-	12W	13.6V	
LT_{LED}	LED Lifetime	30,000 Hours			
OVP	Over Voltage Protection in System Board	110% Vsmax Volt			

Supported OS

Windows	**Win7, Win8, Win10 ↑**
Linux	**Kernel 2.6.24 ↑**
Android	**3.0 ↑**
Mac	**10.5.x ↑ (Intel CPU)**

Touch Specifications

Touch Technology	**Projected Capacitive**	Transparency	**≧87%**
Allowed Touch Points	**10 points**	Accuracy	**99.00%**
Interface	**USB/RS232 (Optional)**	Thickness of Cover Lens	**2.0±0.2mm**
Hardness of Cover Lens	**7H**		



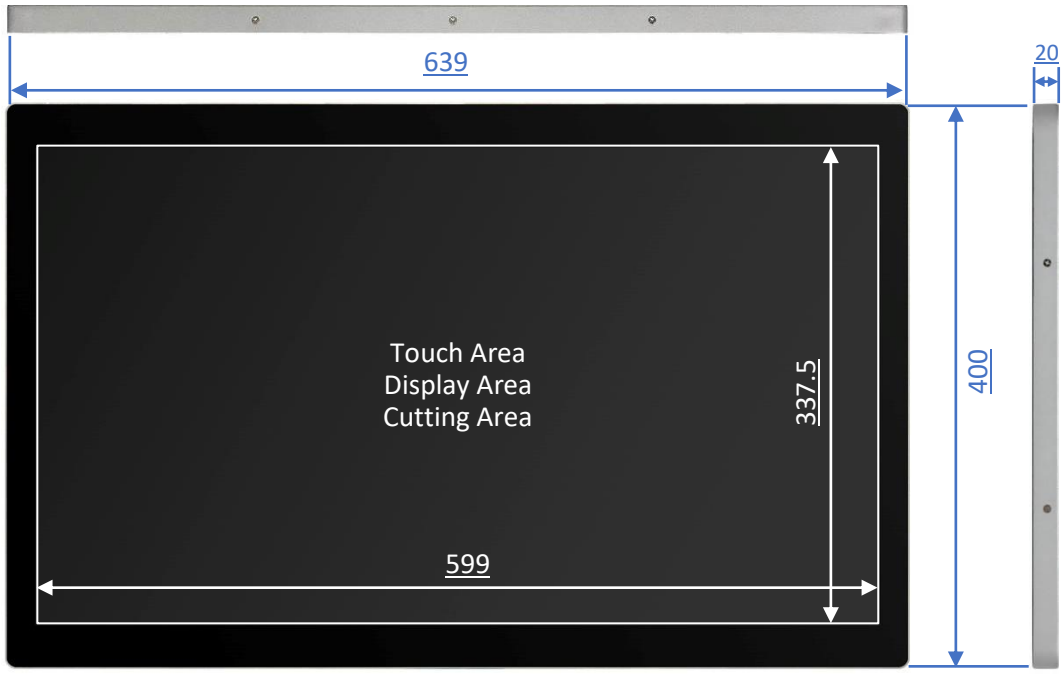
* True Flat, 1mm Bezel

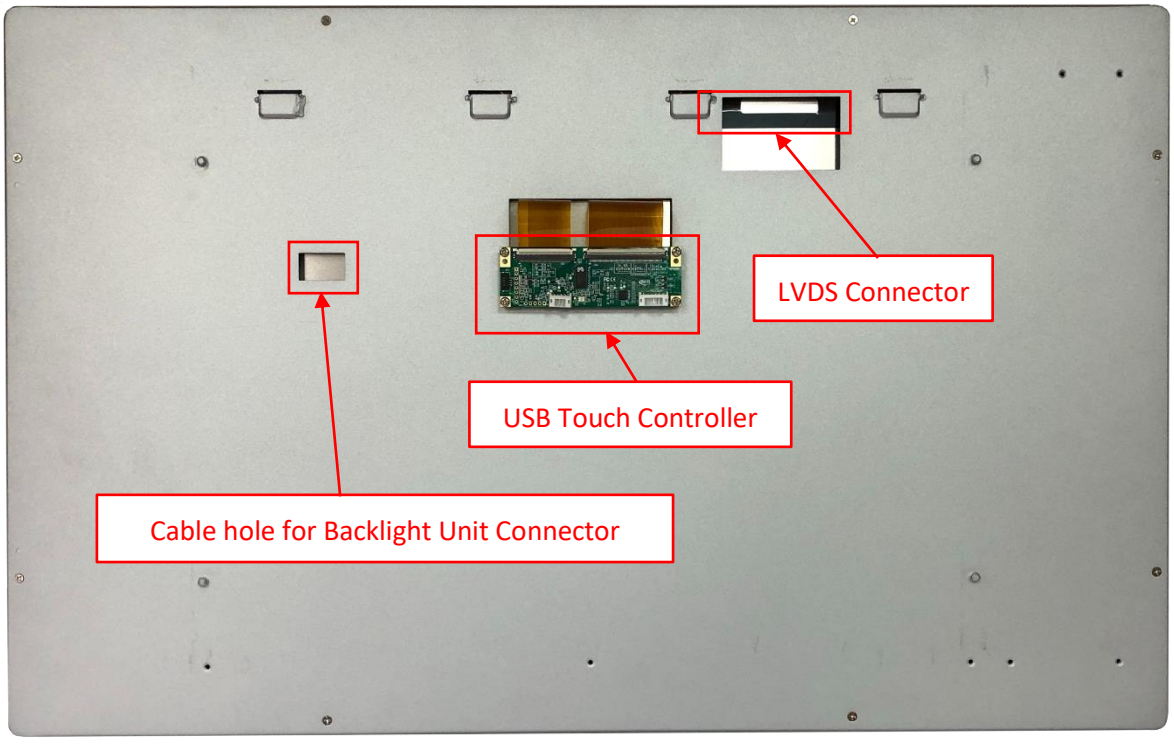
Active Stylus Option	
Technology	**Active Capacitive Coupled**
Working Frequencies	**90~250 KHZ**
Pressure Level	**256~1024 Levels**
Side Buttons	**2 Side Buttons (Eraser, Barrel)**
Active Tip Force	**5~25g**
Max. Tip Force	**400g**

Surface Film Options		
	Description	**Model Name**
Standard	**(none)**	**NTSP270XXXB-00XXX-500**
Option	Antibacterial (AB Film)	NTSP270XXXB-ABXXX-500
Option	Anti-Glare +UV-Cut (AG+UV Film)	NTSP270XXXB-GUXXX-500
Option	Anti-Glare +Fouling/Fingerprint (AG+AFP Film)	NTSP270XXXB-GPXXX-500
Option	Anti-Reflective +Fouling/Fingerprint (AR+AFP Film)	NTSP270XXXB-RPXXX-500
Option	Anti-Glare +Reflective +Fouling/Fingerprint (AG+AR+AFP Film)	NTSP270XXXB-GRXXX-500
Option	Anti-Spy (AS Film)	NTSP270XXXB-SFXXX-500

Physical Specifications

Dimension (Max)	**639x400x20(±1)mm**	Net Weight	**≦7.7 KG**
		Gross Weight	**≦8.1 KG**

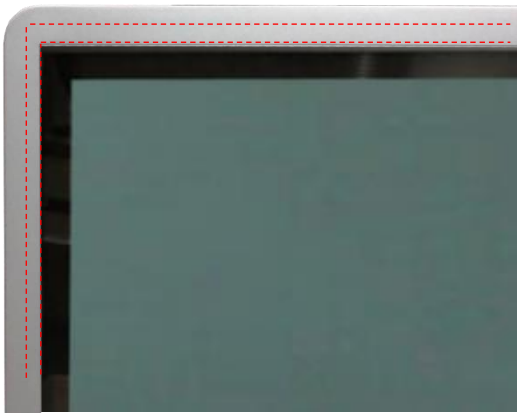




Optional Accessories (Front Cover)

The standard **NTWP270** 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 **NTWP270.**
It complies IP65 on front.



Optional Accessories (Open-frame Brackets)