

element™

## **M15-FHD**

Digital Display User Manual



## About This Document

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## Compliance Information

### For FCC (USA)

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy, and if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

### For IC (Canada)

CAN ICES-3(B)/NMB-3(B)

### For CE (EU)

The device complies with the EMC Directive 2014/30/EU and Low Voltage Directive 2014/35/EU

## Renseignements relatifs à la conformité

### Pour la FCC (États-Unis).

Ce matériel a fait l'objet d'essais qui ont déterminé qu'il respectait les limites d'un appareil de classe B selon la partie 15 des règlements de la FCC. Ces limites sont établies pour assurer une protection raisonnable contre les parasites nuisant à une installation résidentielle. Ce matériel génère, utilise et peut émettre des ondes radio électriques, et lorsqu'il n'est pas installé et utilisé selon les instructions, peut causer des parasites nuisant aux communications radio. Il n'y a toutefois aucune garantie qu'il n'y aura pas de parasites dans une installation en particulier. Si ce matériel cause des parasites à la réception d'ondes radio ou de télévision, ce qui peut être déterminé en l'éteignant et en l'allumant, l'utilisateur est invité à essayer de corriger le problème des parasites par l'une ou l'autre des mesures suivantes :

- Réorienter ou déplacer l'antenne de réception.
- Augmenter la distance entre le matériel et la réception.
- Brancher le matériel dans une prise sur un autre circuit que celui où le récepteur est branché.
- Consulter le distributeur ou un technicien radio ou TV expérimenté pour des conseils.

L'appareil respecte la partie 15 des règlements de la FCC. Le fonctionnement doit respecter les deux conditions suivantes : 1) cet appareil ne doit pas causer de parasites et (2) cet appareil doit accepter tous les parasites reçus, notamment ceux pouvant causer un fonctionnement non voulu.





### Pour Industrie Canada

Norme canadienne NMB-3(B)

### Pour la CE (UE)

L'appareil respecte la directive 2014/30/UE relative à la compatibilité électromagnétique et la directive 2014/35/EU sur les limites de basse tension

## Usage Notice

-  **Warning - To prevent the risk of fire or shock hazards, and do not expose the product to moisture.**
-  **Warning - Please do not open or disassemble the product as this may cause electric shock.**
-  **Warning - Power cord shall be connected to a socket-outlet with earthing connection.**
-  **Warning - The cable cover cannot be removed under normal use conditions.**
-  **Warning - Stability Hazard. The touch monitor may fall, causing serious personal injury or death. To prevent injury, this touch monitor must be securely attached to the wall in accordance with the installation instructions.**

## Precautions

Please follow all warnings, precautions and maintenance as recommended in this user's manual to maximize the life of your unit.

### **Do :**

- Turn off the product before cleaning.
- Use a soft cloth moistened with mild detergent to clean the product housing.
- Use only the qualified power adapter that comes with your device.
- Disconnect the power plug from AC outlet if the product is not going to be used for an extended period of time.

### **Don't :**

- Do not use abrasive cleaners, waxes or solvents for your cleaning.
- Do not operate the product under the following conditions:
  - Extremely hot, cold or humid environment.
  - Areas susceptible to excessive dust and dirt.
  - Near any appliance generating a strong magnetic field.

## Avis d'utilisation



Mise en garde — Pour prévenir les risques d'incendie ou d'électrocution, ne pas exposer le produit à l'humidité.



Mise en garde — Prière de ne pas ouvrir ou démonter le produit, car cela pourrait entraîner l'électrocution.



Mise en garde – Le cordon d'alimentation doit être branché à une prise pourvue d'une mise à la terre.



Mise en garde – La gaine du câble ne doit pas être retirée en conditions normales d'utilisation.



Mise en garde — Risque de renversement. Le moniteur tactile peut se renverser et causer de graves blessures corporelles, voire la mort. Pour prévenir les blessures, ce moniteur tactile doit être solidement fixé au mur selon les instructions d'installation.

## Précautions

Veuillez suivre toutes les mises en garde, précautions et entretiens recommandés dans ce manuel d'utilisation pour maximiser la durée de vie de votre unité.

### **À faire :**

- Éteindre l'appareil avant de le nettoyer.
- Utiliser un chiffon humidifié par une solution savonneuse pour nettoyer le boîtier du produit.
- Utiliser uniquement l'adaptateur d'alimentation prescrit pour votre appareil.
- Débrancher l'appareil lorsqu'il n'est pas utilisé pendant une période prolongée.

### **À éviter :**

- Ne pas utiliser de nettoyeurs abrasifs, de cires ou de solvants pour le nettoyage
- Ne jamais utiliser l'appareil dans les conditions suivantes :
  - des conditions environnementales extrêmes (chaud, froid ou humidité)
  - des endroits remplis de poussières et de saletés.
  - à proximité d'appareils produisant un fort champ magnétique.

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## Product Information

### 1.1 Overview

The M15-FHD series is a 15" touchscreen monitor is designed and developed to provide flexible monitor that can optional install Camera or MSR. The M15-FHD is a 15 inches SXGA (1920 x 1080) LCD monitor with a P-cap touch screen and 10 touch points.

### 1.2 Feature

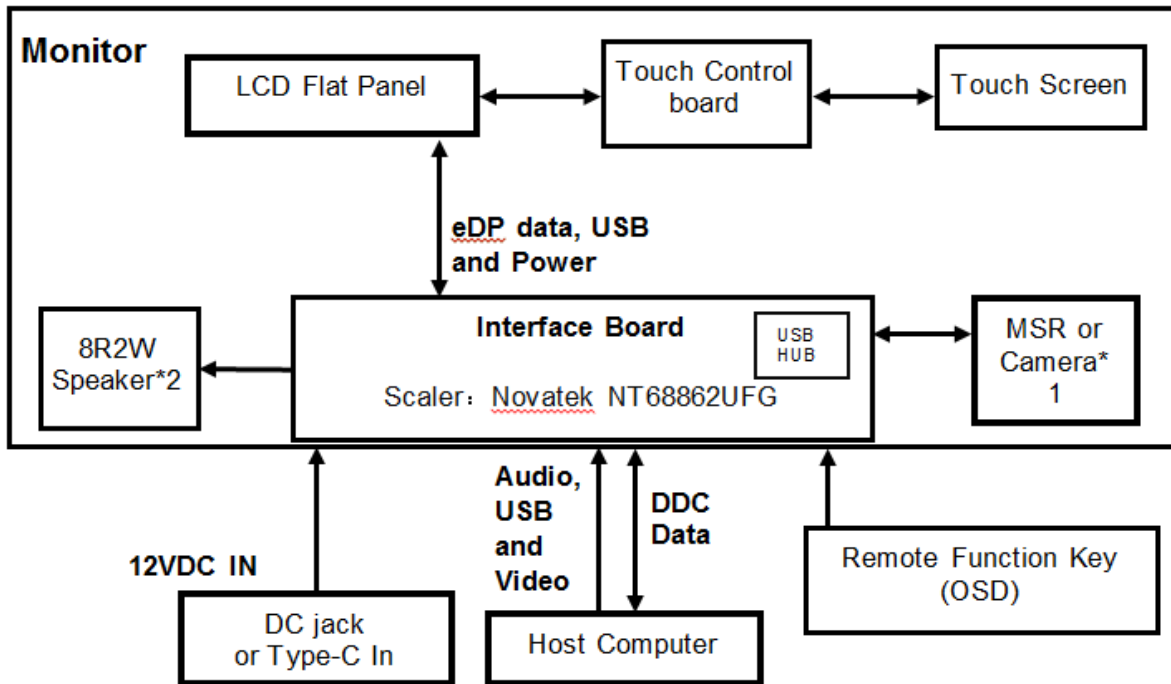
- To provide optional assembly accessories
- To support VESA mount 100mm x 100mm
- 1920 x RGB x 1080 resolution
- With P-cap touch

### 1.3 Specifications

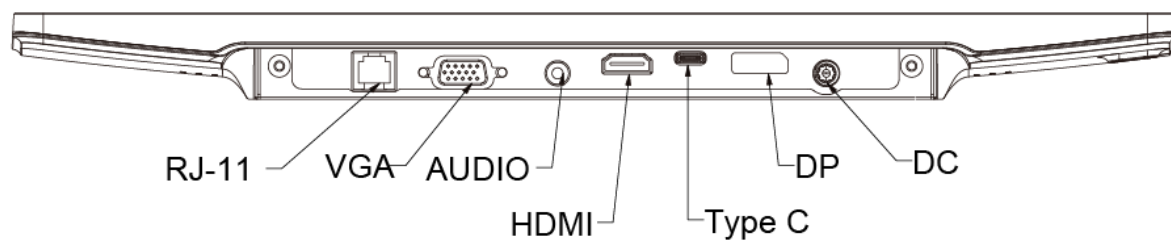
LCD Touch Panel	
Size	15" TFT LCD
Brightness	450 cd/m <sup>2</sup> (Non-touch screen) 360 cd/m <sup>2</sup> (P-CAP)
Number of Pixels	1920 (H) × RGB x 1080 (V)
Touch Type	P-CAP/ 10 points
Environment	
Certificate	CE 、 FCC
Compliance	IPX0
Operating Temperature	0°C ~ 40°C
Storage Temperature	-20°C ~ 60°C
Operating Humidity	0% ~ 90% RH, non-condensing
Mounting	VESA 100 mm x 100 mm
Dimension (W x H x D)	223.7 mm x 369.1 mm x 27.2 mm(w/o stand) 249.3 mm x 369.1 mm x 170 mm(w/ stand)
Net Weight	3.80 Kg (Typ.)
Gross Weight	5.78 Kg



## 1.4 Block Diagram



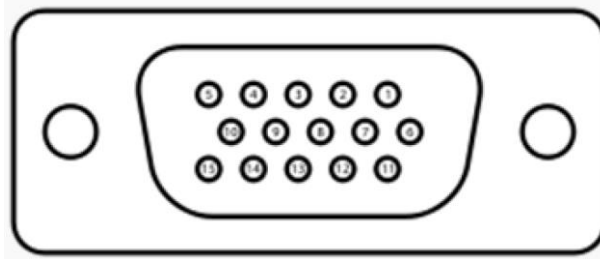
## 1.5 Interface Connectors



### 1.5.1 Power Connector

The AC/DC converter shall have an IEC320 type male power receptacle for connection to AC mains power. The power cord, exact type to be supplied in the appropriate Option Kit, shall be length of  $1.8 \pm 0.05$  meters, and PC99 compliant.

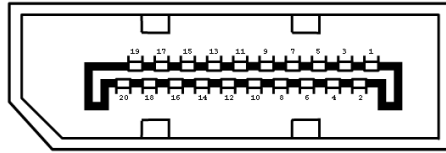
### 1.5.2 Video Signal Connector



The video signal input via D-type 15-pin female connector.  
Connector Pin Assignment:

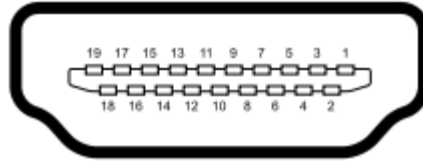
Pin	Signal
1	Red video signal input
2	Green video signal input
3	Blue video signal input
4	NC
5	DDC ground for the VESA DDC2B function
6	Analog signal ground for the red video
7	Analog signal ground for the Green video
8	Analog signal ground for the blue video
9	+ 5V: Input from host system for the VESA DDC2B function
10	Signal ground
11	NC
12	SDA signal input for the VESA DDC2B function
13	Horizontal signal input from host system
14	Vertical signal input from host system
15	SCL signal input for the VESA DDC2B function

### Display Port(1.2a)



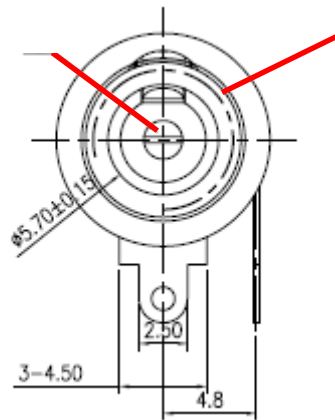
Pin	Signal	Pin	Signal
1	ML_Lane 0(p) Data0 +	11	Signal ground
2	Signal ground	12	ML_Lane 3(n) Data3 -
3	ML_Lane 0(n) Data0 -	13	Signal ground
4	ML_Lane 1(p) Data1 +	14	Signal ground
5	Signal ground	15	AUX_CH(p) AUX + Signal for Auxiliary Channel
6	ML_Lane 1(n) Data1 -	16	Signal ground
7	ML_Lane 2(p) Data2 +	17	AUX_CH(n) AUX - Signal for Auxiliary Channel
8	Signal ground	18	Hot Plug
9	ML_Lane 2(n) Data2 -	19	DP_PWR Return
10	ML_Lane 3(p) Data3 +	20	DP_PWR

### HDMI(1.3a)



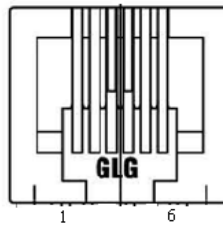
Pin	Signal	Pin	Signal
1	TMDS Data2+	11	TMDS Clock Shield
2	TMDS Data2 Shield	12	TMDS Clock-
3	TMDS Data2-	13	CEC
4	TMDS Data1+	14	Reserved (N.C. on device)
5	TMDS Data1 Shield	15	SCL
6	TMDS Data1-	16	SDA
7	TMDS Data0+	17	DDC/CEC Ground
8	TMDS Data0 Shield	18	+5V Power
9	TMDS Data0-	19	Hot Plug Detect
10	TMDS Clock+		

### DC JACK



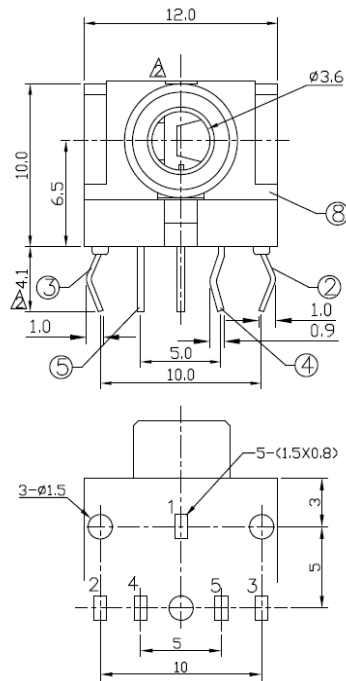
Pin	Signal
1	+12V
2	GND

### RJ11(Remove OSD key)



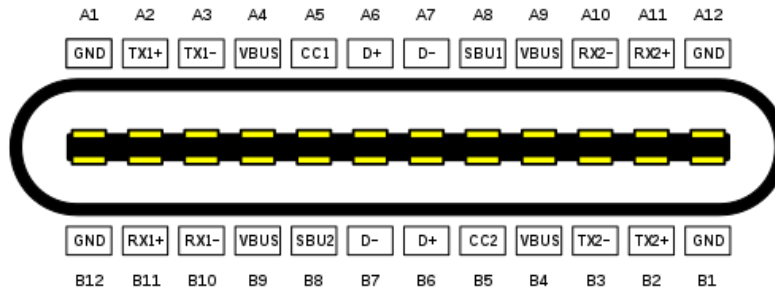
Pin	Signal	Pin	Signal
1	MENU	4	SELECT
2	LEFT_UP	5	KEY_PWR
3	RIGHT_DN	6	GROUND

### AUDIO IN JACK



Pin	Signal	Pin	Signal
1	GND	4	GND
2	Left_IN	5	DC_5V
3	Right_IN		

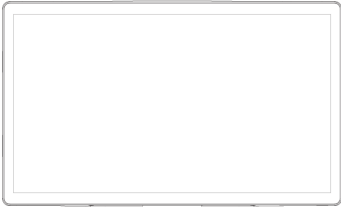
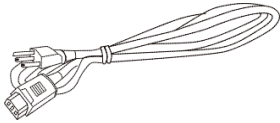
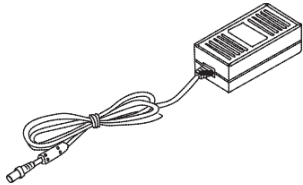
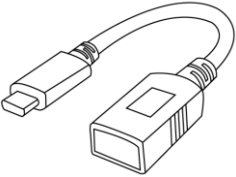
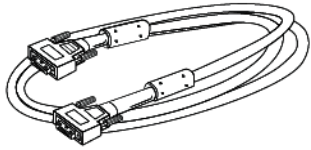
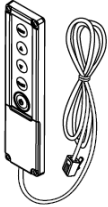
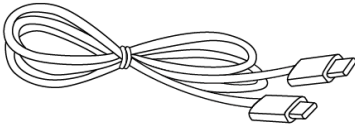
## Type-C USB Connector

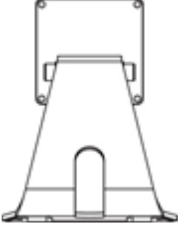



Pin	Signal	Pin	Signal
A1	GND	B12	GND
A2	SSTXp1	B11	SSRXp1
A3	SSTXn1	B10	SSRXn1
A4	VBUS	B9	VBUS
A5	CC1	B8	SBU2
A6	Dp1	B7	Dn2
A7	Dn1	B6	Dp2
A8	SBU1	B5	CC2
A9	VBUS	B4	VBUS
A10	SSRXn2	B3	SSTXn2
A11	SSRXp2	B2	SSTXp2
A12	GND	B1	GND



## 1.6 Package Overview

		
<p>LCD Display</p>	<p>Power Cord</p>	<p>DC Power Supply</p>
		
<p>TYPE-C to USB-A cable (Optional)</p>	<p>DP cable (Optional)</p>	<p>VGA cable (Optional)</p>
		
<p>OSD Remote key (Optional)</p>	<p>USB TYPE-C cable (Optional)</p>	<p>HDMI cable (Optional)</p>

	
Stand(Optional)	Screw



### Warning!

*This product is intended to be supplied by a Listed Power Adapter, rated 12Vdc, 1.5A minimum (complied with LPS or PS2), Tma = 40 degree C minimum, and the altitude of operation = 3048m minimum. If it needs further assistance with purchasing the power source, please contact to ELEMENT for further information.*



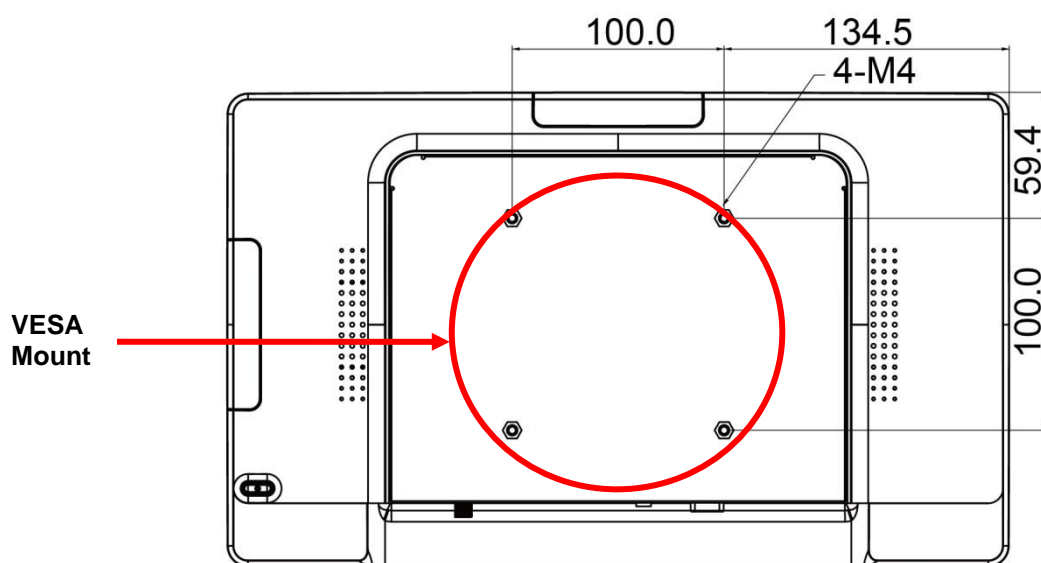
### Mise en garde!

*Cet appareil est conçu avec une alimentation de courant CA, d'une tension nominale de 12Vdc, 1.5A minimum (conforme LPS ou PS2), Tma = 40 degrés C minimum et l'altitude de l'utilisation = 3048m minimum. Pour d'autres conseils pour l'installation de la source d'alimentation, communiquer avec ELEMENT pour de plus amples renseignements.*

## Product Installation

### 2.1 About VESA Mount

The M15-FHD series conform to the “VESA Flat Display Mounting Interface Standard” which defines a physical mounting interface for touch monitor, and corresponding with the standards of touch monitor mounting devices. The VESA mount is located on the back of this unit.



#### Warning!

*Please select the ELEMENT original screws!*

*The distance between the back cover surface and the bottom of the screw hole is 8 mm. Please use four M4/8mm screws diameter with proper length to mount your monitor.*

*Note: The mounting stand must be able to support at least 7.67 lbs (3.48 Kg).*



#### Mise en garde!

*Sélectionner les vis d'origine de ELEMENT!*

*La distance entre la surface du couvercle arrière et le bas de l'orifice de la vis est de 8 mm. Utiliser les vis M4/8mm de diamètre pour le montage de votre moniteur.*

*Remarque : Le support de montage doit pouvoir supporter un poids d'au moins 7.67 lb (3,48kg).*

## 2.2 On-Screen Display



OSD Key	Menu off status	Menu on status
☰	Menu appear	Menu disappear/ return to main item
▲	Brightness	Main item select up/ Adjust up
▼	Mute	Main item select down/ Adjust down
↵	Enter/Select sub-item function	
⏻	Power On/Off	

1. Press the “MENU” button to pop up the “on-screen menu” and press “Up” or “Down” button to select among the five functions in the main menu.
2. Choose the adjustment items by pressing the “Enter” button.
3. Adjust the value of the adjustment items by pressing the “Up” or “Down” button.
4. With the OSD menu on screen, press “Menu” button to return main menu or exit OSD.
5. The OSD menu will automatically close, if you have left it idle for a pre-set time.
6. To Lock the OSD / Power menu buttons, please follow the instructions below.

(Please note: the monitor has to be turned ON with a valid signal pre-set)

- a. Press the "Select" key 3 seconds, The "Lock/Unlock" menu will be appeared.
  - b. The "Lock/Unlock" is showed for 3 seconds
  - c. Use the "Select" key to select OSD or Power setting then set at "Lock" by pushing the "UP" or "Down" button
  - d. When the "UP" or "Down" button is released, the previous setting will be saved and exit the "Lock/Unlock" menu automatically.
7. OSD of source selection is showed, please follow the instructions below.
- a. Press the "Menu" key 3 seconds and next to press "Down".
  - b. After releasing key," OSD of source selection" is showed for 3 seconds

**Please note:**

1. When the OSD Lock function is selected, this indicates that all the buttons except "power" button are now disabled.
2. When the Power Lock function is selected, this indicates that the power key is disabled; user can not to turn off the monitor by "Power" key.

### 2.2.1 OSD Function Description

ITEM	CONTENT	Default
<b>Contrast</b>	The monitor luminance level control.	50
<b>Brightness</b>	The monitor backlight level control.	100
<b>Auto Adjust</b>	Fine-tune the image to full screen automatically.	NA
<b>Left/Right</b>	Moving screen image horizontal position to left or right.	NA
<b>Up/Down</b>	Moving screen image vertical position to up or down.	NA
<b>Horizontal size</b>	The screen image horizontal dot clock adjustment.	NA
<b>Fine</b>	The screen image pixel phase adjustment.	NA
<b>OSD Left/Right</b>	Moving OSD menu horizontal position to left or right.	50
<b>OSD Up/Down</b>	Moving OSD menu vertical position to up or down.	50
<b>OSD Time out</b>	OSD auto-disappear time selection.	15
<b>OSD Language</b>	OSD menu language selection. (English, French, Japanese, Deutsch, Spanish, Italian, Traditional Chinese and Simplified Chinese)	English
<b>Factory Reset</b>	Factory default value restored.	NA
<b>Input Select</b>	Auto /VGA /HDMI/TYPE-C Signal Display Select	Auto
<b>RGB</b>	Color temperature selection. (9300K, 6500K, 5500K, 7500K, User)	USER
<b>Volume</b>	Audio volume adjustment.	50
<b>Mute</b>	Audio On/Off control.	Off

### 2.2.2 Timing Table Chart

Mode	Resolution	H-Freq. (KHz)	Band Width (MHz)	Polarity	
				H	V
1	VESA 640x480 60Hz	31.47	25.175	—	+
2	VESA 800x600 60Hz	37.88	40	+	+
3	VESA 1024x768 (60.0 Hz)	48.363	65	—	—
4	SXGA 1280x1024 60Hz	64	108	+	+
5	SXGA 1280x960 60Hz	60	108	+	+
6	WXGA+ 1440x900 60Hz	56	106.5	-	+
7	WSXGA+ 1680x1050 60Hz	65.2	146	-	+
8	VESA 1280x 768 60Hz	47.776	79.5	-	+
9	1920X1080 60Hz	67.5	148.5	+	+

**Note:** The screen does not fit the monitor for 640x480 60Hz.

### 2.2.3 EDID Data

#### VGA

The monitor assembly shall provide a display communications channel that conforms to VESA DDC2B hardware requirements. This configuration shall contain the 128-byte EDID file as specified by VESA EDID Standard.

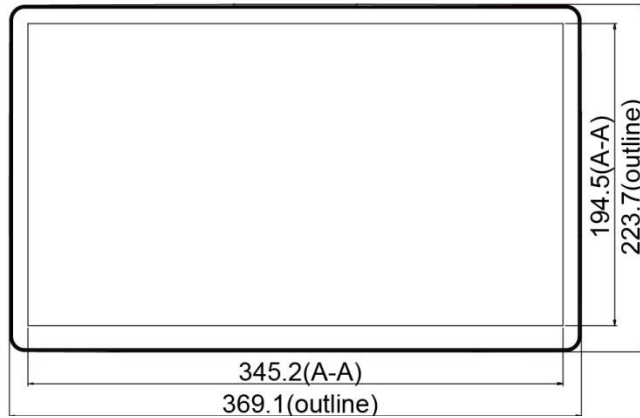
#### DP/HDMI/TYPE-C

The monitor assembly shall provide a display communications channel that conforms to VESA DDC2B hardware requirements. This configuration shall contain the 256-byte EDID file as specified by VESA EDID Standard.

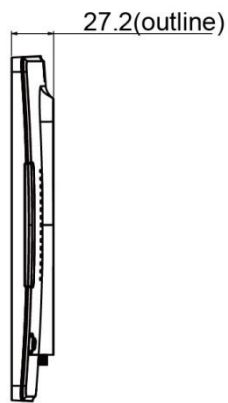
## 2.3 Dimension

### 2.3.1 M15-FHD (w/o stand)

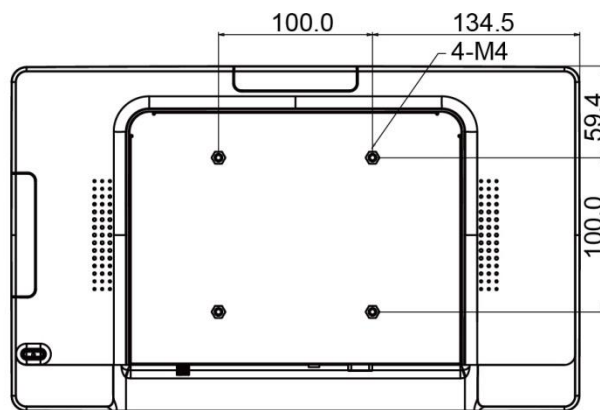
Front View



Side View



Rear View



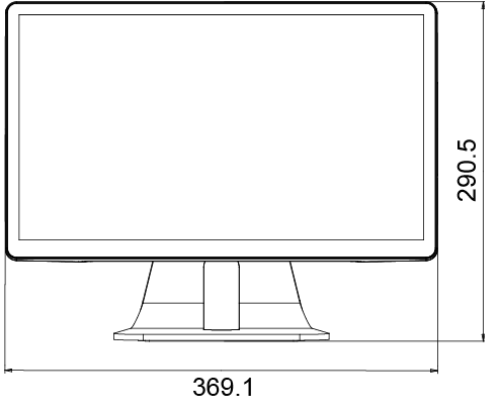
Bottom view



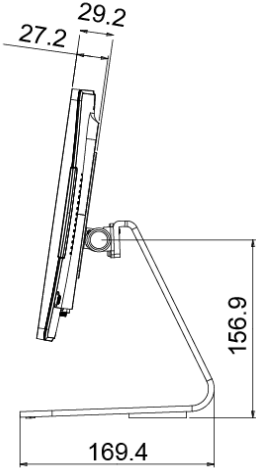


### 2.3.2 M15-FHD (w/ stand)

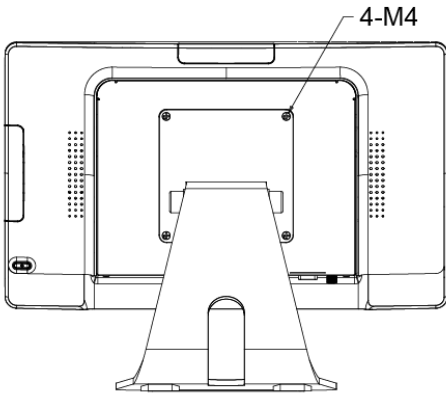
Front View



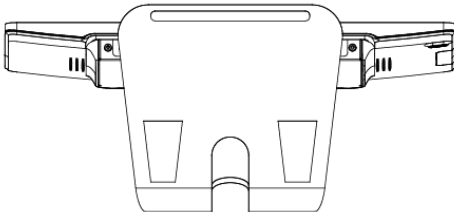
Side View



Rear View



Bottom view

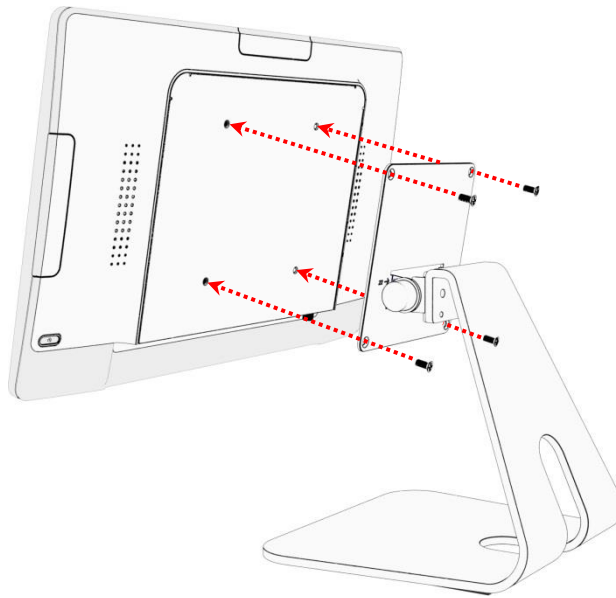


## 2.4 Optional Accessory Installation

Note: Please install/ dismantle the product when the monitor system is in the shutdown state.

### 2.4.1 Install the Stand Module

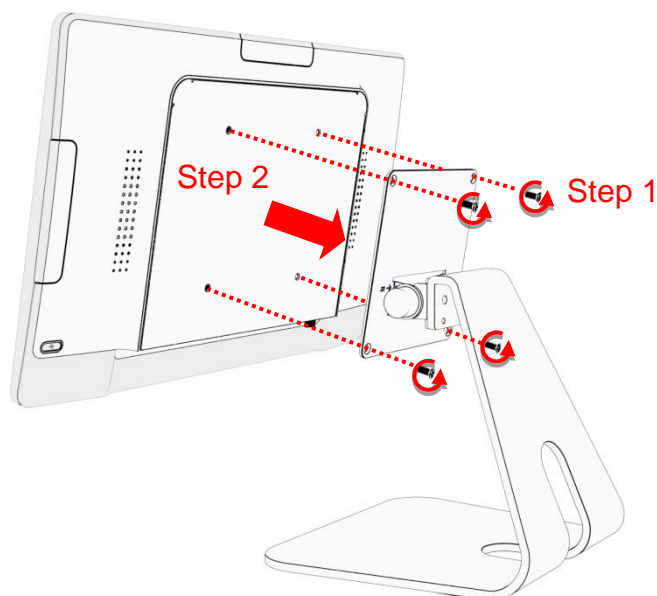
Place stand module on back of touch monitor and align the screw holes. Install the four M4 screws to fasten the stand module.



### 2.4.2 Dismantle the Stand Module

Step 1: Loosen the screws

Step 2: Pull it to out from touch monitor and remove stand module.



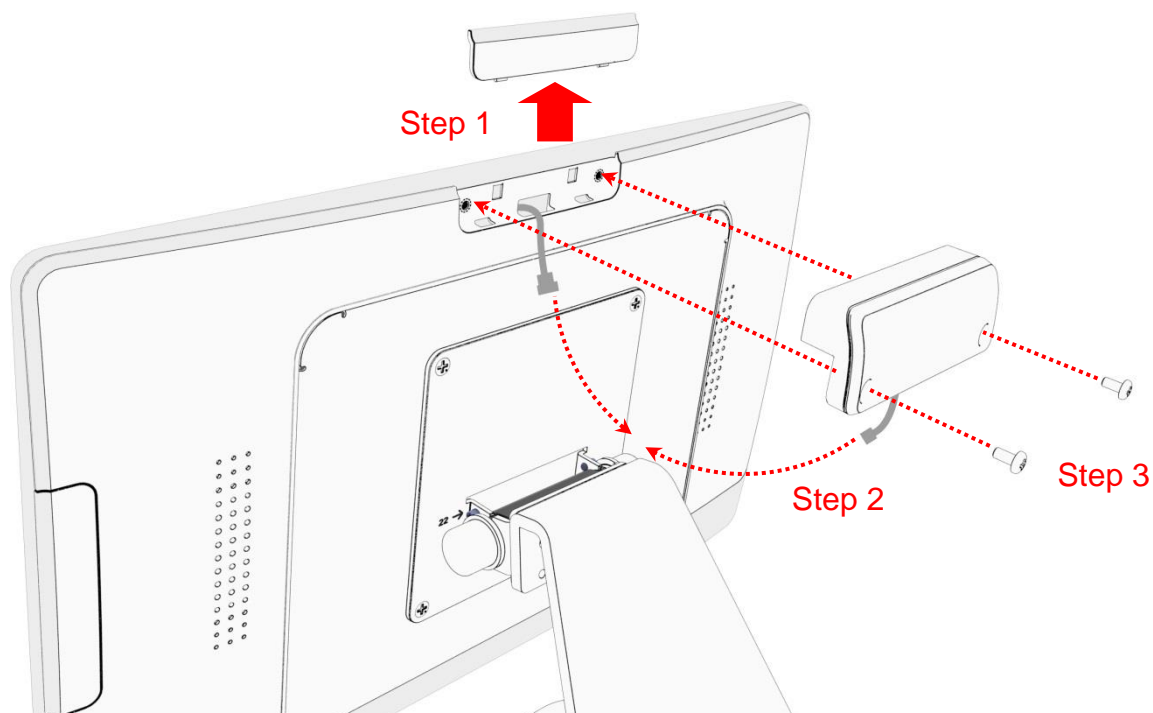
### 2.4.3 Install the Camera Module

Camera Module max. 19g

Step 1: Remove the side cover.

Step 2: Connect the camera module cable to the touch monitor.

Step 3: Install the two M3 screws to fasten the camera module.

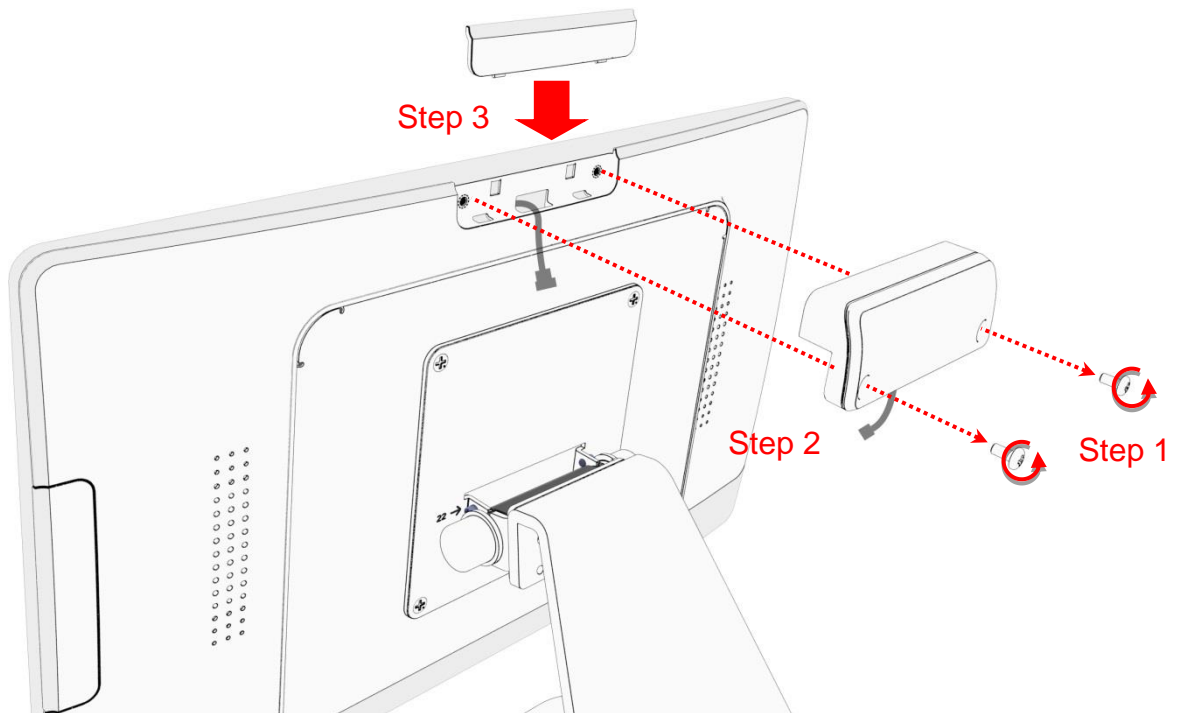


### 2.4.4 Dismantle the Camera Module

Step 1: Loosen the screws.

Step 2: Remove the camera module cable from the touch monitor.

Step 3: To assemble the side cover.

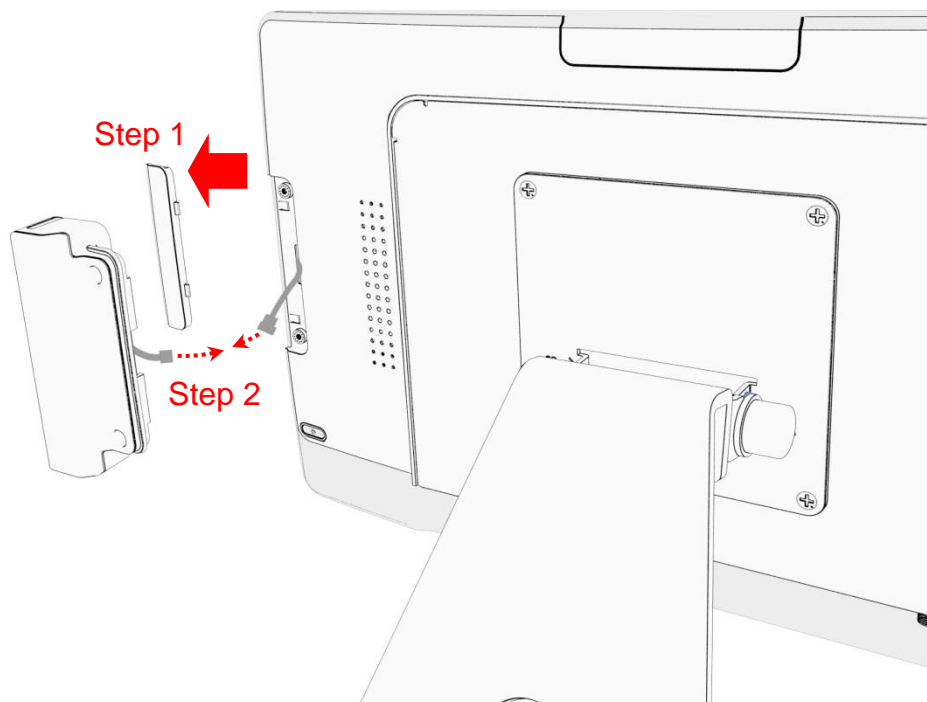


#### 2.4.5 Install the MSR Module

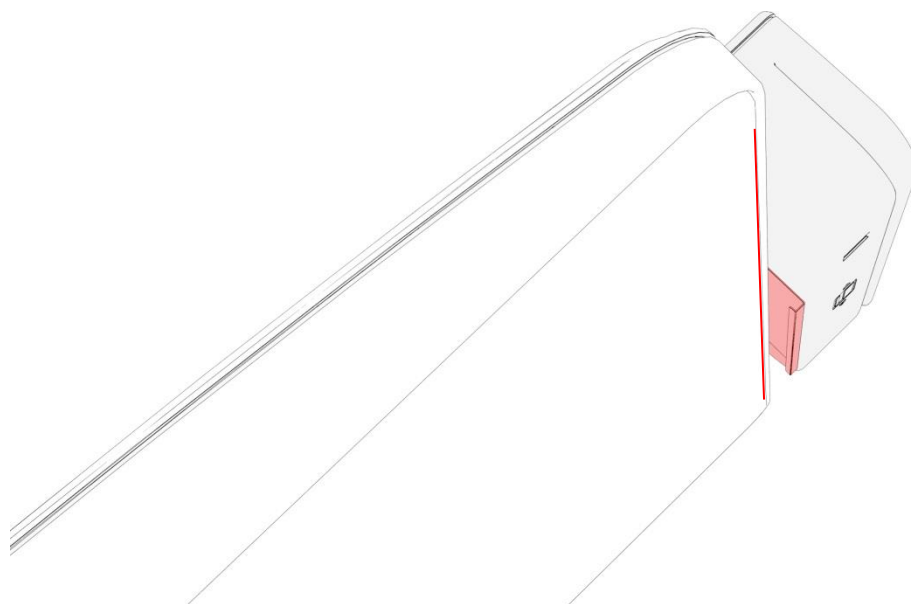
MSR Module max. 62g.

Step 1: Remove the side cover.

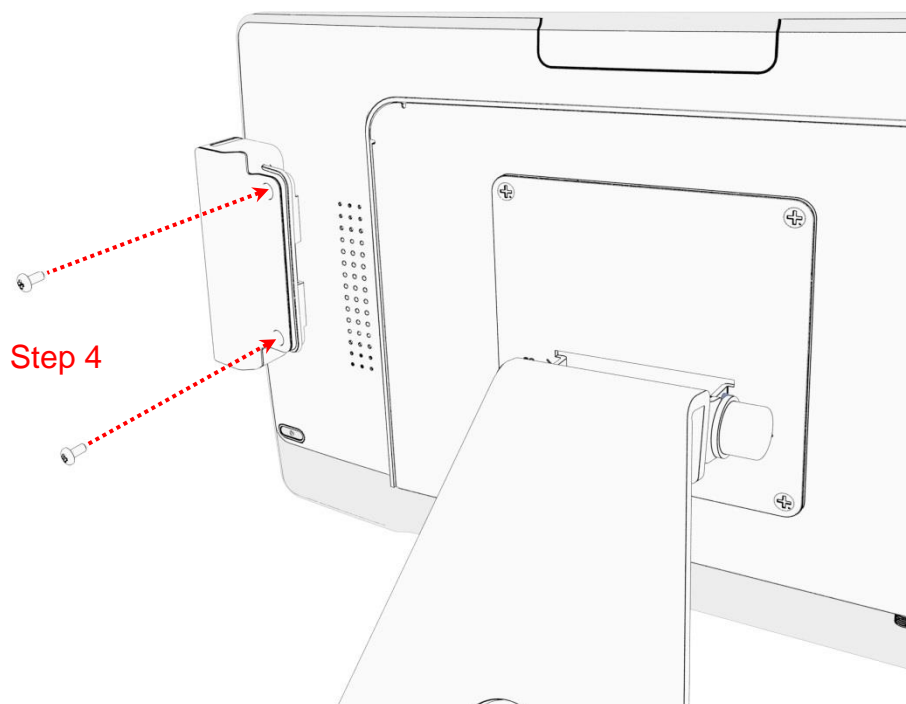
Step 2: Connect the MSR module cable to the touch monitor.



Step 3: The metal bracket hook into the gap between cover glass and bezel.

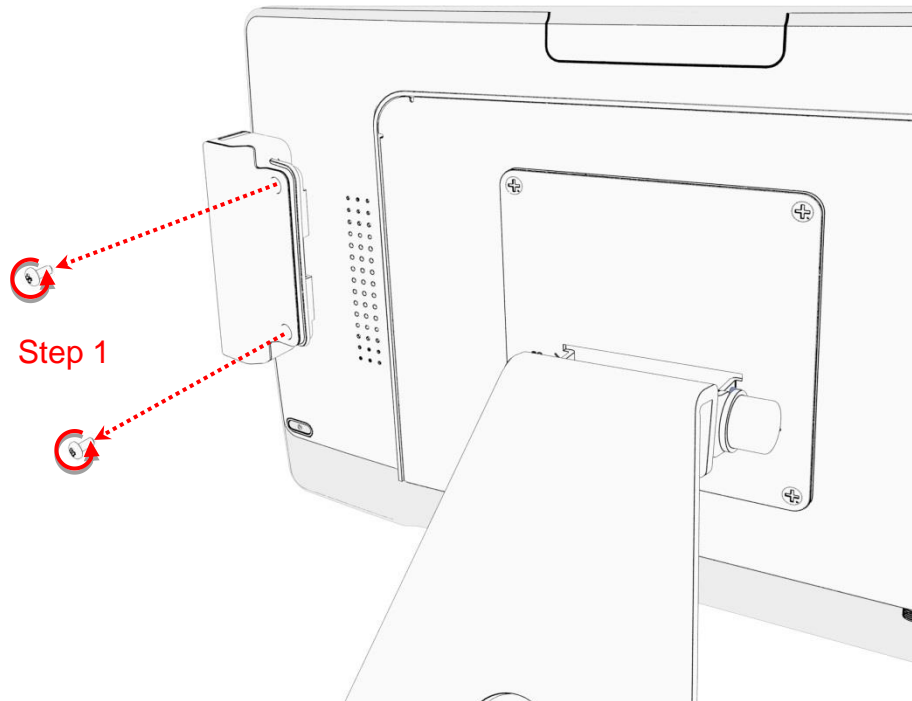


Step 4: Install the two M3 screws to fasten the MSR module.



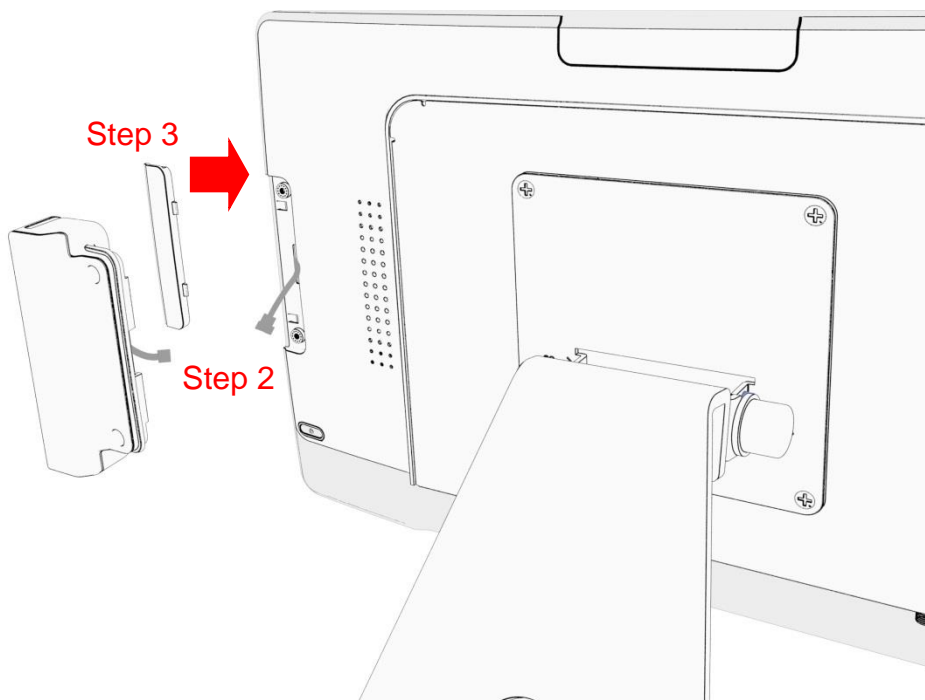
## 2.4.6 Dismantle the MSR Module

Step 1: Loosen the screws.



Step 2: Remove the MSR module cable from the touch monitor.

Step 3: To assemble the side cover.



# Appendix

## Declaration of the Presence Condition of the Restricted Substances Marking

設備名稱：觸控螢幕 Equipment name : Touch LCD Monitor		型號（型式）：M15-FHD Type designation (Type) : M15-FHD				
單元 Unit	限用物質及其化學符號 Restricted substances and its chemical symbols					
	鉛 Lead (Pb)	汞 Mercury (Hg)	鎘 Cadmium (Cd)	六價鉻 Hexavalent chromium (Cr <sup>+6</sup> )	多溴聯苯 Polybrominated biphenyls (PBB)	多溴二苯醚 Polybrominated diphenyl ethers (PBDE)
塑膠零件 Plastic Parts	○	○	○	○	○	○
金屬零件 Metal Parts	-	○	○	○	○	○
線纜和電纜組件 Cable component	-	○	○	○	○	○
LCD 面板 LCD Panel	-	○	○	○	○	○
觸控式螢幕面板 Touch Panel	-	○	○	○	○	○
PCBA	-	○	○	○	○	○
軟體(CD 等) Software	○	○	○	○	○	○
<p>Note 1 : “Exceeding 0.1 wt %” and “exceeding 0.01 wt %” indicate that the percentage content of the restricted substance exceeds the reference percentage value of presence condition. °</p> <p>Note 2 : “○” indicates that the percentage content of the restricted substance does not exceed the percentage of reference value of presence.</p> <p>Note 3 : The “-” indicates that the restricted substance corresponds to the exemption.</p>						