15/19/24/26”Display ECDIS Marine(R2AH)

Quick Start Guide

V1.0

Model No.:

R15L600-MRA3FP
R19L300-MRA1FP
W24L100-MRA1FP
W26L100-MRA1FP

Document Part Number: 91521110100W

Please read these instructions carefully before using this product, and save this manual for future use.

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For example, the serial number 1W15Axxxxxxxx means October of year 2015.

For more detailed information about this device, please refer to the ECDIS Marine Display User Manual available at http://www.winmate.com/

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1 Getting Started

Congratulations on purchasing Winmate®ECDIS Marine Series Display. The design meets the requirements of industrial marine standards, including IEC60945 4th Edition, DNV2.4, IACS E10.

Modern marine sector requires durable devices that can withstand long periods submersed in water. Winmate® ECDIS Marine Series Display is suitable for navigation, ship automation, and surveillance, rugged industrial and light military applications.

Flat easy-to-cleansurfacedelivers aesthetically pleasing look. Due to dimmable backlight the Display suitable for high and low ambient light conditions. You can mount the Display on the bridge of a ship. The Display features user-friendly and resistant to scratches PCAP touch-screen. All models sealed with front IP 66 dust and water proof.

Winmate® ECDIS Series Marine Display offers the following features:

- Hyper Dimming
- Anti-corrosion IP66 Proof
- Projective capacitive multi-touch screen
- Edge-to-edge narrow bezel design
- Color calibrated for ECDIS compliance
- Capacitive touch keys for quick function access and display control (Support ECDIS DAY, DUSK, and NIGHT mode switching)
- Support capacitive touch key lock / touchscreen lock function
- Compliant with marine standards (DNV2.4, IEC 60945 4th, IACS-E10)

DNV Type Approved Product

ECDIS

Model Number Naming Rule

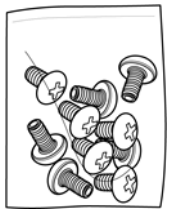
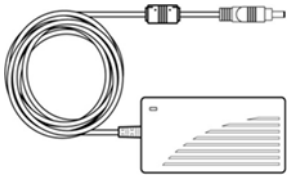
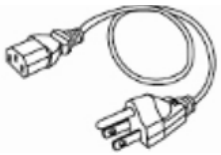
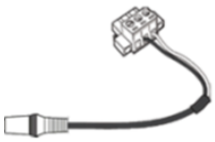
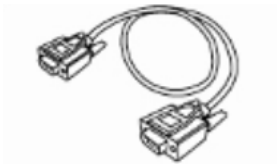
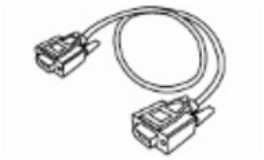
R19LXXX-MRXXFP

Item	Description
R	Panel Type
19	Panel Size
LXXX	Product Size
MR	Mechanical Type
XX	Panel Model
FP	Touch Type

Unpacking

Carefully remove the box and unpack your device. Please check if all the items listed below are inside your package. If any of these items are missing or damaged contact us immediately.

The factory shipment list:

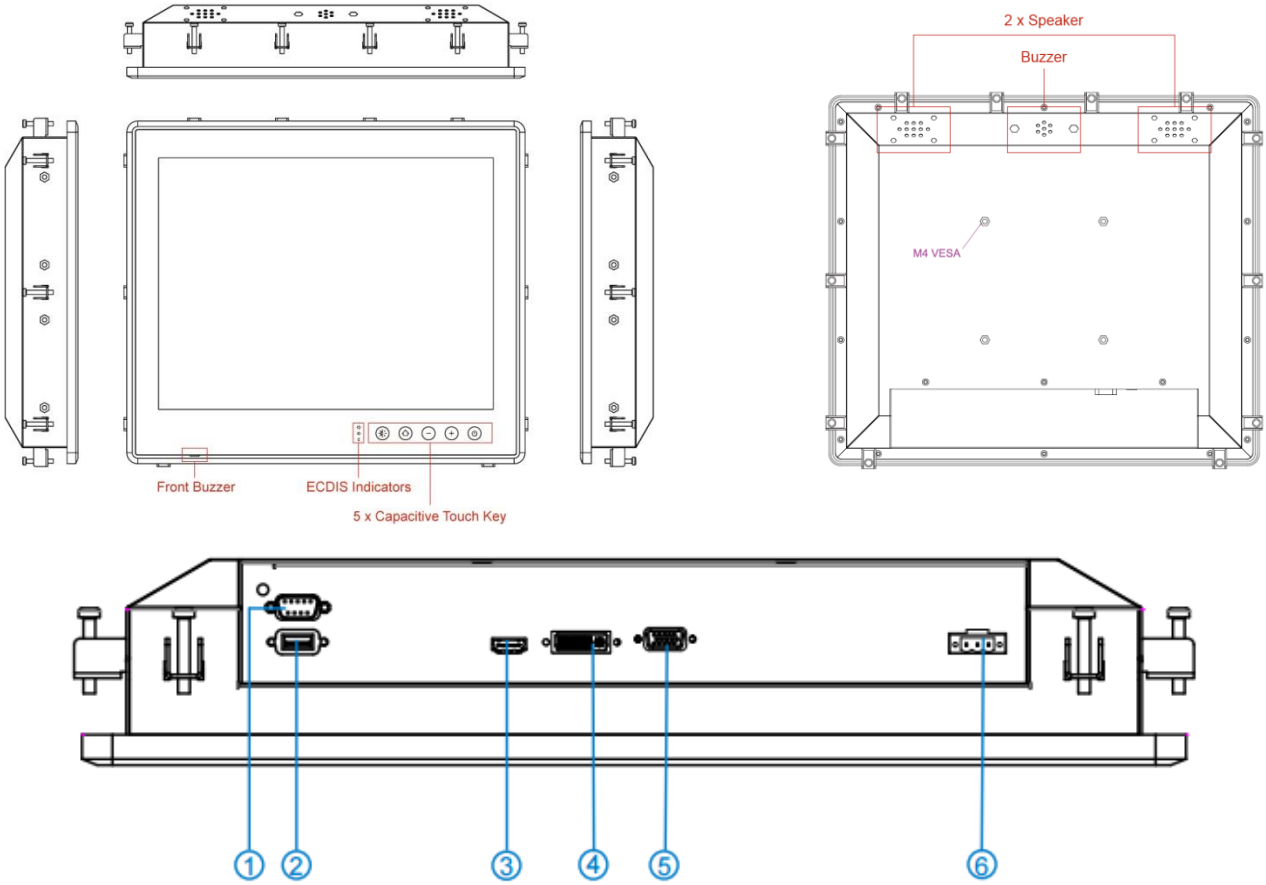
			
Display	**User Manual**	**Quick Start Guide (Hardcopy)**	****M4 x 12 black screw bolts**
			
***AC Adapter (Input 100-240V AC Output: 12V/ 80W)**	***Power Cord**	***3pin Terminal Block**	**1 x HDMI Cable (HDMI 19pin Male to 19pin Male)**
			
1 x VGA Cable (D-SUB 15pin Male to 15pin Male)	**1 x RS232 Cable (D-SUB 9pin Male to 9pin Female)**	**1 x DVI Cable (DVI-D 24pin Male to 24pin Male)**	

**AC adapter, 3-pin terminal block, and power cord shipped with the display for testing purposes only.*

***Notice: Screw bolts provided by Winmate only to be used to screw the display onto a console from the rear side. If you prefer your own bolts, please make sure to use M4 and 30mm in length.*

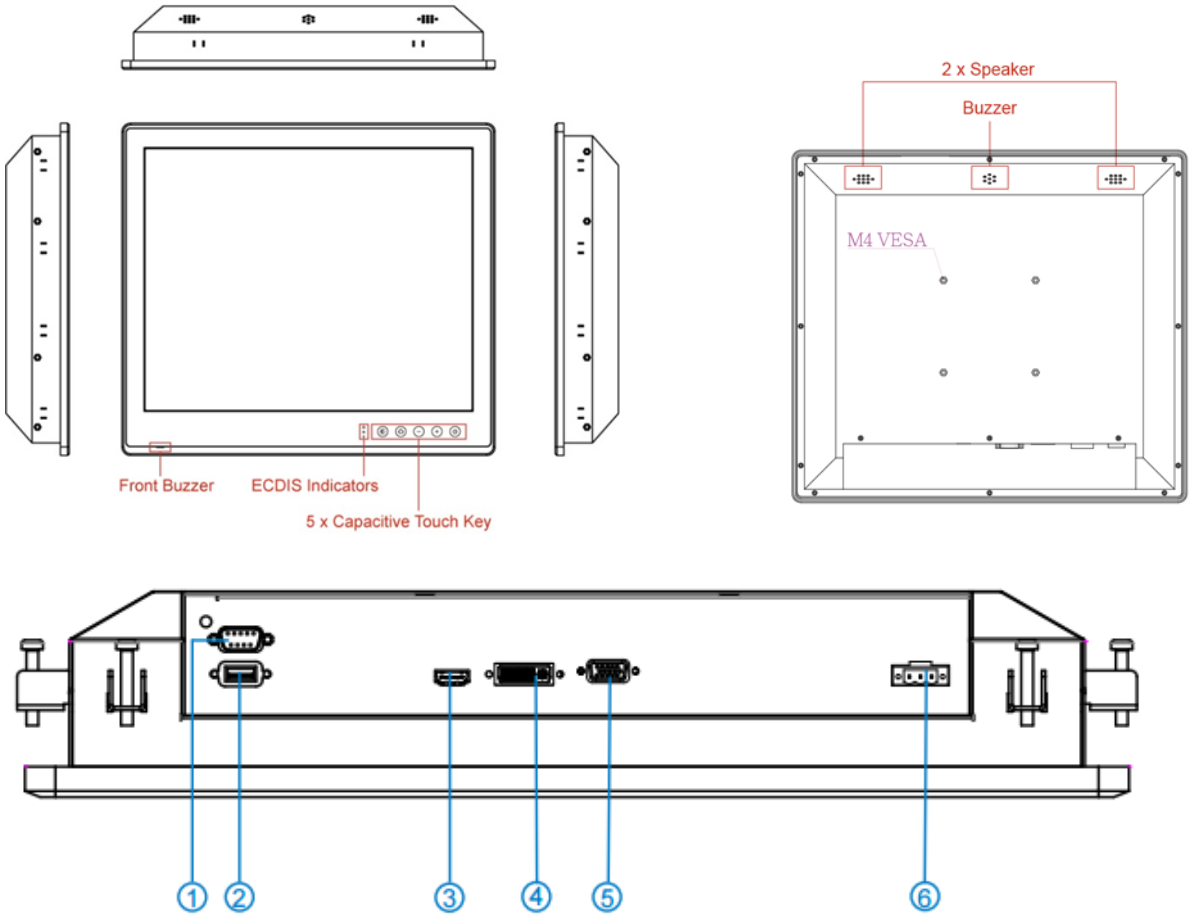
Description Of Parts

Appearance and Layout 15”



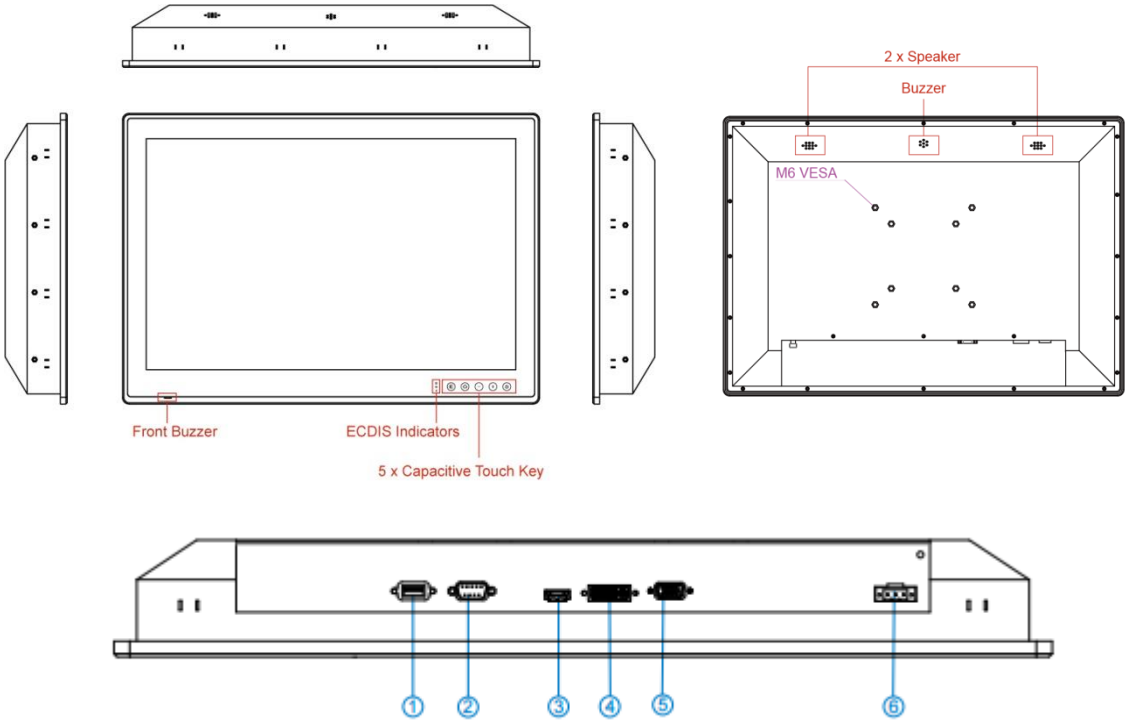
No	Description	No	Description
①	RS232 (Remote control)	④	DVI-D
②	USB (for Touch)	⑤	VGA
③	HDMI 1.4	⑥	DC Input

Appearance and Layout 19”



No	Description	No	Description
①	RS232 (Remote control)	④	DVI-D
②	USB (for Touch)	⑤	VGA
③	HDMI 1.4	⑥	DC Input

Appearance and Layout 24” and 26”



No	Description	No	Description
①	USB (For touch)	④	DVI-D
②	RS232 (Remote control)	⑤	VGA
③	HDMI 1.4	⑥	DC Input

For schematics and mechanical dimensions refer to the ECDIS Marine Display User Manual. You can download the User Manual from Winmate Download Center or Winmate File Share.

Capacitive Touch OSD Control Panel

Capacitive touch OSD control panel and ECDIS indicators located on the front of yourDisplay. Refer to the Description of Parts section of this guide to see the location.

ECDIS Mode Indicator			Capacitive Touch Keys		
Icon	Function	Description	Icon	Function	Description
	Day Mode	Lights up when ECDIS brightness adjusted to day mode		ECDIS Key/ ESC	Switching ECDIS standard range mode (Day / Dust / Night mode) or performs ESC button function
	Dusk Mode	Lights up when ECDIS brightness adjusted to dusk mode		OSD/ Enter	Opens OSD Menu or performs Enter button function
	Night Mode	Lights up when ECDIS brightness adjusted to night mode		Brightness -	To decrease brightness
				Brightness +	To increase brightness
				Power	Power on/off control

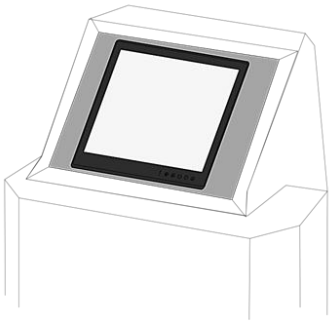
Please read these instructions carefully before using this product, and save this guide for future use.

2 Mounting

There are two most common mounting solutions for a display – Panel Mount from the rear side and VESA Mount. This section explains how to mount ECDIS Marine Display.

Panel Mount

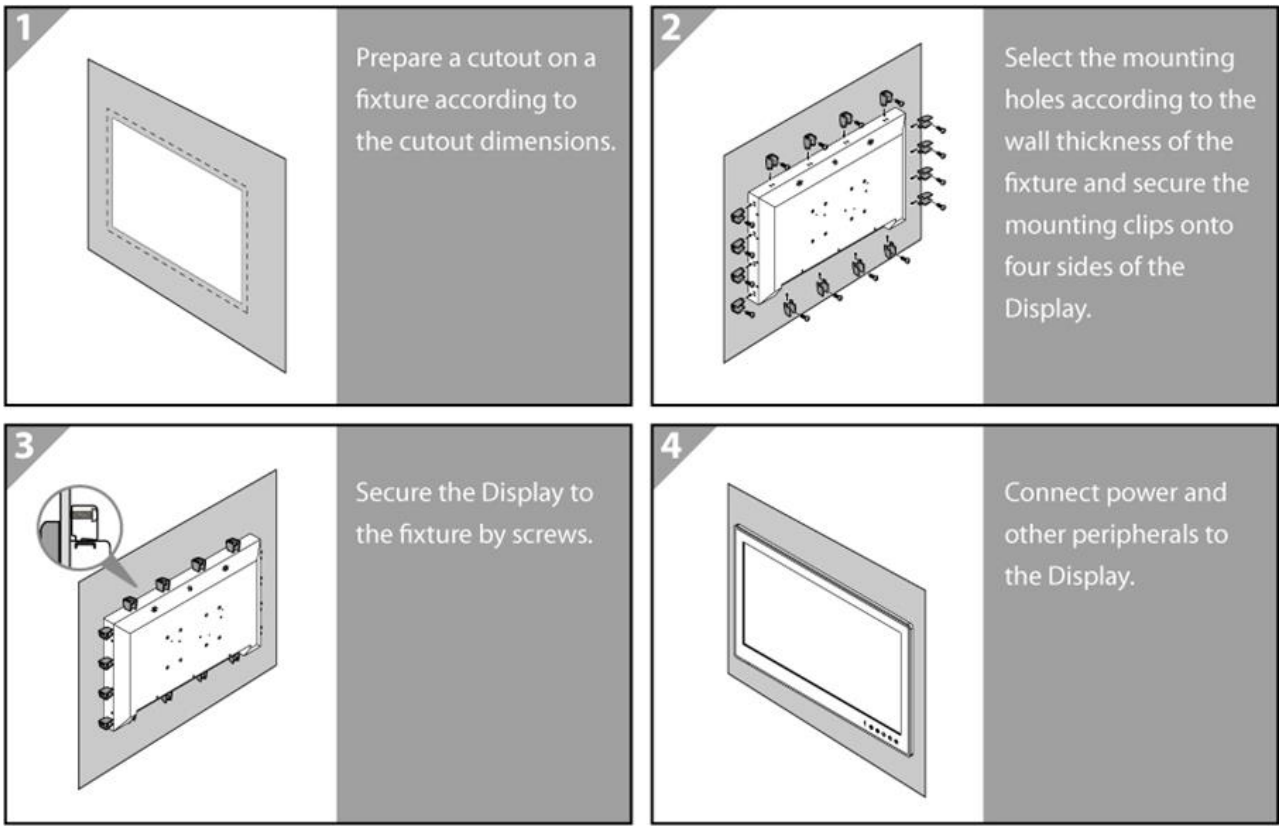
Winmate® provides mounting clips for installation onto a wall or into console by request.



Make sure you console cutout matchesthe display cutout dimensions.

Use either short or long screws based on the thickness of the fixture.

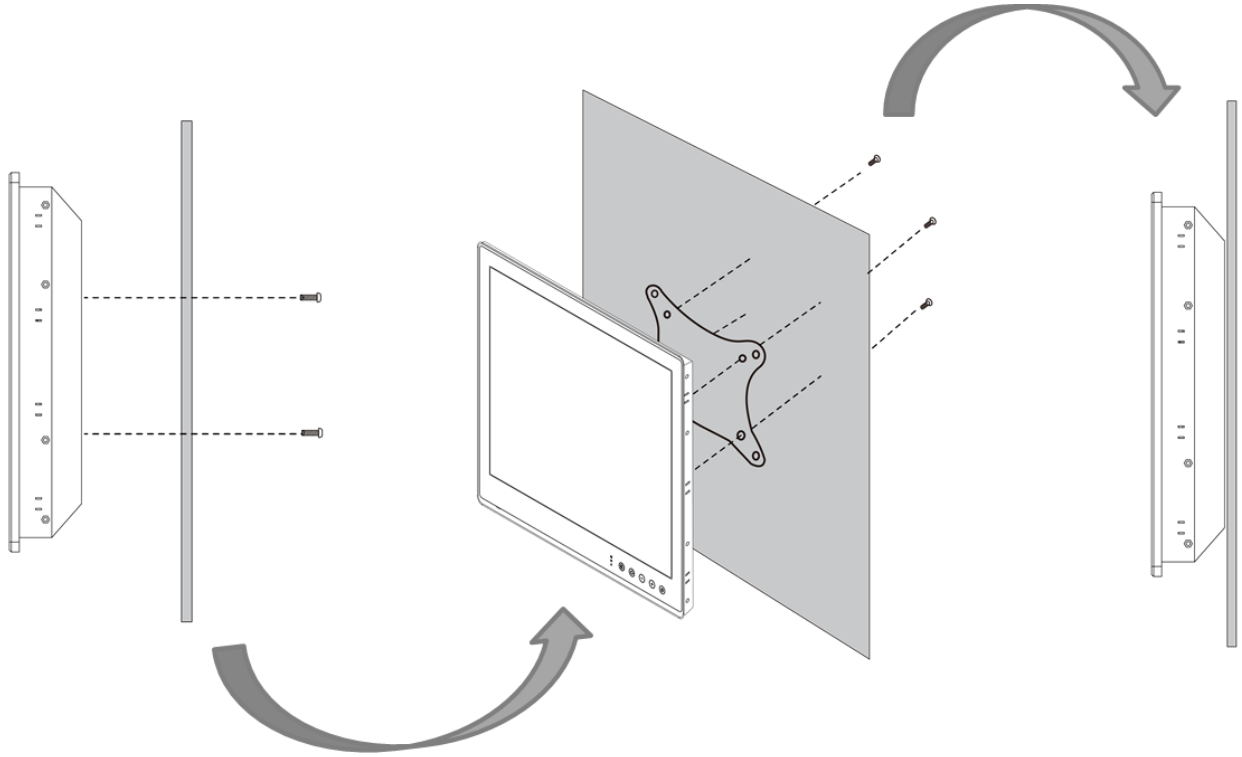
Cutout dimension (W x D in mm)			
15”	19”	24”	26”
330 x 280	408 x 359	572 x 363	598 x 408
Mounting Kit		**Mounting Kit**	
Mounting Clips: 12pcs Short screws: 15mm M4 Long screws: 30mm M4		Mounting Clips: 16pcs Short screws: 15mm M4 Long screws: 30mm M4	



VESA Mount

Winmate® provides VESA and Wall Mount Kits by request.

VESA Plate Dimensions			
15”	**19”**	**24”**	**26”**
100 x 100	100 x 100	100 x 100 100 x 200	100 x 100 100 x 200
Screw Hole Diameter			
M4 D=3mm	M4 D=5mm	M4 D=5mm	M6 D=5mm



Mounting Steps:

1. Screw VESA bracket to the fixture (ex. wall) withfour screws (refer to the table above for screw hole diameter).
2. Place the device on VESA bracket.
3. Connect all cables and peripheral devices.
4. When the installation is complete, plug the power cord into a grounded AC outlet. Turn on the power.

NOTE:
Notice that both hooks on bracket should lock the notches on the back cover of the device.

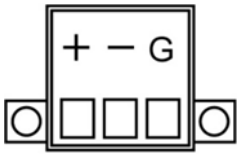
3 Connector Description

This section describes how to connect ECDIS Marine Display to various interfaces and describes connector pinouts.

WARNING!/ AVERTISSEMENT!
Make sure the power is off when connecting and disconnecting the connectors.
Assurez-vous que l'alimentation est coupée lors de la connexion et la déconnexion des connecteurs.

DC Input Connector

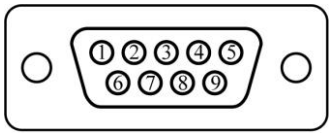
DC terminal block power source input compact design meets the maritime application. The 3-pin terminal block is to be secured that the cable to screw terminal.



Pin No.	Signal Name	Description
1	VIN+	9-36V DC Input +
2	VIN-	9-36V DC Input -
3	GND	Ground

Serial Port Connector (For Remote Control)

Connect Standard D-SUB 9pin connector from your system to connect to the monitor.



Pin №	Signal Name	Pin №	Signal Name
1	DCD	2	RXD
3	TXD	4	DTR
5	GND	6	DSR
7	RTS	8	CTS
9	RI		

USB 2.0 Connector (For Touch)

Use standard USB type A cable to connect the device that use USB interface for touch.

Pin №	Signal Name	Pin №	Signal Name
1	+5V	2	Data-
3	Data+	4	GND

DVI Connector

Use DVI to connector in the rear of PC system, and plug the other end to the TFT LCD display. Fasten cable connectors with screws.

Pin №	Signal Name	Pin №	Signal Name
1	DVI_RX2-	2	DVI_RX2+
3	GND	4	4-
5	4+	6	DVI SCL
7	DVI SDA	8	NC
9	DVI_RX1-	10	DVI_RX1+
11	GND	12	3-
13	3+	14	+5V
15	DVI_CON_CABLE	16	DVI_CON_HP
17	DVI_RX0-	18	DVI_RX0+
19	GND	20	5-
21	5+	22	GND
23	DVI_CLKP	24	DVI_CLKN
C1	NC	C2	NC
C3	NC	C4	NC
C5	NC		

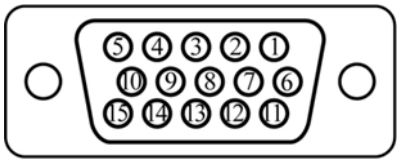
HDMI 1.4 Connector

Use HDMI to connector in the rear of PC system, and plug the other end to the TFT LCD display. Fasten cable connectors with screws.

Pin №	Signal Name	Pin №	Signal Name
1	HDMI_RX2+	2	GND
3	HDMI_RX2-	4	HDMI_RX1+
5	GND	6	HDMI_RX1-
7	HDMI_RX0+	8	GND
9	HDMI_RX0-	10	HDMI_RXC+
11	GND	12	HDMI_RXC-
13	HDMI_CON_CEC	14	NC
15	HDMI_CON_SCL	16	HDMI_CON_SDA
17	GND	18	+5V_HDMI
19	HDMI_CON_HP		

VGA Connector

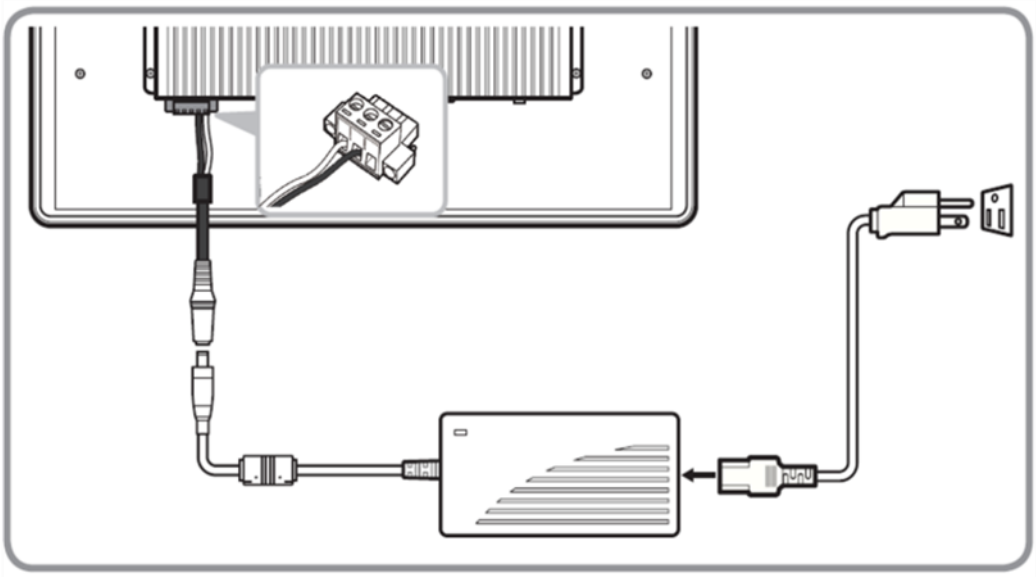
ECDIS Marine Display has VGA connector (D-Sub 15pin Female). Use VGA cable to connect the display to the PC system. Fasten cable connectors with screws.



Pin №	Signal Name	Pin №	Signal Name
1	RED	2	GREEN
3	BLUE	4	NC
5	GND	6	RED_RTN
7	GREEN_RTN	8	BLUE_RTN
9	KEY/PWR	10	GND
11	NC	12	SDA
13	H Sync	14	V Sync
15	SCL		

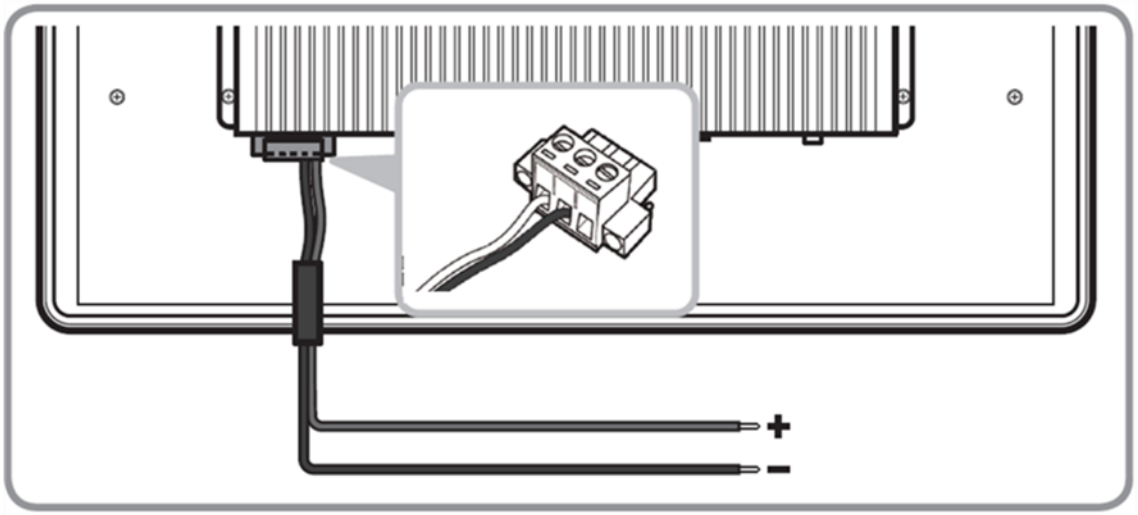
4 Powering On or Off

Connecting to AC Power Source (For Testing)



1. Plug one end of the terminal block cable firmly to the DC IN Jack.
2. Plug the other end of the terminal block plug to the AC adapter (12V 80W).
3. Connect the AC adapter to the power cord.
4. Plug the power cord to a working AC outlet.The device will boot automatically.

Connecting to DC Power Source



1. Insert the exposed wires of the DC Power Cable to the appropriate connectors on the terminal block plug.
2. Plug the terminal block plug firmly to the DC IN Jack.
3. Connect the other end of the DC power cable (wires with lug terminals that are labeled **+** and **–** to the terminals of the 9~36V DC Power Source. Ensure that the power connections maintain the proper polarity.

For more detailed instructions refer to the User Manual.

Please read these instructions carefully before using this product, and save this guide for future use.

5 Turning On or Off

Turning On

Perform the following procedure to turn on the screen:

Press and hold the capacitive power key ( ) until the image appears on the monitor.

IMPORTANT:
Make sure the signal source from system is correct (VGA / DVI/ HDMI/ Display Port).

Turning Off

Perform the following procedure to turn off the screen:

1. Press capacitive power button ( ), then the screen turns black.

6 ECDIS Mode Brightness Adjustment

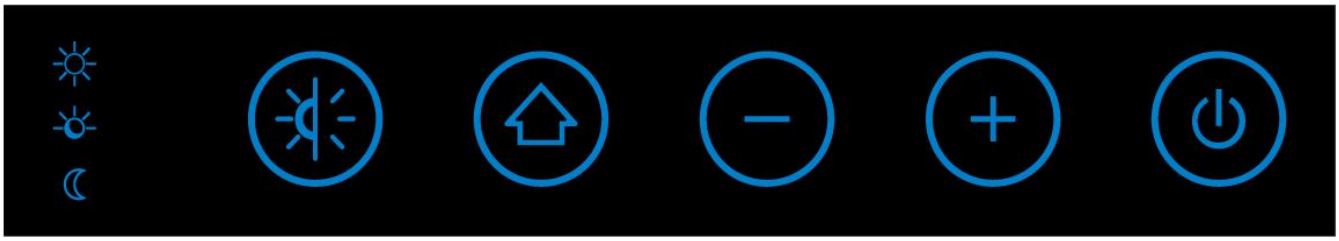
Winmate providesquickly adjustablekeys for the ECDIS mode switch (DAY, DUSK, NIGHT).

ECDIS Mode Brightness Adjustment

Switch the ECDIS mode by tapping capacitive touch key. Tap theECDIS Mode Quick Button (), and the level of brightness will be automatically adjusted according to ECDIS standard. ECDIS Mode Indicator shows themode that has been activated.

The sequence of the switching modes is as follows:

DAY Mode→DUSK Mode→NIGHT Mode→ DAY Mode.

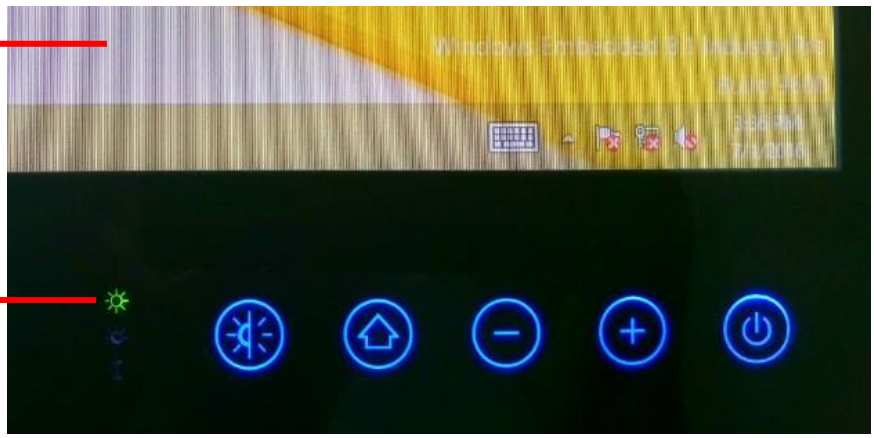


ECDIS Mode Indicator			Capacitive Touch Key		
Icon	Function	Description	Touch Key	Function	Description
	Day Mode	Lights up green when ECDIS brightness adjusted to day mode		ECDIS Mode Quick Button	Switching ECDIS standard range mode (Day /Dusk / Night mode)
	Dusk Mode	Lights up green when ECDIS brightness adjusted to dusk mode			
	Night Mode	Lights up green when ECDIS brightness adjusted to night mode			

NOTE:
In ECDIS Mode (DAY, DUSK, NIGHT) you can adjust the brightness manually. **Notice** when the manually adjusted brightness parameter does not comply with the ECDIS Standard, the LED indicator light disappears. You should switch the ECDIS mode quick button again to correct the brightness parameter to ECDIS.

Switchingto DAY Mode

The brightness was adjusted to DAY Mode



DAY Mode
LED Indicator

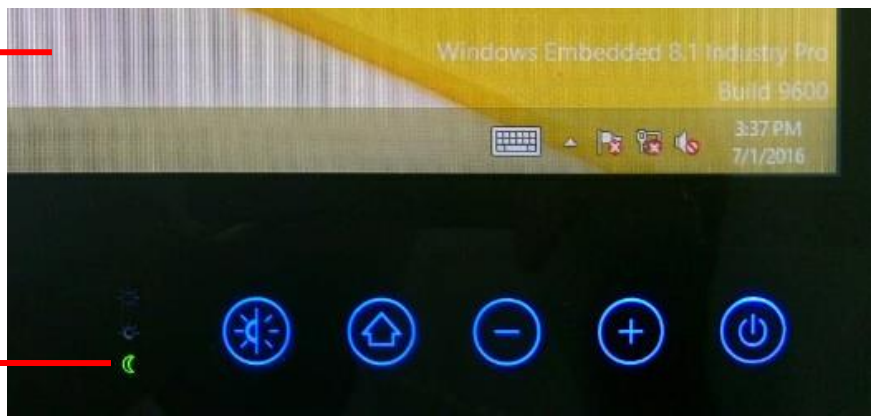
Switchingto DUSK Mode

The brightness was adjusted to DUSK Mode

DUSK Mode
LED Indicator

Switchingto NIGHT Mode

The brightness also be adjusted to NIGHT Mode



NIGHT Mode
LED Indicator

7 OSD Menu Introduction

OSD Menu is a tool that is used to control system settings.

☀	BRICONTRAST	BRIGHTNESS CONTRAST	XII	GAMMA	GAMMA0 GAMMA1 GAMMA2
	POSITION	Only support VGA mode		CHANNEL	AUTO ANALOG DVI HDMI
	IMAGE	Only support VGA mode		RECALL	YES NO
	COLOR	USER 9300K 6500K ADC RIGHTNESS	EXIT	OSD EXIT	YES NO
OP	OPTION	ECDIS LED ADJUST VR BRIGH VOLUME ADJUST SPEAK ON/OFF			

For more details about OSD Menu and its functions please refer to the ECDIS Marine Display User Manual.

8 Technical Specifications

Display Technical Specification

Model Name	R15L600-MRA3FP	R19L300-MRA1FP	W24L100-MRA1FP	W26L100-MRA1FP
Display				
Panel Size	15"	19”	24”	26”
Resolution	1024 x 768	1280 x 1024	1920 x 1080	1920 x 1200
Pixel Pitch (H x V, mm)	0.2947 x0.2947	0.294x0.294	0.276x0.276	0.2865x0.2865
Brightness	400 cd/m^2	350 cd/m^2	350 cd/m^2	350 cd/m^2
Contrast Ratio	700:1 (typ.)	1000:1 (typ.)	5000:1 (typ.)	1500:1 (typ.)
ViewingAngles	80°/80°/60°/80°	85°/85°/80°/80°	89°/89°/89°/89°	88°/88°/88°/88°
Active Display Area,H x V , mm	306 x 230	376.32x 301.06	531.36 x 298.89	550.1 x 343.8
Max Colors	16.2 M colors, 8 bits/color	16.7 M colors, 8 bits/color		
Touch Screen	PCAP	PCAP(Optional AR Protection Glass)		
Buzzer	75 dB~80 dB, 2300 Hz, 1m			
Mechanical				
Dimensions, mm	363 x 312 x 66.5	429x 382x 72.8	595 x 385 x 63.8	621 x 432.4x 85.5
Panel Mount Cutout, mm	330 x 280	408 x 359	572 x 363	598 x 408
Housing	Anodized Aluminum Bezel			
Mounting	Panel Mount/ VESA Mount			
Input/ Output Connectors				
DVI Input	1 x DVI-D 24pin (Female)			
HDMI Input	1 x HDMI 1.4			
VGA Input	1 x D-SUB 15pin (Female)			
Remote control via RS232	1 x D-SUB 9pin (Female)			
Touch	1 x USB type A (Female)			
Audio	1 x Audio in			
DC Input	1 x Terminal block 3pin (Phoenix type)			

User Controls	
OSD Control	Via programmable capacitive touch keys: ECDIS, Home, Brightness (+/-), Power
Remote Control	Via RS232 serial interface
Power Specifications	
Power Input	24V DC-in with Isolation (9~36V acceptable)
Power Consumption	80W (Max)
Environment	
IP Rating	IP66 (Front Side)
Operating Temperature	-15 to +55°C
Operating Humidity	5%-95%, non-condensing
Anti-vibration	0.7g@DNV2.4 (Class A)
Anti-shock	15G,11ms duration

Available Input Signals

The choice of supported modes depends on the monitor native resolution. Refer to the table below for more information about available input signals.

DVI		
No.	**Resolution**	**Frequency (Hz)**
1	**800x600**	**60**
2	**1024x768**	**60**
3	**1280x1024**	**60**
4	**1366x768**	**60**
5	**1680x1050**	**60**
6	**1920x1200**	**60**
7	**1600x1200**	**60**
8	**1920x1080**	**60**

VGA		
No.	**Resolution**	**Frequency (Hz)**
1	**640x480**	**60**
2	**640x480**	**72**
3	**640x480**	**75**
4	**800x600**	**56**
5	**800x600**	**60**
6	**800x600**	**72**
7	**800x600**	**75**
8	**1024x768**	**60**
11	**1280x1024**	**60**
12	**1280x1024**	**75**
13	**1366x768**	**60**
14	**1600x1200**	**60**
15	**1680x1050**	**60**
16	**1920x1200**	**60**
17*	**1920x1080**	**60**

HDMI 1.4		
No.	Resolution	Frequency (Hz)
1	800x600	60
2	1024x768	60
3	1280x1024	60
4	1366x768	60
5	1600x1200	60
6	1680x1050	60
7	1920x1080	60
8	1920x1200	60

9 Technical Support

You can download all supporting documents and drivers for ECDIS Marine Display from Winmate Download Center or Winmate File Share.

Winmate Download Center

http://www.winmate.com.tw/>Support > Download Center > Marine Grade >ECDIS Marine Display

Or follow the link below:http://www.winmate.com/DownCenter/DownLoadCenter.asp?DownType=0618&OnlyContent=

Winmate File Share

http://www.winmate.com/>File Share>Public Documents>Display >Marine Display > ECDIS Marine Display

Or follow the link below:https://winmate.box.com/v/Winmate-ECDIS-Marine-Display

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