In-Vehicle Computing

SINTRONES

In-Vehicle Monitor

VDM-700HD

User Manual   V1.0

SINTRONES® Technology Corp.

User Manual

Copyright

Disclaimer

Declaration of Conformity

The CE symbol on your product indicates that it complies with the Union European (EU) directives. A Certificate of Compliance is available by contacting Technical Support. This product has passed the CE test for environmental specifications when shielded cables are used for external wiring. We recommend the use of shielded cables.

This product has been tested and found to comply with the limits for a Class B device, according 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 by the manufacturer's instructions, may cause harmful interference to radio communications.

Trademarks

SINTRONES® is a registered trademark of SINTRONES® Technology Corp.

All the trademarks, registrations, and brands mentioned herein are used for identification purposes only and may be trademarks and registered trademarks of their respective owners.

Safety Information

Read the following precautions before setting up a SINTRONES® Product.

Electrical safety

- To prevent electrical shock hazards, disconnect the power cable from the electrical outlet before relocating the system.

- When adding or removing devices to or from the system, ensure that the power cables for the devices are unplugged before the signal cables are connected. If possible, disconnect all power cables from the existing system before adding a device.

- Before connecting or removing signal cables from the motherboard, ensure that all power cables are unplugged.

- Seek professional assistance before using an adapter or extension cord. These devices could interrupt the grounding circuit.

- Ensure that your power supply is set to the correct voltage in your area. If you are not sure about the voltage of the electrical outlet you are using, contact your local power company.

- If the power supply is broken, do not fix it by yourself. Contact a qualified service technician or your retailer.

Operation safety

- Before installing the motherboard and adding devices, carefully read all the manuals that came with the package.

- Before using the product, ensure all cables are correctly connected and the power cables are not damaged. If you detect any damage, contact your dealer immediately.

- Keep paper clips, screws, and staples away from connectors, slots, sockets, and circuitry to avoid short circuits.

- Avoid dust, humidity, and temperature extremes. Please do not place the product in any area where it may become wet.

- Place the product on a stable surface.

- If you encounter technical problems with the product, contact a qualified service technician or your retailer.

Environmental safety

- Use this product in environments with ambient temperatures between 0˚C and 60˚C.
- Do not leave this product in an environment where the storage temperature may be below -30°C or above 85°C. To prevent damages, the product must be used in a controlled environment.

CAUTION

Incorrectly replacing the battery may damage this computer. Replace only with the same or equivalent as recommended by SINTRONES® Technology Corp. Dispose of used battery according to the manufacturer's instructions.

Technical Support

Please do not hesitate to call or e-mail our customer service when you cannot fix the problems.

- TEL: +886-2-8228-0101
- FAX: +886-2-8228-0100
- E-mail: sales@sintrones.com
- Website: www.sintrones.com

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Chapter 1

Product Introduction

1.0 PRODUCT INTRODUCTION

1.1 Overview

VDM-700HD is a touch monitor designed with wide power input voltage range and operating temperature which are dedicated for In-Vehicle computing. An ideal operating terminal for fleet management and smart cockpit applications on commercial vehicles.   The panel resolution of 1280*720 and typical brightness of 600 nits excel among other 7" monitors in the market. SINTRONES' proprietary cable design which delivers video, audio, touch signal, and power all in one cable connection provides effortless deployment and installation.

1.2 Key Features

- Effortless one cable connection

- 1280(H)×720(V) High Resolution

- High Brightness 600 nits

- Secondary Video Input (HDMI)

- Projected Capacitive Multi-touch

- 9-48V DC Input and Operating Temp.: -20~60°C

- Vehicle Regulation E13

1.3 Specification

LCD	
Screen Size / Ratio	7 inches / 16:9
Resolution	1280 (H)×720 RGB(V)
Active Area (mm)	156.48(H)×80.136(V)mm
View Angle (H/V)	80/80/80/80 deg.
Brightness (nits)	600 nits (typical)
Contrast Ratio	1000:1 (typical)
Backlight Type	LED
Touch	
Type	Projected Capacitive w/ Multi-touch
I/O	
Multi-IO	1 x DVI-D 29 pins Connector for DVI-D Single Link Video, Touch (USB 2.0), Line in, MIC out, and DC 9~48V Power input * SINTRONES custom pin definition for SINTRONES optional cable only
Secondary Video Input	1 x HDMI
Audio	
Microphone	2 x bulit-in digital MIC
Speaker	Stereo speaker with built-in amplifier
Mechanical	
Dimension	188.5 (L) x 124.2 (W) x 31.4(H) mm
Mounting	VESA MIS-D 75mm

Weight	510g
IP Rating	(Front) IP65; (others) IP4X
Environmental	
Operating Temp.	-20ºC ~ 60ºC w/0.6 m/S airflow
Storage Temp.	-40ºC ~ 80ºC
Relative Humidity	10% RH – 90% RH (non-condensing)
Vibration	IEC60068-2-64, random, 2.5G@5~500Hz, 1hr/axis MIL-STD-810G, Method 514.6, Procedure I, Cat.4, Operating
Shock	Operating: MIL-STD-810G, Method 516.6, Procedure I, Trucks and semi-trailers=15G (11ms)
Certifications	CE, FCC Class A, E13
Ordering Information	
Model Number	VDM-700HD
Description	16:9 7" 600nits In-Vehicle Monitor w/ P-CAP multi-touch
State of Origin	Made in Taiwan

1.4 Power Consumption

VDM-700HD								
Voltage / Power Status	9V		12V		24V		48V	
Operating	1054mA	9.59W	760mA	9.576W	396mA	9.58W	197mA	9.51W

1.5 Package Contents

Your product package should include the items listed below. If any of the items below is missing, contact the distributor or dealer from whom you purchased the product.

Item	Description	Function	Q'ty
	Screws M4*L10 for VESA mount	VESA mounting screws	4

1.6 Ordering Information

Model Name	Description
VDM-700HD	16:9 7" 600nits In-Vehicle Monitor w/ P-CAP multi-touch

1.7 Optional Accessory

SINTRONES provides optional accessories as follows. Please get in touch with your dealer or us if you need any.

Item	Order No.	Description
Cable	341027150200	DVI to DVI L:1500mm
Cable	341027150201	DVI to 4 Ports Combo L:1500mm

*Please check with SINTRONES' sales representatives for the availability.

Chapter 2

I/O and Connectors

2.0 SYSTEM I/O

2.1 Front Panel Information

Icon Mode	⩗	☰	⋀	⋁	○	⏻
Normal	Input Source	Menu	Brightness Up	Brightness Down	N/A	Power On/Off
OSD Menu	Exit	Exit/Return	Move Up	Move Down	Confirm	Power On/Off

2.2 I/O Information

SINTRONES Proprietary DVI Combo Port   Secondary HDMI input

2.3 Dimensions

VDM-700HD
Unit: mm

VESA 75

188.5±1
31.4±1
124.2±1
7"
2-75±0.5
2-56.76±0.5
2-29.68±0.5
2-75±0.5
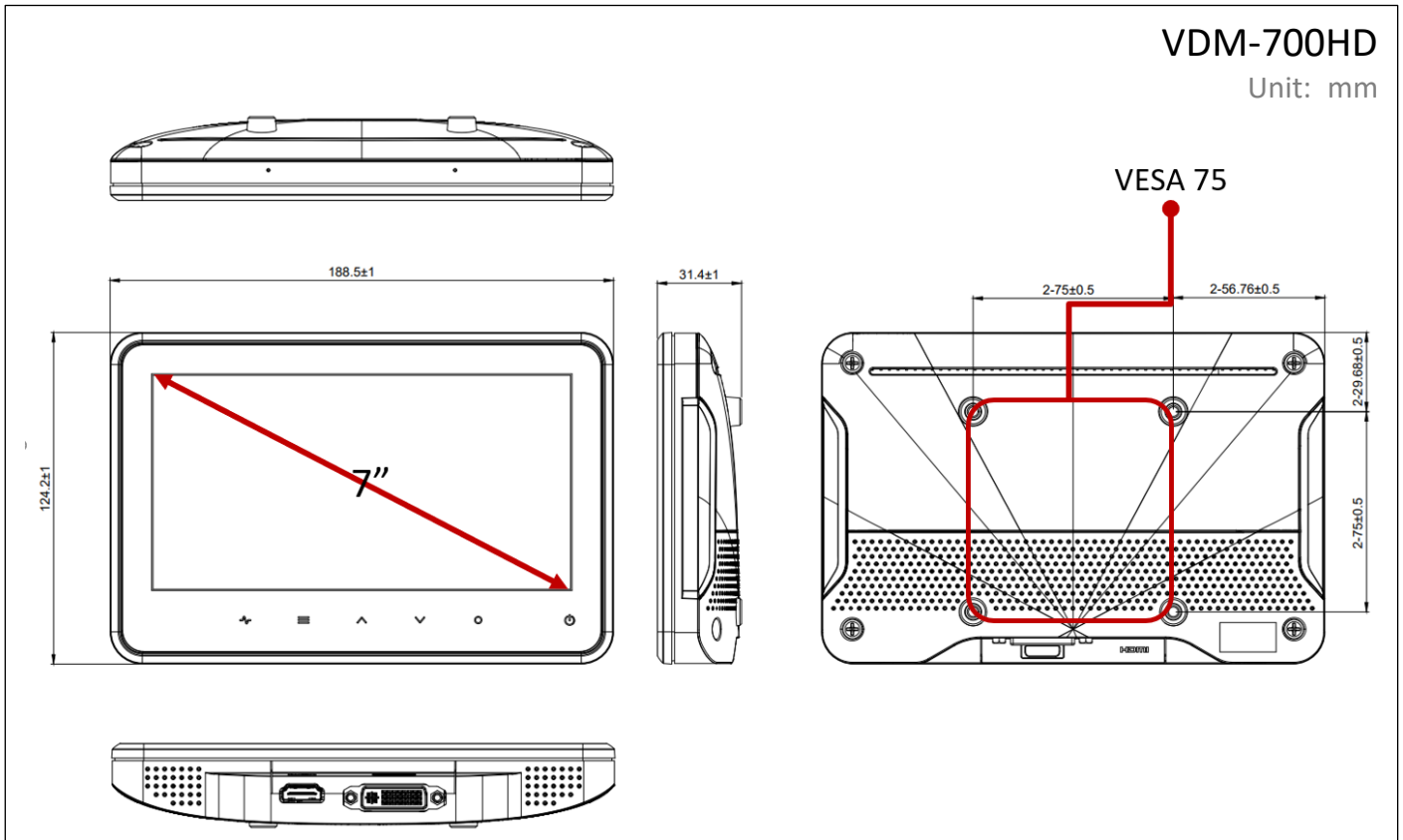
2.4 I/O CONNECTOR DEFINITION

2.4.1 DVI Connector

Connector Type	DVI 29 Pins		
Connector Location	DVI		
Connector Drawing			

PIN#	Interface	PIN#	Interface
PIN 1	DVI_TX2_N (TMDS)	PIN 16	DVI_HPD (Hot plug detect)
PIN 2	DVI_TX2_P (TMDS)	PIN 17	DVI_TX0_N (TMDS)
PIN 3	GND	PIN 18	DVI_TX0_P (TMDS)
PIN 4	5V USB	PIN 19	GND
PIN 5	+12V	PIN 20	RS232_RX
PIN 6	DVI_DDC_CLK	PIN 21	+12V
PIN 7	DVI_DDC_DATA	PIN 22	GND
PIN 8	RS232_TX	PIN 23	DVI_CLK_P (TMDS clock)
PIN 9	DVI_TX1_N (TMDS)	PIN 24	DVI_CLK_N (TMDS clock)
PIN 10	DVI_TX1_P (TMDS)	C1	Line in_Left
PIN 11	GND	C2	Line in_Right
PIN 12	USB_7N	C3	Mic_Left
PIN 13	USB_7P	C4	Mic_right
PIN 14	+5V	C5	GND_Audio
PIN 15	GND		