



User Manual

DSD-5038 Series

38" Industrial Stretched Signage
Display Monitor

ADVANTECH

Enabling an Intelligent Planet

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Product Warranty (2 years)

Advantech warrants the original purchaser that each of its products will be free from defects in materials and workmanship for two years from the date of purchase.

This warranty does not apply to any products that have been repaired or altered by persons other than repair personnel authorized by Advantech, or products that have been subject to misuse, abuse, accident or improper installation. Advantech assumes no liability under the terms of this warranty as a consequence of such events.

Because of Advantech's high quality-control standards and rigorous testing, most customers never need to use our repair service. If an Advantech product is defective, it will be repaired or replaced at no charge during the warranty period. For out-of-warranty repairs, customers are billed according to the cost of replacement materials, service time, and freight. Please consult your dealer for more details.

If you believe that your product is defective, please follow the steps listed below:

1. Collect all information about the problem encountered (for example, CPU speed, Advantech products used, other hardware and software used, etc.). Note anything abnormal and list all onscreen messages displayed when the problem occurs.
2. Call your dealer and describe the problem. Please have your manual, product, and any relevant information to hand.
3. If your product is diagnosed as defective, obtain an return merchandize authorization (RMA) number from your dealer. This allows us to process your return more quickly.
4. Carefully pack the defective product, a fully completed Repair and Replacement Order Card and proof of the purchase date (such as a photocopy of your sales receipt) in a shippable container. Products returned without a proof of purchase date are not eligible for warranty service.
5. Write the RMA number clearly on the outside of the package and ship the product prepaid to your dealer.

Declaration of Conformity

CE

This product has passed the CE test for environmental specifications. The conditions for passing the test included operating the equipment in an industrial enclosure. To protect the product from electrostatic discharge (ESD) and electromagnetic interference (EMI) damage, we strongly recommend using CE-compliant industrial enclosure products.

FCC Class B

This equipment has been tested and found to comply with the specifications for a Class B digital device, pursuant to part 15 of the FCC Regulations. These standards are designed to provide reasonable protection against harmful interference in residential installations. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used according to the instructions, may cause harmful interference to radio communication. However, we cannot guarantee that interference will not occur in particular installations. If the equipment does cause harmful interference to radio or television reception (verified by turning the equipment off and on), users are advised to correct the interference using one or more of the following measures:

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

Technical Support and Assistance

1. Visit the Advantech website at <http://support.advantech.com> to obtain the latest product information.
2. Contact your distributor, sales representative, or Advantech's customer service center for technical support should you require additional assistance. Please have the following information ready before calling:
 - Product name and serial number
 - Description of your peripheral attachments
 - Description of your software (operating system, version, application software, etc.)
 - A comprehensive description of the problem
 - The exact wording of any error messages

Warnings, Cautions, and Notes

Warning! *Warnings highlight dangerous conditions and if not observed can result in personal injury!*



Caution! *Cautions are included to help you avoid damaging hardware or losing data. e.g.*



There is a danger of a new battery exploding if it is incorrectly installed. Do not attempt to recharge, force open, or heat the battery. Replace the battery only with the same or equivalent type recommended by the manufacturer. Discard used batteries according to the manufacturer's instructions.

Note! *Notes provide optional additional information.*



Document Feedback

To assist in improving this manual, we welcome all comments and constructive criticism. Please send all such feedback in writing to:
support@advantech.com

Safety Instructions

1. Read these safety instructions carefully.
2. Retain this user manual for future reference.
3. Disconnect this equipment from all AC outlets before cleaning. Use only a damp cloth to clean the equipment. Do not apply liquid or spray detergents.
4. For pluggable equipment, position the equipment near to an easily accessible power outlet socket.
5. Protect this equipment from humidity.
6. Position the equipment on a reliable surface during installation. Dropping or letting the equipment fall may cause damage.
7. The openings of the enclosure are for air convection to prevent the equipment from overheating. Do not cover these openings.
8. Ensure the power source voltage is correct before connecting the equipment to a power outlet.
9. Position the power cord away from high-traffic areas. Do not place anything on the power cord.
10. All cautions and warnings on the equipment should be noted.
11. If not used for a long time, disconnect the equipment from the power source to avoid damage from transient overvoltages.
12. Never pour liquid into the openings. This may cause fire or electrical shock.
13. Never open the equipment. For safety reasons, the equipment should only be opened by qualified service personnel.
14. If one of the following occurs, have the equipment checked by service personnel:
 - The power cord or plug is damaged.
 - Liquid has penetrated into the equipment.
 - The equipment has been exposed to moisture.
 - The equipment is malfunctioning, or does not operate according to the user manual.
 - The equipment has been dropped and damaged.
 - The equipment shows obvious signs of breakage.
15. Do not leave this equipment in an environment with a storage temperature of below -20 °C (-4 °F) or above 60 °C (140 °F) as this may cause damage. The equipment should be stored in a controlled environment.

The sound pressure level at the operator's position does not exceed 70 dB (A), as per the IEC 704-1:1982 specifications.

DISCLAIMER: These instructions are provided in accordance with IEC 704-1. Advantech disclaims all responsibility for the accuracy of any statements contained herein.

Caution! *if the power adaptor is not shipped with the unit, information regarding the power adapter's output rating (24 Vdc, 5 A min, or 120 W min) is provided in the user manual, enabling enable users to select an appropriate power adapter.*



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Chapter 1

Overview

- Introduction
- Features
- Applications
- Product Photographs
- Naming Conventions

1.1 Introduction

Advantech's DSD-5038 series products are industrial stretched signage display monitors of an innovative size, shape, and display resolution, designed to be quickly and easily integrated with Advantech's embedded box computers, such as the ARK and DS series computers.

1.2 Features

- 38" (16:4) 1920 x 358, high-resolution stretched display with LED backlighting
- High brightness of 800 cd/m²
- High contrast ratio (1:4000)
- 0 °C ~ 45 °C operating temperature
- Ultra-wide viewing angle (176° / 176°)
- Dual signal interface for VGA and DVI
- RS232 remote control support
- Audio output
- Wall mount (200 x 100 mm)
- Fanless design

1.3 Applications

The DSD-5038 series can be used as public information displays and are especially suitable for narrow or limited spaces. Below are some application examples.

- Bus / Metro route maps
- Station information displays (advertisements or schedules)
- Signage displays in elevators
- Advertisements in cafeterias and public venues
- Entertainment / Gaming
- Public advertisement displays

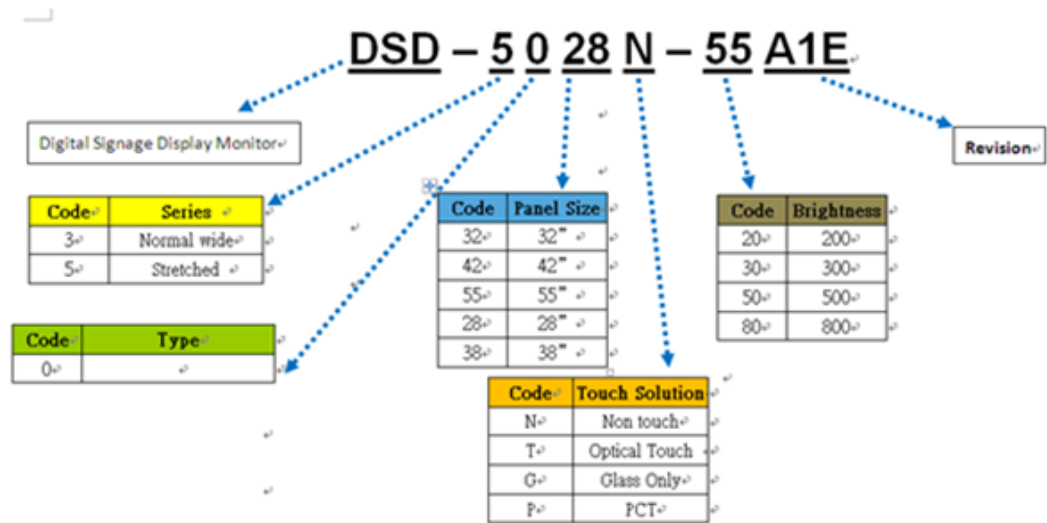
1.4 Product Photographs

Front View



Rear View**I/O View (left / right)****Keys View**

1.5 Naming Conventions



Chapter 2

System Setup

- Specifications
- Dimensions
- Packing List

2.1 Specifications

Note! The DSD-5038 series monitors are equipped with the features and specifications described below.



Unless otherwise stated, all monitor specifications are subject to change without prior notification.

	Model	DSD-5038
Display	Size	38" stretched LED panel
	Resolution	1920 x 538 (16:4)
	Viewing Angle	176° (H) / 176°(V)
	Brightness	800 (cd/m ²)
	Color Support	16.7 M colors
	Contrast Ratio	4000:1
	Response Time	9.5 msec
	Backlight Life	50,000 hrs
Environment	Operating Temperature	0~ 45 °C (32 ~ 113 °F)
	Storage Temperature	-10 ~ 60 °C (-4 ~ 140 °F)
	Humidity	80% RH maximum (Ta ≤ 45 °C), non-condensing
	Vibration	5-500Hz, 0.002G ² / Hz, 1 Grms, 1 hour for X,Y, and Z per axis
System	I/O	Input: VGA x 1; DVI-D x 1; RS232 x 1 (reserved for the remote control); 24V DC power din Output: audio output x 1; 12 V DC jack (maximum is 12 W)
	OSD	Source / Enter, Menu, Up, Down, Left, Right, Power On / Off
	Power	120 W power adapter, with AC100-240 V input and DC +24 V @ 5A output
	EMC Compliance	CE / FCC / CCC

2.2 Dimensions

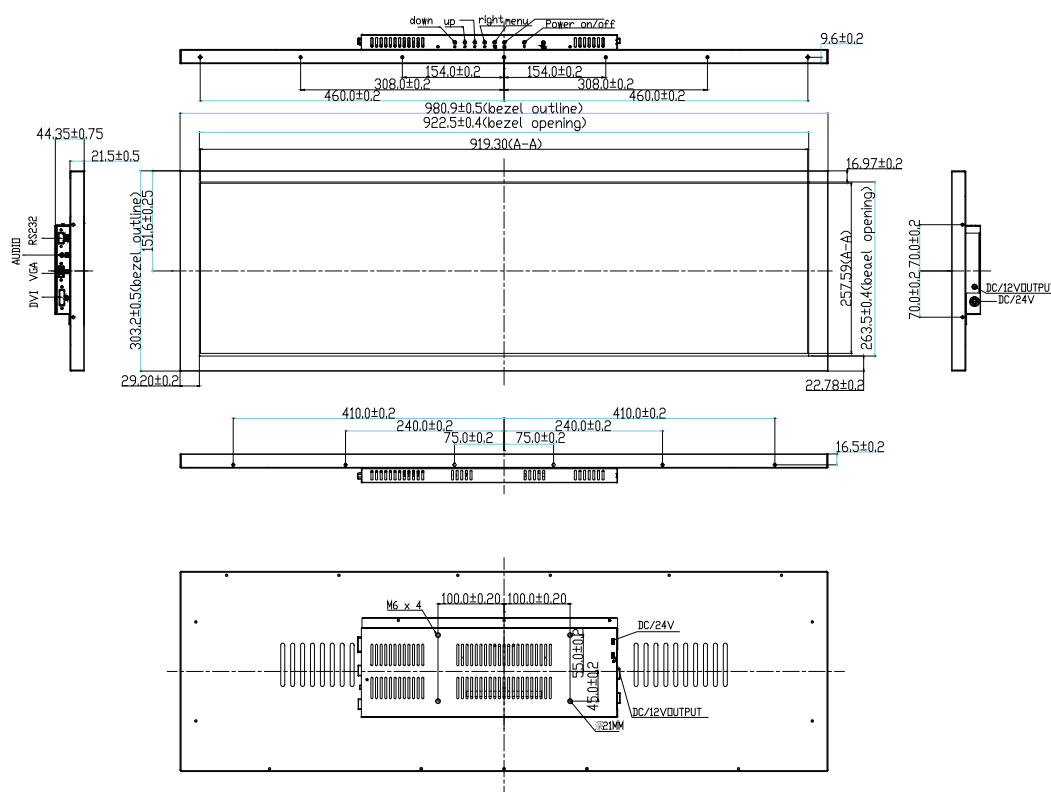


Figure 2.1 DSD-5038 Series Dimensions

2.3 Packing List

- 1 x 120 W DC24 V power adapter
- 1 x DVI cable 2.0 meter
- 1 x HDMI to DVI cable (1.5 m)
- 1 x RS232 9P/9P 1.8M M/F cable (optional)
- 1 x power cord (optional)

Note! The accessories listed above may differ depending on the software development kit.



2.4 Power Output

The DSD-5038 series supports 12Vdc output with a maximum loading of 12 W, effective only when the monitor is powered on.

Chapter 3

OSD Key Functions

3.1 OSD Functions

Users are advised to ensure that all content designs are based on a resolution of 1920 x 538. The onscreen display (OSD) key for the DSD-5038 series monitors (1920 x 538 resolution) is provided below.

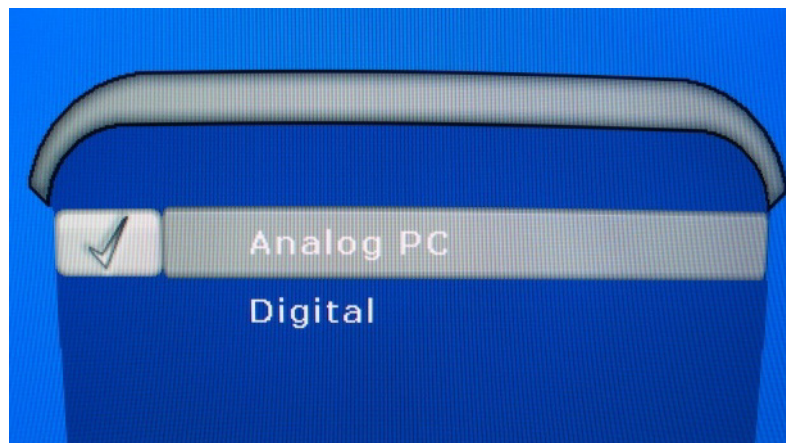
Button	Description
Power	Turns the monitor power on or off
Menu	Activates the OSD menu
	Closes the OSD menu
Auto	Automatically adjusts the clock and phase
	H-position and V-position
Value Up / Down / Left / Right	Used to move the selector to an option
	Changes the gauge value of the selected option

LED Function	
DPMS ON	Blue
DPMS STANDBY	Orange

3.1.1 Select Signal Input Source

Analog PC: VGA input

Digital: DVI input



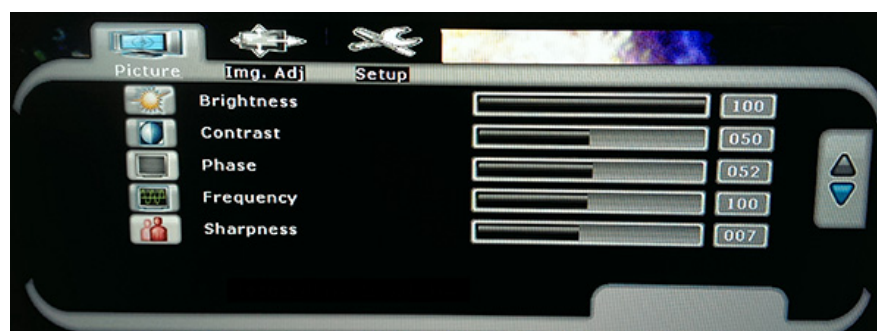
3.1.2 Display Settings

Users can access these options to adjust the display brightness, contrast, phase (VGA only), frequency (VGA only), sharpness, color temperature (Note 1), and tint (Note 1).

VGA



DVI



3.1.3 Image Settings

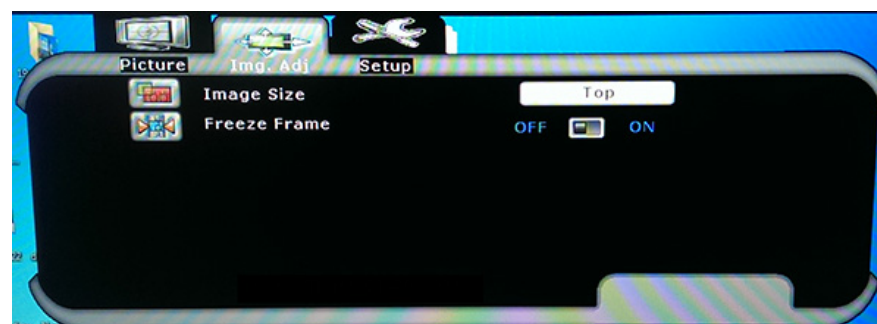
The Image Size settings can only be adjusted if the source signal resolution is not 1920 x 538.

3.1.3.1 Image Setting in DVI Mode

Image Size: Zoom in (DVI only, Notes 2 and 3), zoom out (Note 3), top (Note 3), and bottom (Note 3).

Freeze Frame: On/Off (DVI only)

If the input image does not comply with the display resolution (1920 x 538), set the Image Size to "Top/Bottom". This aligns the source image to the the top and bottom of the display.



3.1.3.2 Image Setting in VGA Mode

Image Size: Zoom out (Note 3), top (Note 3), and bottom (Note 3).

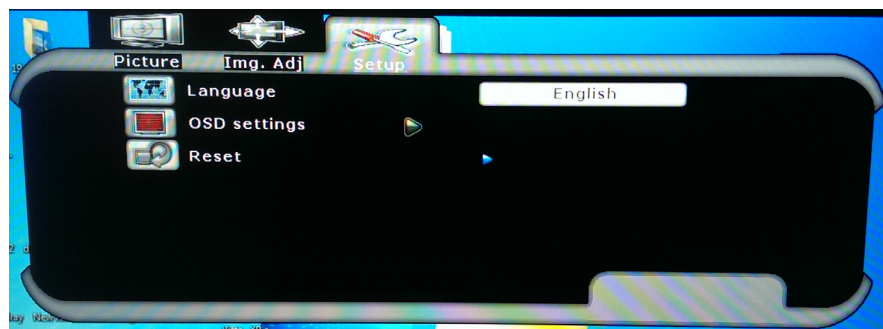
Horizontal Position, Vertical Position, and Auto Adjust

If the input image does not comply with the display resolution (1920 x 538), set the Image Size to “Top/Bottom”. This aligns the source image to the the top and bottom of the display.



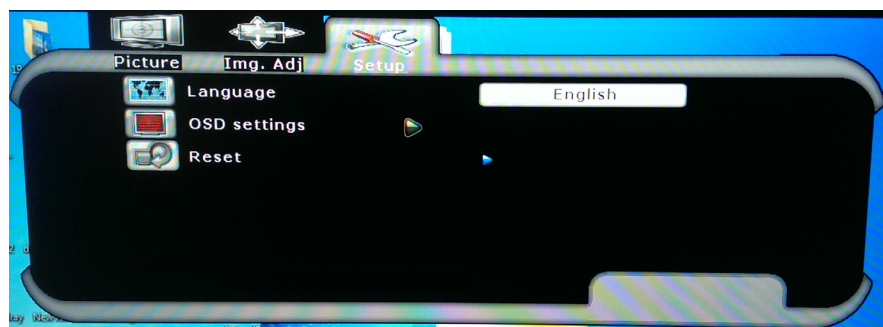
3.1.4 Language Settings

Options: English, Traditional Chinese, and Simplified Chinese



3.1.5 OSD Manager

Transparency, OSD Timeout (seconds), and Reset



Note 1 The color and tint adjustment functions are only supported for DVI video inputs (480i, 480p, 720p, 1080i, 1080p).



Note 2 The zoom in function is only supported for DVI video inputs (480i, 480p, 820p, 1080i, 1080p).



Note 3 Mode select



3.2 RS-232 Remote Control

3.2.1 Configuration

BAUDRATE: 19200
 PARITY: None
 BITS: 8
 STOPBIT: 1

3.2.2 Commands

KEY	COMMAND
POWER	BE EF 02 06 00 AE D7 07 00 00 00 00 00
SOURCE	BE EF 02 06 00 7F D6 06 00 00 00 00 00
MENU	BE EF 02 06 00 C8 D7 01 00 00 00 00 00
RIGHT	BE EF 02 06 00 4C D6 05 00 00 00 00 00
LEFT	BE EF 02 06 00 9D D7 04 00 00 00 00 00
UP	BE EF 02 06 00 FB D7 02 00 00 00 00 00
DOWN	BE EF 02 06 00 2A D6 03 00 00 00 00 00

VGA mode only

KEY	COMMAND
Auto Adjust	BE EF 02 06 00 58 D5 11 00 00 00 00 00

Appendix **A**

Troubleshooting

A.1 Introduction

For monitors that are malfunctioning, users are requested to refer to the following advice before contacting Advantech's service center. If you are still unable to resolve the problem using the instructions provided below, please contact your local distributor or service center.

A.2 Troubleshooting

Images not displayed on screen

- Ensure all I/O and power connectors are correctly installed and connected. (Refer to Section 1.4, I/O View (left / right))
- Ensure the connectors are not crooked, broken, or loose.
- Ensure the monitor is powered on, as indicated by the LED.
- Ensure that the monitor brightness is not set to the minimum value.
- Ensure that the screen resolution does not exceed that specified for the particular LCD type.

Images are incorrectly displayed, or full-screen images not displayed

- Please ensure that the screen resolution setting on the motherboard is correct.

The position of screen is not in the center

- Adjust the H-position and V-position, or select the "Auto" option.

Out of range

- The onscreen message "Out of Range" indicates that the output signal is not appropriate for the LCD display, for example, the output resolution exceeds the resolution specified for the LCD.
- Adjust the BIOS settings to the correct resolution.

No signal

- The monitor is powered on, but is not displaying or receiving an output signal from the computer. Check all power switches, power cables, and the VGA cable to ensure all are correctly connected.

Hibernate

- If the monitor goes into hibernation mode, the display is either set to power-saving mode or the monitor is not receiving an output signal from the computer. If the display is set to power-saving mode, adjust the BIOS settings and/or Windows configuration. If the monitor is not receiving an output signal from the computer, check that the cable connecting the computer to the display monitor is securely attached.



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