

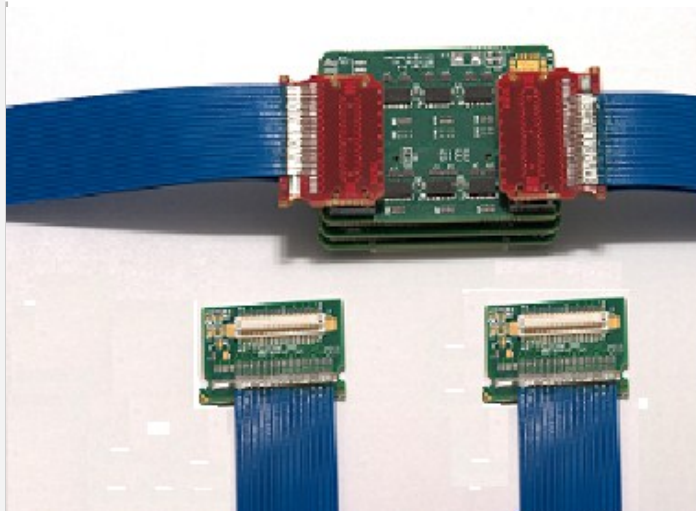
# MRADIGITAL

## VGA-615 SM/DM/DS

### Stereo 3D OLEDs Driver Board Datasheet

#### Features and Benefits

- 3D Stereo OLED Driver
- Dual/Single OLED Driver
- Multiple Video Inputs
  - Dual HDMI
  - Dual DVI
  - Analog RGB
  - NTSC / PAL/ RS170
- OLED Brightness and Color Control
- OLED Can be Located up to 5 feet Away
- Digital Stereo Audio (via HDMI port)
- Built in EDID
- Built-in DC/DC Power Conversion
- Low Input Voltage Range
- USB Calibration Software Via PC



#### Stereo 3D VGA OLED Driver

The VGA-615 is a stereo 3D dual VGA OLED driver board that allows video content to be displayed on two VGA OLEDs simultaneously. With the inclusion of digital stereo audio, rich 3D applications can be developed.

The VGA-615 is designed such that the OLEDs can be located up to 5 feet away from the main driver board. The interface board for the OLEDs is the same as the OLED and thus, allows the VGA-615 to solve the most challenging packaging and space limited requirements.

The VGA-615 is available in C, SM, DM and DS trim lines, an overview of their main features are listed below.

VGA-615SM - Single video Input drives one VGA OLED

VGA-615DM - Single video Input drives two VGA OLEDs

VGA-615DS - Two video inputs drives two VGA OLEDs

The VGA-615 driver is available with a micro controller to allow for custom applications features, such as the addition of dials, push buttons etc. In addition to the on board micro-controller, custom image and signal processing can be designed into the FPGA .

Our USB base PC application and configuration cable provides calibration adjustment for, color gain/offset, brightness, image orientation, firmware upgrades and other register values.

#### Power Consumption

Input Voltage	3.5 – 5.5 V DC
Power Consumption	350mW (Depends on Configuration)

#### Input Video Format

HDMI, DVI, Analog RGB, NTSC/ PAL, RS170	640 x 480
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#### EDID

Default	640 x 480 @ 60Hz
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#### Software Configuration

USB - PC Application	Control Brightness
	Gamma Updates
	Firmware Upgrades
	Auxiliary Input/Outputs

#### Mechanicals

Dimension (L x W )	1.2 x 1.5 inches
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#### Auxiliary Features

6 Analog/ Digital Inputs/Outputs
Additional Software Features via On board Micro-controller

## VGA-615DS

Dual HDMI Inputs	Stereo 3D Output (2 OLEDs)
Dual DVI inputs	Stereo 3D Output (2 OLEDs)
Dual NTSC/PAL RS170	Stereo 3D Output (2 OLEDs)
1 HDMI & 1 Analog RGB inputs	Stereo 3D Output (2 OLEDs)
1 DVI & 1 Analog RGB inputs	Stereo 3D Output

## VGA-615DM

Single HDMI Input	Mono (2 OLEDs)
Single DVI input	Mono (2 OLEDs)
Analog RGB input	Mono (2 OLEDs) (no audio)
Single NTSC/PAL/ RS170 input	Mono (2 OLEDs)

## VGA-615SM

Single HDMI Input	Mono (1 OLED)
Single DVI input	Mono (1 OLED)
Analog RGB input	Mono (1 OLED) (no audio)
Single NTSC/PAL/ RS170 input	Mono (1 OLED)

## Aux Connector : Power, UART, GPIO

Pin #	Definition	Function
JST - SM20B-SRSS-TB		
1,5-9	Reserved	Reserved
2	+3.3V	Power (300ma—max)
3	UART TX (3.3V)	TX from Micro
4	UART RX (3.3V)	RX from Micro
5-11	Reserved	Reserved
12	Ground	Ground
13	GPIO	GPIO pins
14	GPIO	GPIO pins
15	GPIO	GPIO pins
16	GPIO	GPIO pins
17	GPIO	GPIO pins
18	GPIO	GPIO pins
19-20	Reserved	Reserved

## Video Input #1: DVI / HDMI

Pin #	Definition	Function
JST - SM20B-SRSS-TB		
1	Data 2M	Digital Red Negative
2	Data 2M	Digital Red Positive
3	Ground	Ground
4	Data 1M	Digital Green Negative
5	Data 1P	Digital Green Positive
6	Ground	Ground
7	Data 0M	Digital Blue Negative
8	Data 0P	Digital Blue Positive
9	Ground	Ground
10	CLK M	CLK Negative
11	CLK P	CLK Positive
12	Ground	Ground
13	DVI VCC	+5V
14	Hot Plug	Hot Plug Detect
15	SCL	DDC Clock
16	SDA	DDC Data
17	Input Power	4.5 – 5.5V DC
18	Ground	Ground
19	Ground	Ground
20	Reserved	Reserved

## Video Input: #2 DVI / HDMI

Pin #	Definition	Function
JST - SM20B-SRSS-TB		
1	Data 2M	Digital Red Negative
2	Data 2M	Digital Red Positive
3	Ground	Ground
4	Data 1M	Digital Green Negative
5	Data 1P	Digital Green Positive
6	Ground	Ground
7	Data 0M	Digital Blue Negative
8	Data 0P	Digital Blue Positive
9	Ground	Ground
10	CLK M	CLK Negative
11	CLK P	CLK Positive
12	Ground	Ground
13	DVI VCC	+5V
14	Hot Plug	Hot Plug Detect
15	SCL	DDC Clock
16	SDA	DDC Data
17	Input Power	4.5 – 5.5V DC
18	Ground	Ground
19	Ground	Ground
20	Reserved	Reserved

## Video Input # 2: Analog RGB

Pin #	Definition	Function
JST - SM20B-SRSS-TB		
1	Reserved	Reserved
2	Red	Analog Red Video
3	Red Return	Analog Red Return
4	Reserved	Reserved
5	Green	Analog Green Video
6	Green Return	Analog Green Return
7	Reserved	Reserved
8	Blue	Analog Blue Video
9	Blue Return	Analog Blue Return
10	VSYNC	VSYNC
11	HSYNC	HSYNC
12	Ground	Ground
13	Reserved	Reserved
14	Reserved	Reserved
15	Reserved	Reserved
16	Reserved	Reserved
17	Input Power	4.5 – 5.5V DC
18	Ground	Ground
19	Ground	Ground
20	Reserved	Reserved

## Wireless Low Latency Video (WLLV)

Wireless Low Latency Video – Make your OLED based product wireless by using MRA Digital wireless video technology. Transmitting up to 1080p with 1-2 frame of latency at ranges over 100 meters with Wi-Fi and miles using microwave or Wi-Max. Contact us for more info.

## Ordering Information

Part Number	Description
VGA-615DS	Dual Input Stereo 3D Dual OLED Driver
VGA-615DM	Single Input Dual OLED Driver
VGA-615SM	Single Input Single OLED Driver
VGA-ANALOG-C	Analog RGB Video & Power Cable
VGA-1001	USB Configuration Cable
VGA-DVI-C	DVI Video & Power Cable
VGA-HDMI-C	HDMI Video & Power Cable

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