



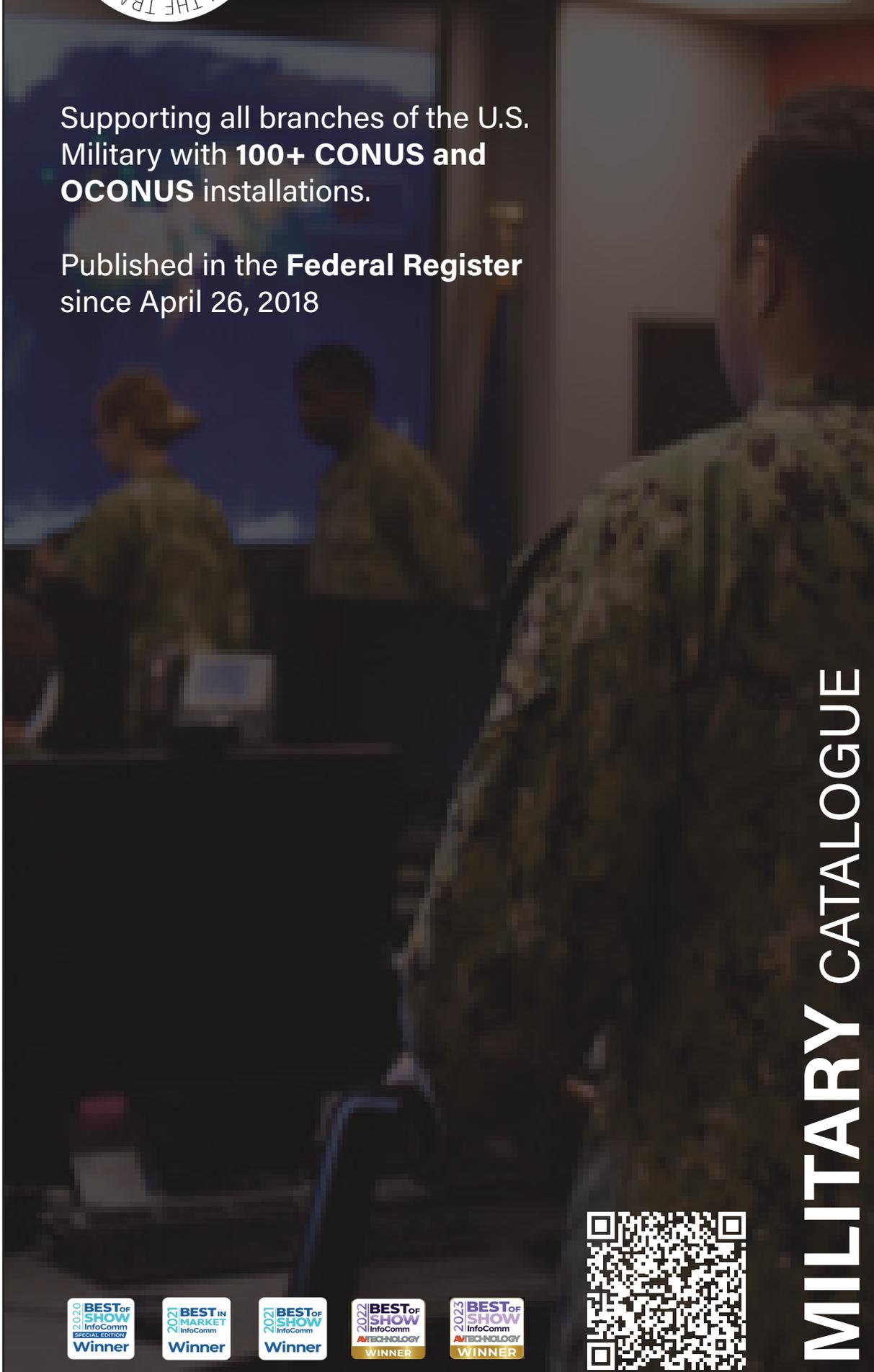
# VERINT LEAD DISPARATORS



**CLASS**  
compliant  
configuration

Supporting all branches of the U.S. Military with **100+ CONUS and OCONUS** installations.

Published in the **Federal Register** since April 26, 2018



# MILITARY CATALOGUE

# VANGUARD

## LED DISPLAYS

# INFINITY

Controllers Unlimited Capabilities

- *Up to 16 Input and 18 Output Cards*
- *Multi Window Processing upto **64 windows!***
- *No need for expensive switcher/multi window processors*
- *User Friendly Browser Based GUI*
- *Windowing Control DvLED and LCDs from one Infinity controller*



Elevate your Control Room experience with the  
**Infinity LED Display controller/processor.**

# VANGUARD

## LED DISPLAYS

# INFINITY ULTRA

## Controllers Defying Limits

- *Up to 60 Versatile Input/Output card slots*
- *Multi Window Processing upto **160 windows!!***
- *No need for expensive switcher/ multi window processors*
- *User Friendly Browser Based GUI*
- *Window and Program DvLED and LCDs from a single Infinity Ultra*
- *Integrated World Clocks*
- *Integrated API Recallable Classification Bars*
- *Windowing Control DvLED and LCDs from one Infinity controller*



**Elevate your Control Room experience with the  
Infinity ULTRA LED Display controller/processor.**



Scan for a digital copy!

# INFINITY



Limitless Capabilities to Create an all-encompassing Data Wall

ideal for

Large displays, complex inputs

## summary

Infinity controllers utilize a card/chassis. This allows for the optimal customization to any LED display system. By combining Infinity with Vanguard displays there is no need for expensive switcher/multi-window processors which will result in significant savings.

Ample input and output options guarantee that Infinity controllers can support an ideal data wall, exceeding the requirements of the most complex direct view LED system.

Infinity controllers can also be paired with the Vanguard LED VE4K encoder to enable dynamic screen sharing from a high volume of connected machines.

Three chassis sizes allow for the perfect configuration of inputs, outputs, and optimal functionality.

## inputs



## special configurations



## optional

- Light sensor for automatic brightness
- Multi-function card for various sensors
- Back-up power supply
- VE4K encoder



## Chassis sizes



model name	<b>Infinity 4RU</b>						
input	up to 4 cards, 16 channels						
output	up to 4 cards, 26 million pixels						
output windows	16 x 1080p						
dimensions	<table> <tr> <td>WIDTH</td> <td>483mm (19")</td> </tr> <tr> <td>HEIGHT</td> <td>177.8mm (7")</td> </tr> <tr> <td>DEPTH</td> <td>406.1mm (16")</td> </tr> </table>	WIDTH	483mm (19")	HEIGHT	177.8mm (7")	DEPTH	406.1mm (16")
WIDTH	483mm (19")						
HEIGHT	177.8mm (7")						
DEPTH	406.1mm (16")						
weight	12.5kg (27.5lbs)						

main board	<ul style="list-style-type: none"> <li>2 genlock I/O</li> <li>1 RS-232 serial port</li> <li>1 USB 3.0</li> <li>1 Ethernet/LAN</li> <li>1 3D port</li> </ul>
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preview and monitoring	1 HDMI1.4 (2K)
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model name	<b>Infinity 7RU</b>						
input	up to 8 cards, 32 channels						
output	up to 8 cards, 52 million pixels						
output windows	32 x 1080p						
dimensions	<table> <tr> <td>WIDTH</td> <td>483mm (19")</td> </tr> <tr> <td>HEIGHT</td> <td>276.8mm (10.9")</td> </tr> <tr> <td>DEPTH</td> <td>406.1mm (16")</td> </tr> </table>	WIDTH	483mm (19")	HEIGHT	276.8mm (10.9")	DEPTH	406.1mm (16")
WIDTH	483mm (19")						
HEIGHT	276.8mm (10.9")						
DEPTH	406.1mm (16")						
weight	19.3kg (42.5lbs)						

## Optional input/output cards

input cards	<ul style="list-style-type: none"> <li>1 HDMI2.0 (4K)</li> <li>1 DP1.2 (4K)</li> <li>1 12GSDI (4K)</li> <li>1 HDMI2.0 (4K), 1 DP1.2 (4K)</li> <li>4 DL-DVI (2K)</li> <li>4 HDMI1.4 (2K)</li> <li>4 VGA (2K)</li> <li>2 VGA (2K), 2 CVBS</li> <li>4 3G-SDI (2K)</li> <li>2 RJ45 (4K)</li> </ul>
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output cards	<ul style="list-style-type: none"> <li>8 1G RJ45</li> <li>10 1G RJ45</li> <li>4 5G RJ45</li> <li>2 10G fiber</li> <li>1 HDMI2.0 (4K)</li> <li>4 DL-DVI (2K)</li> <li>4 HDMI1.4 (2K)</li> </ul>
--------------	--

model name	<b>Infinity 11RU</b>						
input	up to 16 cards, 64 channels						
output	up to 18 cards, 117 million pixels						
output windows	72 x 1080p						
dimensions	<table> <tr> <td>WIDTH</td> <td>483mm (19")</td> </tr> <tr> <td>HEIGHT</td> <td>488mm (19.2")</td> </tr> <tr> <td>DEPTH</td> <td>475.2mm (18.7")</td> </tr> </table>	WIDTH	483mm (19")	HEIGHT	488mm (19.2")	DEPTH	475.2mm (18.7")
WIDTH	483mm (19")						
HEIGHT	488mm (19.2")						
DEPTH	475.2mm (18.7")						
weight	38kg (83.8lbs)						





# INFINITY

## ULTRA



Expansive capabilities with secure **command and control** in mind

ideal for

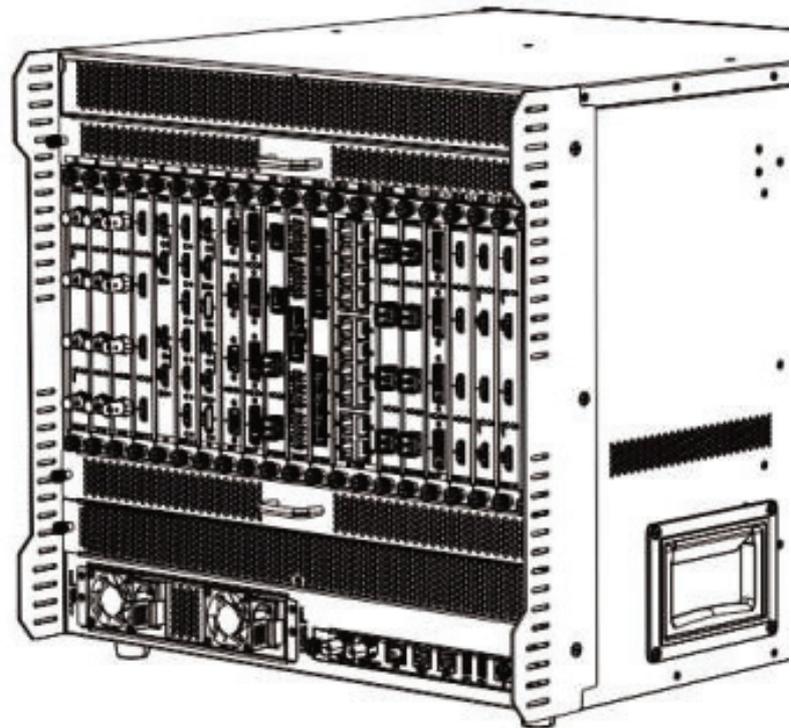
## Command and control

### summary

Vanguard LED is proud to announce our latest **next generation in video processing LED controllers**, the Infinity Ultra series. Available in three chassis sizes, 9, 15, and 20 RU, Infinity Ultra has expansive options input/output cards to support any application.

Infinity Ultra is managed entirely via a human-friendly and **intuitive web-based** interface enabling a diverse range of compatibility for the operating system of the control computer. The web interface enables easy configuration of a high volume of inputs as well as non-video source elements like background images, subtitles, and logos.

Infinity Ultra supports **dual 4K UltraHD preview and monitoring**. In combination with dynamic system health monitoring with email alert functionality, Infinity Ultra is the processing and control solution which exceeds the requirements of the most demanding applications like secure command and control centers. **Pair Infinity Ultra with the VE4K to centralize up to 160 workstations.**



CONTROLLERS

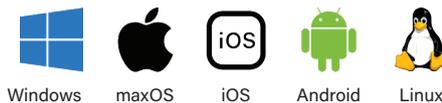
### inputs



### special configurations



### compatible control OS



### optional

- Light sensor for automatic brightness
- Multi-function card for various sensors
- Back-up power supply
- VE4K encoder

## Chassis sizes



model name	<b>Infinity ULTRA 9RU</b>
input	up to 18 cards (20 total i/o slots)
output	up to 10 cards (20 total i/o slots)
output windows	160 x 2K or 40 x 4K (per controller) 16 x 2K or 4x x4K (per card)
dimensions	WIDTH   482.6mm (19") HEIGHT   399.3mm (15.7") DEPTH   535.2mm (21.1")
weight	27kg (59.5lbs)

main board	2 genlock I/O 2 RJ11 RS-232 2 USB 2.0 1 Ethernet/LAN 1 3D port
------------	--

preview and monitoring	2 HDMI2.0 (4K)
------------------------	----------------

model name	<b>Infinity ULTRA 15RU</b>
input	up to 30 cards (40 total i/o slots)
output	up to 20 cards (40 total i/o slots)
output windows	640 x 2K or 160 x 4K (per controller) 16 x 2K or 4x 4K (per card)
dimensions	WIDTH   482.6mm (19") HEIGHT   666mm (26.2") DEPTH   488.2mm (19.2")
weight	48.6kg (107.14lbs)

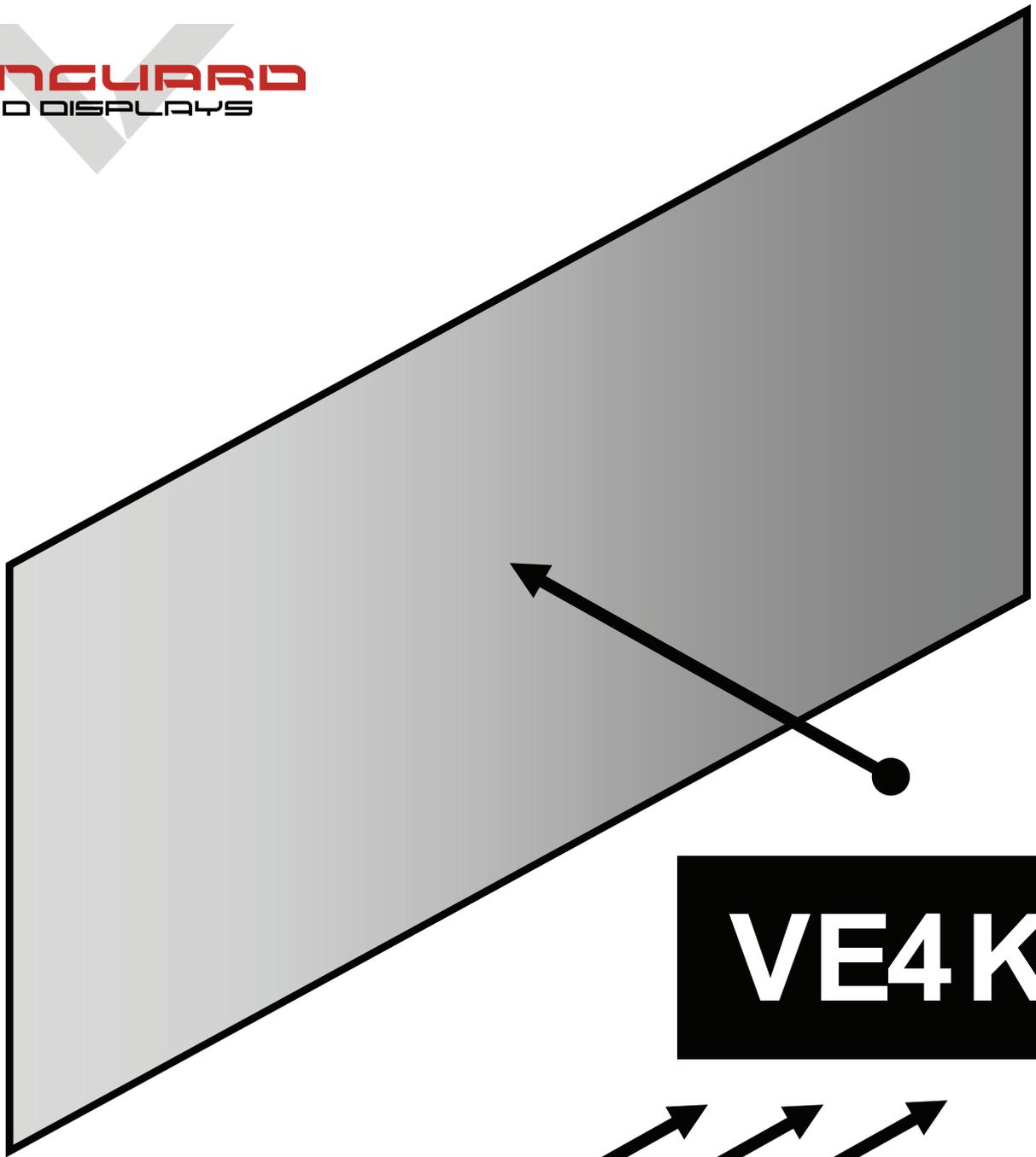
## Optional input/output cards

input cards	2 HDMI2.0, 2 DP1.2 1 HDMI2.0, 1 DP1.2 2 12G SDI 1 12G SDI 4 3G SDI 4 HDMI1.3 6 HDMI 1.3 4 VGA 2 VGA, 2 CVBS 4 AUDIO 4 DVI 4 CVBS
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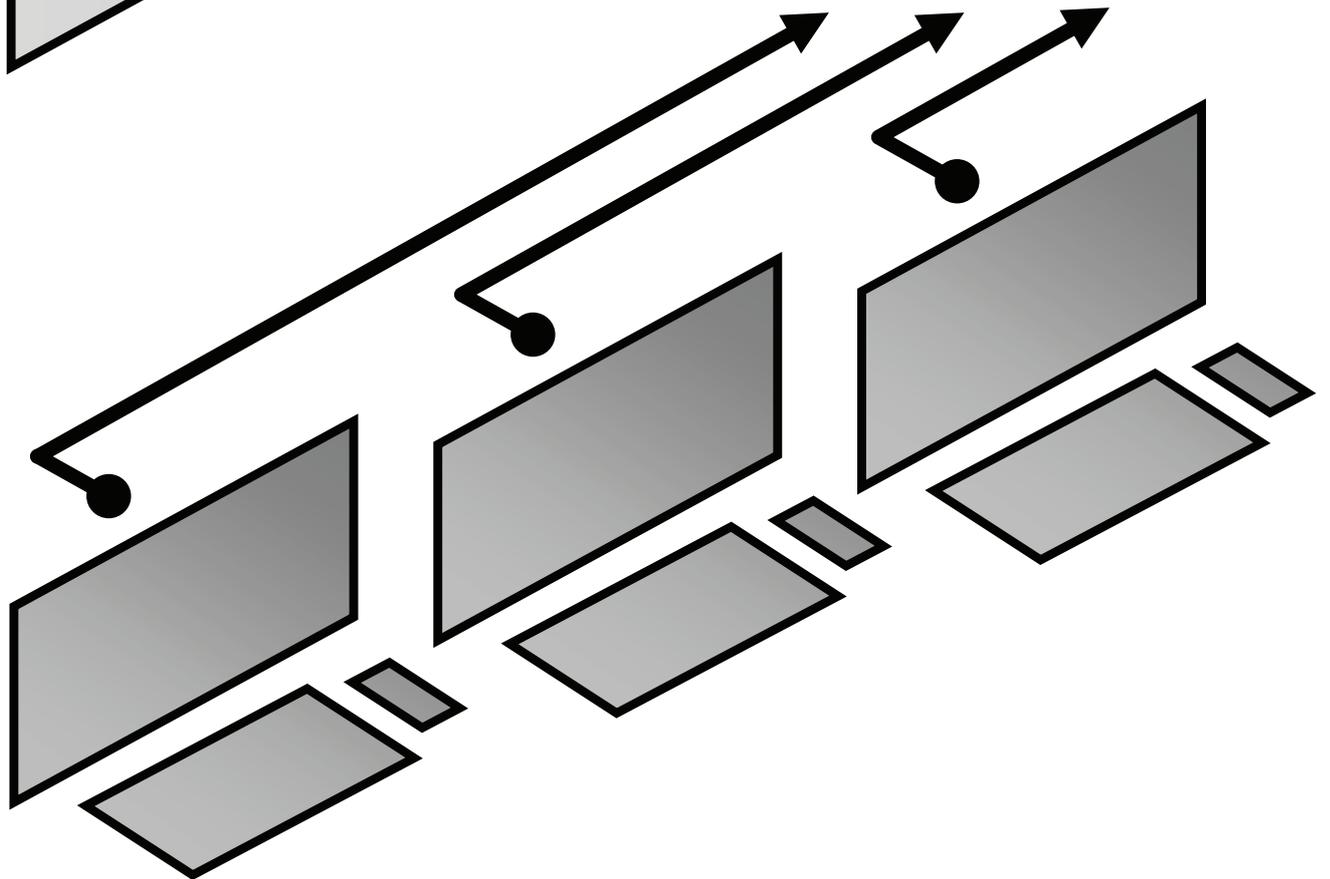
output cards	20 1G RJ45 8 5G RJ45 4 10G Fiber 2 HDMI2.0 1 HDMI2.0 4 HDMI1.4 6 HDMI1.3 4 DVI
--------------	---



model name	<b>Infinity ULTRA 20RU</b>
input	up to 40 cards (60 total i/o slots)
output	up to 30 cards (60 total i/o slots)
output windows	960 x 2K or 240 x 4K (per controller) 16 x 2K or 4 x 4K (per card)
dimensions	WIDTH   482.6mm (19") HEIGHT   889mm (35") DEPTH   488.2mm (19.2")
weight	66.8kg (147.3lbs)



**VE4K**



# secure and expansive control



actual size shown

## VE4K

ideal for

### Command and control

summary

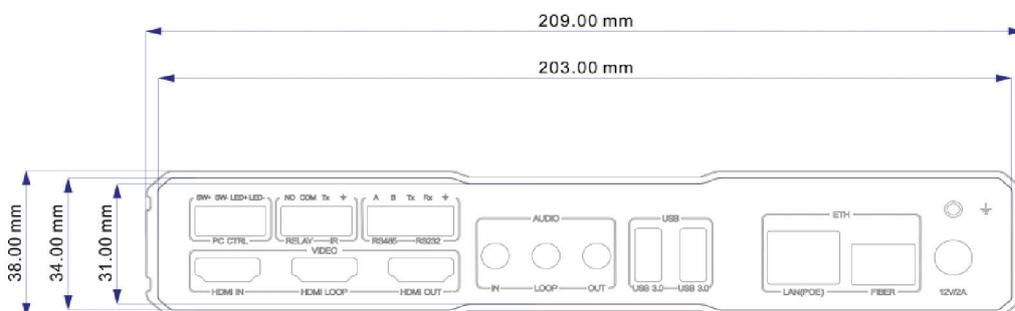
The VE4K (*Vanguard Encoder 4K*) is an optional peripheral for the Infinity and Infinity Ultra controller series.

An IP-based HDMI extender for management of workstations (up to 160) in a SCIF, watch floor, or command center. Coordinate and manage different categories of content. Mirror select stations to the data wall in real time or in combination with defined preset layouts.

The Infinity controller will receive a network cable from the switch and receive the signal from the workstation and apply it to the window of the user's choice on the wall.

connections

- 1 HDMI1.4 (2K) - in | out | loop
- 1 35mm Audio jack –in | out | loop
- 3 USB3.0
- 1 USB2.0
- 1 fiber
- 1 ethernet
- 1 control for PC, IR, RS232, RS485





CLASS  
compliant  
configuration



There are two (2) ways in which Vanguard's LED products qualify as TAA-compliant.

1. Vanguard LED products can be "substantially transformed" in a TAA signatory country, or in a Free Trade Agreement (FTA) country to which the United States has unilaterally extended TAA procurement benefits
2. They may also qualify as "**US-Origin End Products**", as defined in the Foreign Acquisition Regulations (FAR).

Vanguard LED Displays is TAA-compliant under either scenario.

Vanguard LED sources its TAA-compliant products in South Korea, a Free Trade Agreement (FTA) country to which the United States has unilaterally extended TAA procurement benefits. The LED display components are "*substantially transformed*" in South Korea and as a result the LED displays produced in South Korea are TAA-compliant.

Vanguard's LED displays are also considered "**US-Origin End Products**", as defined in the Foreign Acquisition Regulations (FAR). All video displays contain a large number of light emitting-diode (LED) bulbs. The LED bulbs are populated onto a bare printed circuit board and then assembled with a driver Integrated circuit (IC Driver). At this point the display boards are non-functional.

Next, a HUB board PCBA will be combined with a receiving card, which receives electronic signals and commands from an external sender.

A cabinet will be assembled together with low voltage power supplies, cables and adapters forming frames for the display units (modules) to be fitted into at the appropriate time.

At this point the display units are still not functional.

Regardless of where made or assembled the display modules and "*frames*" are shipped separately. In the United States at Vanguard's Florida facility, the modules are integrated with the frames, with various components being wired together, creating, at that precise moment, video display panels that are capable of receiving of receiving signals and displaying images. Controllers will provide instructions to the displays enabling the system to generate images.

The product's functionality is the result of operations performed in the United States.

**THEREFORE, THESE PRODUCTS ARE CONSIDERED "US-ORIGIN END PRODUCTS"**

The following Vanguard LED Displays are TAA approved: **Axion, Invictus, Sirius, LA series, Beryllium, Fusion, Janus, D-TOC, and Cerium.**

CONFIGURABLE

- Axion
- Invictus
- Sirius
- LA Series
- Beryllium

ALL-IN-ONE

- Janus
- D-TOC

SIMULATION

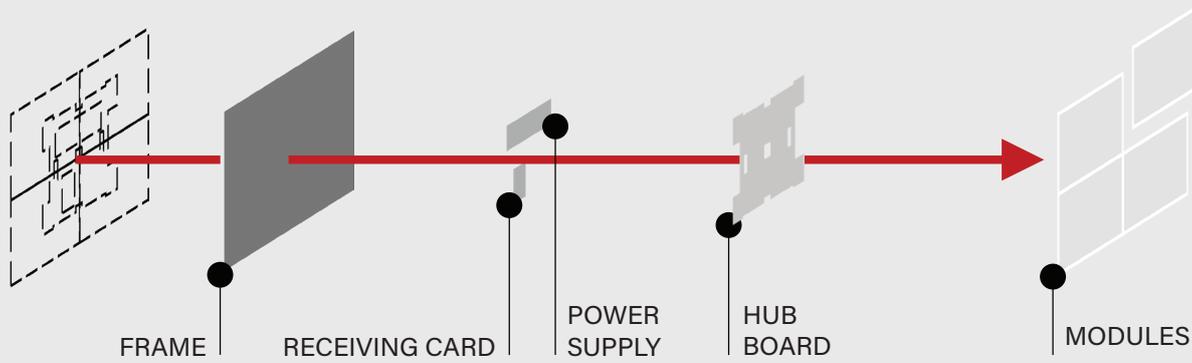
- Cerium

AVAILABLE IN TAA-CLASS

# included spare parts

Vanguard LED includes 5% components and spare parts for maintaining the display in operation. Quantities of each part are calculated based on the quantity of that part in the display. Spare parts include modules from the same batch, HUB boards, receiving cards, and power supplies.

Additional spare parts can be added on request.



**10% of each field-swappable part** *(based on the quantity in the display)*

## warranty

### CONNECTOR GOLD | FLIP-CHIP



default | **5-year**  
maximum | **7 years total**

### STARTING



Upon delivery of the display

### EXTENSION COST



Percentage of the display cost and additional term

### LONGER TERM?

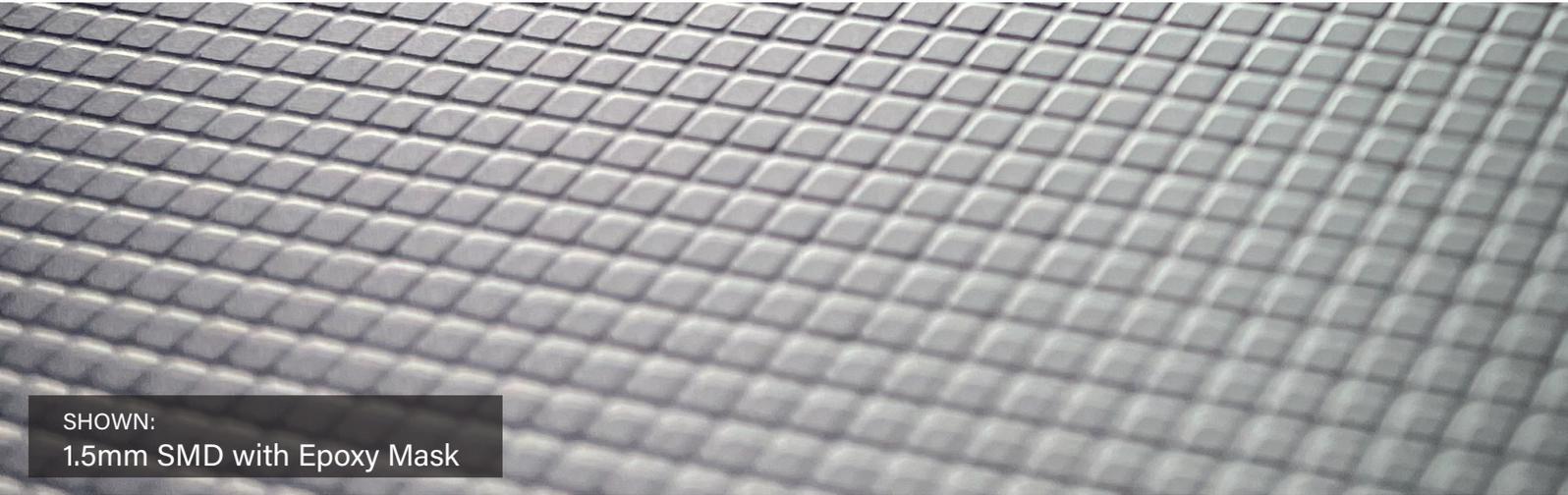


Need a longer warranty?  
We can discuss!

# GLUE-ON-BOARD (GOB)

EPOXY RESIN - pixel protection

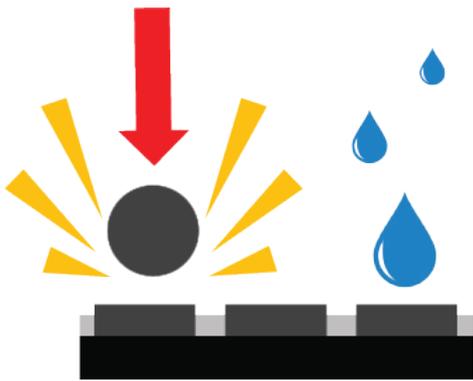
For SMD, IMD, and MIP LED Displays



SHOWN:  
1.5mm SMD with Epoxy Mask

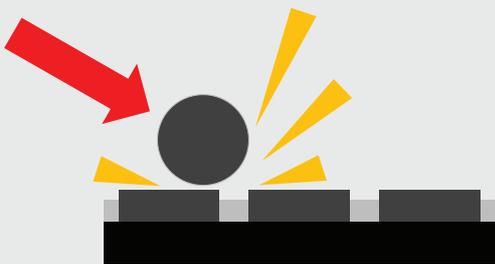
## all about epoxy resin...

"GOB", or Glue-On-Board uses an epoxy resin that covers the modules of an LED display cabinet, at the end of the manufacturing process. This produces a strong, smooth finish covering the encapsulated 3-in-1 bulbs. This process has several benefits:



### Impact and humidity resistant.

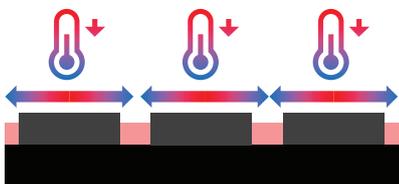
The epoxy resin coating creates a strong, smooth finish over the encapsulated bulbs creating an impact and humidity resistant display, thereby reducing the failure rate of the LED bulbs dramatically.



### Restrict lateral movement.

Roughly 75% of dead pixels are the result of physical impact which break the pixels connection to the PCB.

With an epoxy masking between the pixels which is flush to the pixels, versus the slight gap which exists with installed plastic masks, pixels become much more durable. Simply adding this epoxy makes even fine-pitch pixels remarkably durable.



### Disperse heat.

Due to the direct contact between the pixel encapsulations and the epoxy, the infill acts as a heat sync drawing heat away from the pixels.

This simple thermal principle reduces the wear on the pixels and extends the life of the display

# white glove services

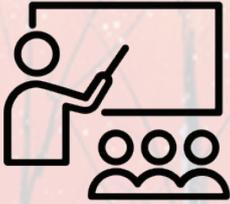


## installation

*Vanguard LED can help with installation!*

*Vanguard LED Displays can support pre-installation planning through commissioning of the display.*

*Vanguard can provide the installation of cabinets and mounts at an additional cost.*



## training

*Training and certification, at a personal level.*

*Bring your team to our offices or we can come to you at your facility. We will provide all tools needed to train on any specific product or on the technology in general.*

*Vanguard LED will provide Certificates of Achievement for all individuals who participate and are present for the duration of the training.*



## repair

*Local pixel repair, by the skilled Vanguard LED team!*

*Vanguard LED has qualified in-house repair technicians. Technicians have received training direct from manufacturing engineers, ensuring both quality and timely repairs.*

*Track the status and progress of your repairs with our advanced RMA system. Feel secure in knowing that we support you and your Vanguard LED displays!*



## commissioning

*Vanguard LED can help with installation!*

*Our Commissioning Services encompass the supervision of an installation and the training of on-site staff to handle the LED display.*

# everyday services



Convenient solution demos



Industry-leading warranty and repair support



Selecting the best product for each unique application



Clear and fast communication with a local resource



Designing the display to the application needs



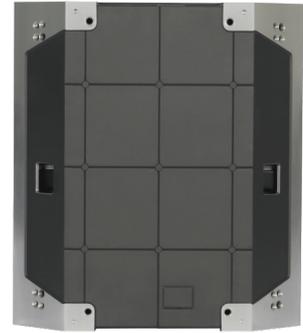
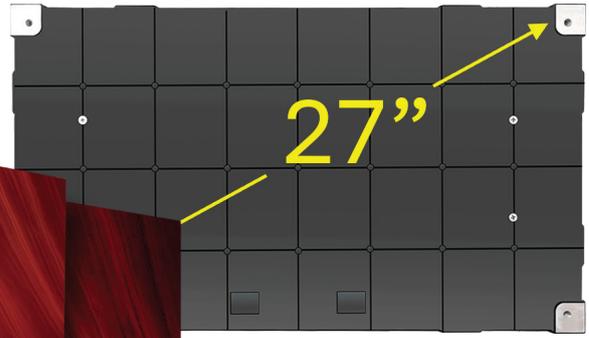
Pre-aging to correct minor issues to ensure a flawless installation



Detailed design drawings



Prompt troubleshooting and service support



# Axion

pitch

0.9

1.2

1.5

1.8

2.5

3.7

pixel tech

SMD

SMD

SMD

SMD

SMD

SMD



ideal for

**Indoor, fixed 16:9 and 32:9 displays**

summary

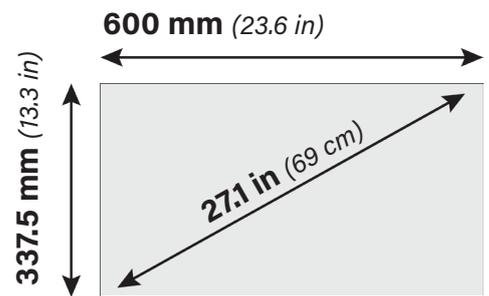
Axion is the best solution for indoor, fixed 16:9 displays. Covering the industry's most popular pitches for this application, Axion utilizes SMD pixels as standard, and can have an optional epoxy masking or coating applied to provide enhanced durability. Gold bonding wire is also available.

Axion is available with standard 600x337.5 panels, and 300x337.5 half-width panels allowing for smaller design units, and narrower facets for curved displays.

special configurations



dimensions



Scan for a digital copy!

aspect ratio

16:9

weight

7.7 kg (17 lbs)

max brightness

1,200 nits

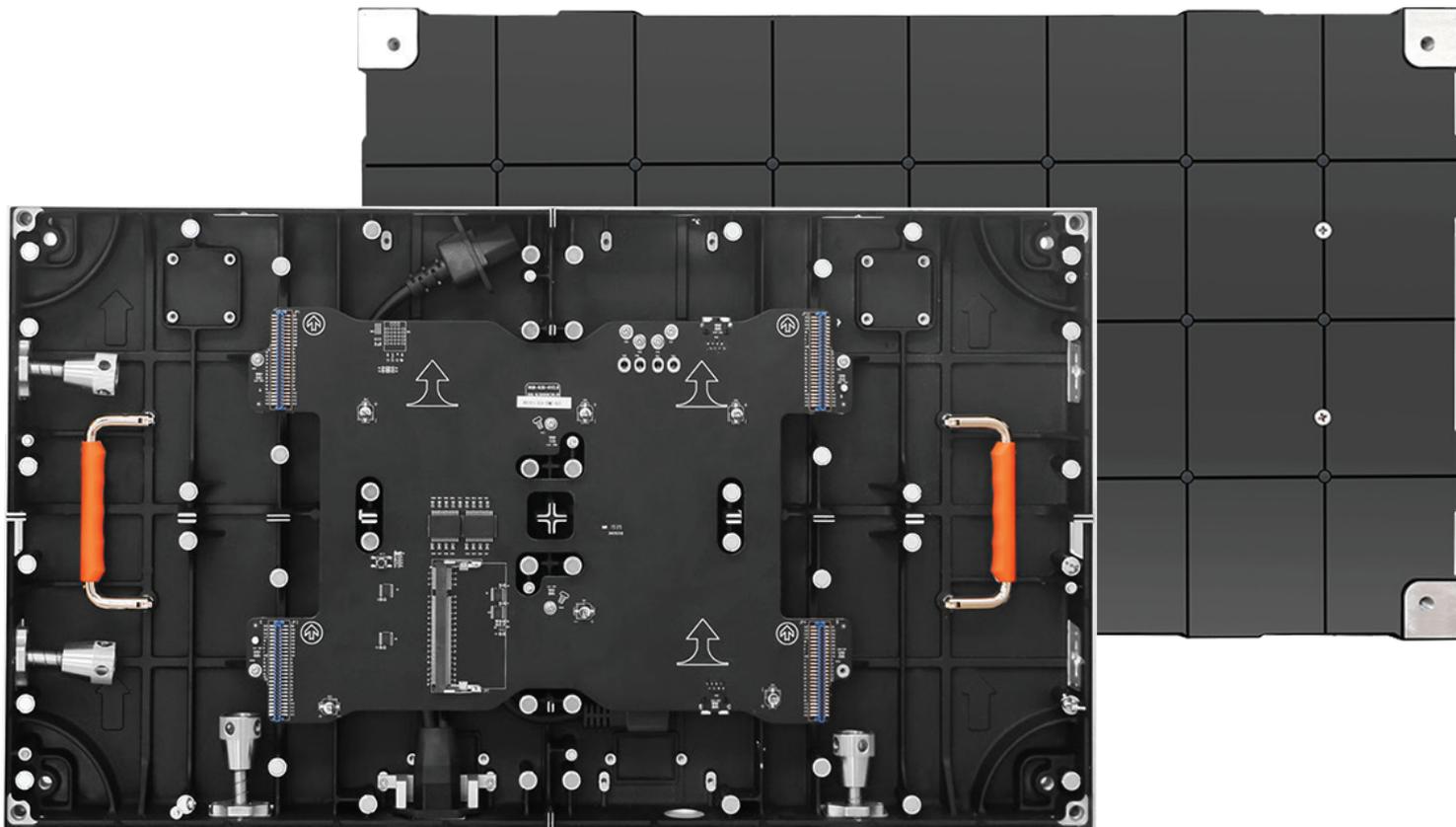
IP rating

IP41

optional

- Protective epoxy masking or coating
- IMD or MIP pixels at select pitches
- Cosmetic/protective edge trim
- 45-degree edges for corner displays
- Connecting plates
- Headers for hanging/flying
- Embedded controller
- Mobile cart, up to 5x5 panel array
- Flight cases
- Hydrophobic treatment
- Dual receiving cards for data redundancy
- Dual power supplies for power redundancy
- Remote AC>DC power conversion

# 16:9 PANELS Indoor, fixed installation



maximum brightness (nits)		up to 1,200	bonding wire	Copper
dimensions	WIDTH	600 mm (23.6 in)	power common	Anode
	HEIGHT	337.5 mm (13.3 in)	watts per panel	132W max (46W average)
	DEPTH	58 mm (2.3 in)	watts per sq m	650W max (228W average)
panel aspect ratio		16:9	max amps per cascade	10
panel weight		7.7 mm (17 in)	operating voltage	100-240V AC, 50/60 Hz
modules per panel		up to 4 per panel	operating temperature	-10°C - +40°C
viewing angle	HORIZONTAL	160°	maximum heat	up to 295.97 BTU/hr
	VERTICAL	160°	humidity	10% - 80%, non-condensing
led lifetime* (hrs)		100,000	ip rating	IP41
contrast		up to 6,000:1	frame material	Die-cast Aluminium
drivers		ICN 2153, ICN1069	hanging and stacking	15 hanging max   30 stacking max
scan rate		1/27, 1/30, 1/60	rear bolt threading	M8
processing depth (bits)		14 default (10-16 range)	power connectors	C13/C14
refresh rate (hz)		3,840 default (3840-7680 range)	data connectors	RJ45
frame rate		60 default (50, 60, 120 options)	service access	Front
color temperature		7,500 default (2000-12000 range)	warranty	5 year (up to 7 available)
color gamut		N/A	certifications	EMC-B, CCC, FCC, ETL, LVD, CE, RoHS, CB, PSE

## supported controllers





# Axion Invictus

pitch	0.6	0.7	0.9	1.2	1.5
pixel tech	COB	COB	COB	COB	COB
					



Scan for a digital copy!

ideal for

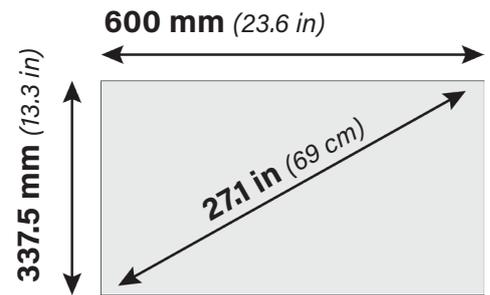
## Cool touch and close audience

summary

Invictus is **durable** by design, creating the strongest dvLED display available. **Chip-on-board** pixel technology allows for super-fine pixel pitch without the fragility associated with standard dvLED pixels at fine-pitch.

Invictus is **highly power efficient** with flip-chip power handling and common cathode technology. Flip-chip technology eliminates the need for a gold or copper bonding wire, reducing both the power draw and heat generated through operation.

dimensions



aspect ratio

16:9

weight

4.7 kg (10.3 lbs)

max brightness

1,000 nits

IP rating

IP31

special configurations

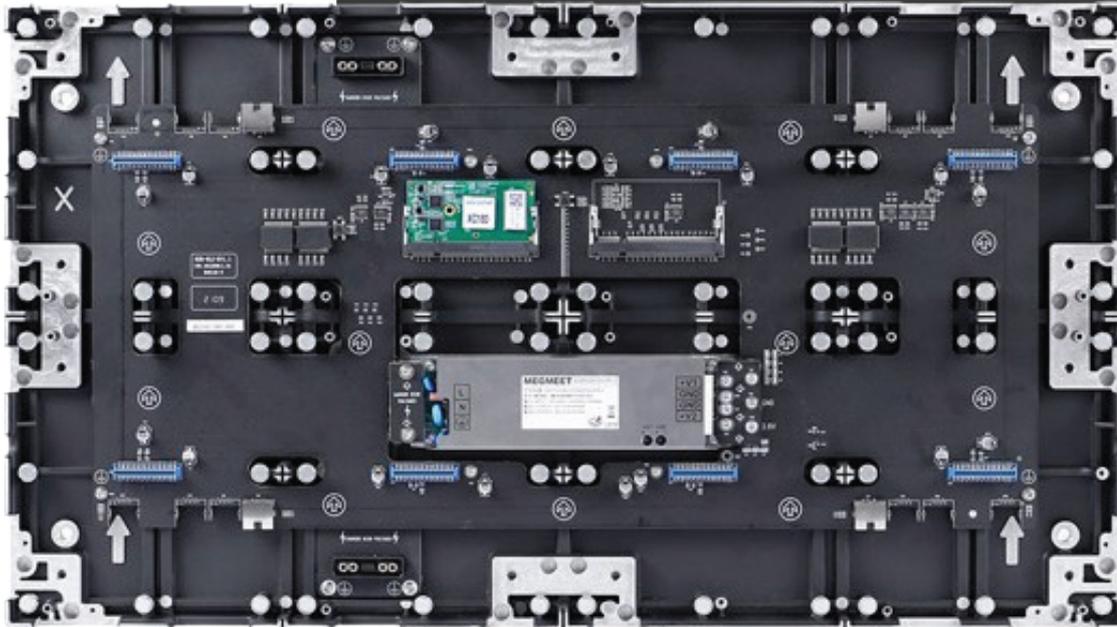


optional

- Cosmetic/protective edge trim
- 45-degree edges for corner displays
- Connecting plates
- Mobile cart, up to 6x6 panel array
- Flight cases
- Hydrophobic treatment
- Remote AC>DC power conversion



Custom power cascade connection



series name

## Invictus (IN)

maximum brightness (nits)

up to 1,000

bonding wire

Flip-chip

dimensions

WIDTH

600 mm (23.6 in)

power common

Cathode

HEIGHT

337.5 mm (13.3 in)

watts per panel

132W max (46W average)

DEPTH

28 mm (1.1 in)

watts per sq m

650W max (228W average)

panel aspect ratio

16:9

max amps per cascade

15

panel weight

4.69 mm (10.3 in)

operating voltage

100-240V AC, 50/60 Hz

modules per panel

up to 8 per panel

operating temperature

-10°C - +40°C

viewing angle

HORIZONTAL

170°

maximum heat

up to 275.63 BTU/hr

VERTICAL

170°

humidity

10% - 80%, non-condensing

led lifetime\* (hrs)

100,000

ip rating

IP41

contrast

20,000:1

frame material

Die-cast Aluminium

drivers

ICN1069, XM11202

hanging and stacking

no hanging | 30 stacking max

scan rate

1/32, 1/40, 1/48

rear bolt threading

M8

processing depth (bits)

14 default (10-16 range)

power connectors

custom

refresh rate (hz)

3,840 default (3840-7680 range)

data connectors

RJ45

frame rate

60 default (50, 60, 120 options)

service access

Front

color temperature

7,500 default (2000-12000 range)

warranty

5 year (up to 7 available)

color gamut

95%-97%

certifications

EMC-A, CCC, FCC, ETL, LVD, CE, RoHS, CB

supported controllers





# Sirius

pitch	0.9	1.2	1.5	1.8	2.5	3.7
pixel tech	SMD	SMD	SMD	SMD	SMD	SMD
						



Scan for a digital copy!

ideal for

Large, indoor 16:9 and 32:9 displays

summary

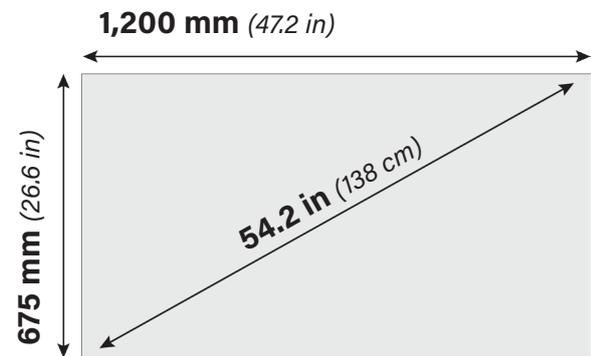
The Sirius series features a 54 inch diagonal panel, exactly double the width and height of the popular 600 x 337.5mm panel size present on Axion and Invictus panels. Paired with the most applicable pitches, Sirius can create the **same displays as average 27-inch panels, but with a quarter of the panels.**

The Sirius frame includes VESA mounting points to enable a broad set of compatible mounting solutions.

special configurations



dimensions



aspect ratio

16:9

weight

17.5 kg (38.6 lbs)

max brightness

1,000 nits

IP rating

IP41

optional

- Protective epoxy masking or coating
- Connecting plates
- Hydrophobic treatment
- Cosmetic/protective edge trim
- Mobile cart, up to 6x6 panel array
- Remote AC>DC power conversion
- 45-degree edges for corner displays
- Flight cases



series name	<b>Sirius (SI)</b>		
maximum brightness (nits)	up to 1,000	bonding wire	Copper
dimensions	WIDTH	1200 mm (47.2 in)	Anode
	HEIGHT	675 mm (26.6 in)	132W max (46W average)
	DEPTH	28 mm (1.1 in)	650W max (228W average)
panel aspect ratio	16:9	watts per panel	20
panel weight	17.5 mm (38.6 in)	watts per sq m	100-240V AC, 50/60 Hz
modules per panel	up to 16 per panel	max amps per cascade	-10°C - +40°C
viewing angle	HORIZONTAL	operating voltage	up to 1118.12 BTU/hr
	VERTICAL	operating temperature	10% - 80%, non-condensing
led lifetime* (hrs)	100,000	maximum heat	IP41
contrast	up to 6,000:1	humidity	Die-cast Aluminium
drivers	ICN 2153, ICN1069	ip rating	no hanging   30 stacking max
scan rate	1/30, 1/60	frame material	M8
processing depth (bits)	14 default (10-16 range)	hanging and stacking	FD20-M/FD20-F
refresh rate (hz)	3,840 default (3840-7680 range)	rear bolt threading	RJ45
frame rate	60 default (50, 60, 120 options)	power connectors	Front
color temperature	7,500 default (2000-12000 range)	data connectors	3 year (up to 5 available)
color gamut	N/A	service access	EMC-A, CCC, FCC, ETL, LVD, CE, RoHS, CB
		warranty	
		certifications	

## supported controllers





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# LA series

pitch	1.2	1.5	1.8	2.5
pixel tech	SMD	SMD	SMD	SMD

ideal for

## LCD videowall replacement

summary

The LA series by Vanguard is a purpose-built replacement for existing LCD videowalls.

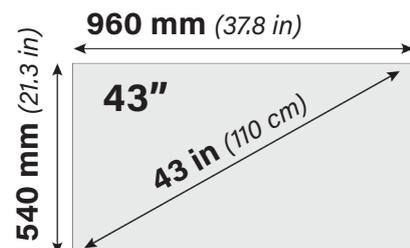
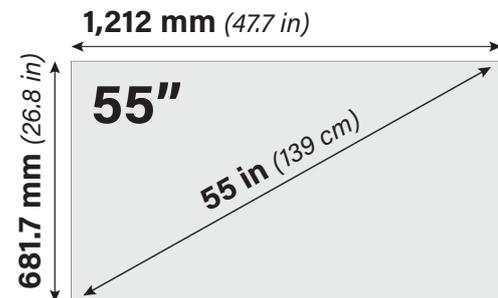
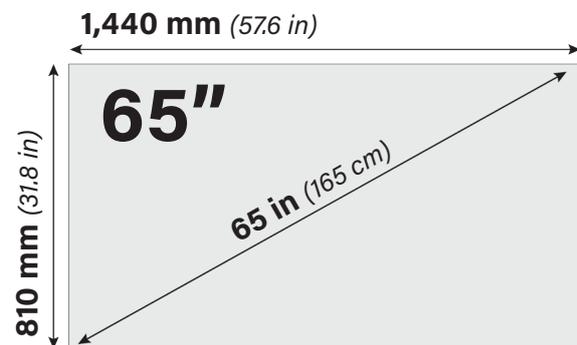
Featuring three panel sizes at **43"**, **55"**, and **65"** diagonal, LA series is likely to be a **perfect swap-out solution** to get rid of the heavy grid and drifting uniformity which plague LCD technology.

LA series panels **support VESA** mounting so the new technology can directly replace LCD monitors on the same VESA mounts. **Integrate the controller to one of the panels to use existing video cabling too!**

special configurations



dimensions



max brightness

600 nits

IP rating

IP41

optional

- Protective epoxy masking or coating
- Cosmetic/protective edge trim
- 45-degree edges for corner displays
- MIP-High Bright pixels at select pitches
- Connecting plates
- Footers for stacking
- Embeddable controller
- Mobile cart
- Flight cases
- Hydrophobic treatment

# 16:9 PANELS Indoor, fixed installation



55" panel and specifications shown

series name	<b>LA 55" (LM)</b>		
maximum brightness (nits)	up to 600		
dimensions	WIDTH	1212 mm (47.7 in)	
	HEIGHT	681.75 mm (26.8 in)	
	DEPTH	40 mm (1.6 in)	
panel aspect ratio	16:9		
panel weight	15 mm (33.1 in)		
modules per panel	8 per panel		
viewing angle	HORIZONTAL	160°	
	VERTICAL	160°	
led lifetime* (hrs)	100,000		
contrast	6,000:1		
drivers	ICN 2153		
scan rate	1/54, 1/60		
processing depth (bits)	14 default (10-16 range)		
refresh rate (hz)	3,840 default (3840-7680 range)		
frame rate	60 default (50, 60, 120 options)		
color temperature	7,500 default (2000-12000 range)		
color gamut	N/A		
bonding wire	Copper		
power common	Anode		
watts per panel	132W max (46W average)		
watts per sq m	650W max (228W average)		
max amps per cascade	10		
operating voltage	100-240V AC, 50/60 Hz		
operating temperature	-10°C - +40°C		
maximum heat	up to 1006.41 BTU/hr		
humidity	10% - 80%, non-condensing		
ip rating	IP41		
frame material	Die-cast Aluminium		
hanging and stacking	no hanging   30 stacking max		
rear bolt threading	M8		
power connectors	C13/C14		
data connectors	RJ45		
service access	Front		
warranty	3 year (up to 5 available)		
certifications	EMC-0		

## supported controllers





# Janus

Scan for a digital copy!

ideal for  
mobile  
plug-n-play



## summary

Vanguard LED introduces the Janus series of **transforming mobile displays**.

Available at **2K, 4K**, and with diagonals from **108" and 136"**, Janus displays are the perfect solution for flexible and varying display needs. Featuring **motorized and folding wing columns**, as well as **motorized height**, the entire display will deploy to a fully operational width. The sides will fold in and the unit will lower into the road case with the push of a button. With integrated wheels in the base, Janus is the perfect portable plug-and-play LED display.

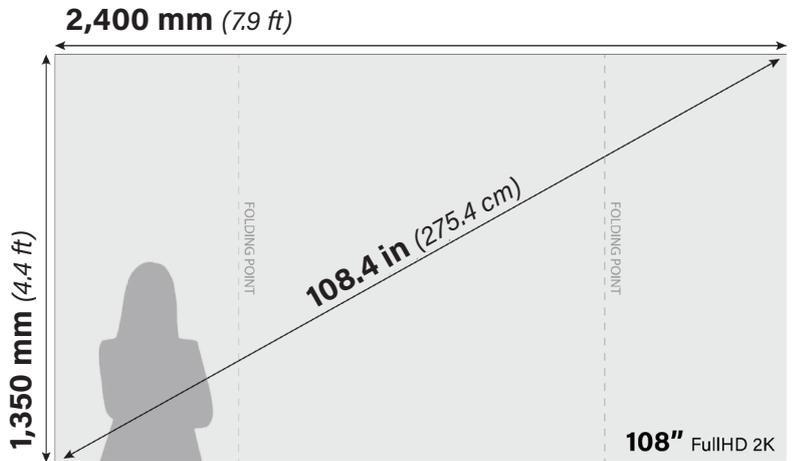
Janus displays include **speakers** as well as an integrated controller making the system truly plug-n-play, while also being highly mobile.

**ALL-IN-ONE** Indoor, fixed installation

special configurations



sizes

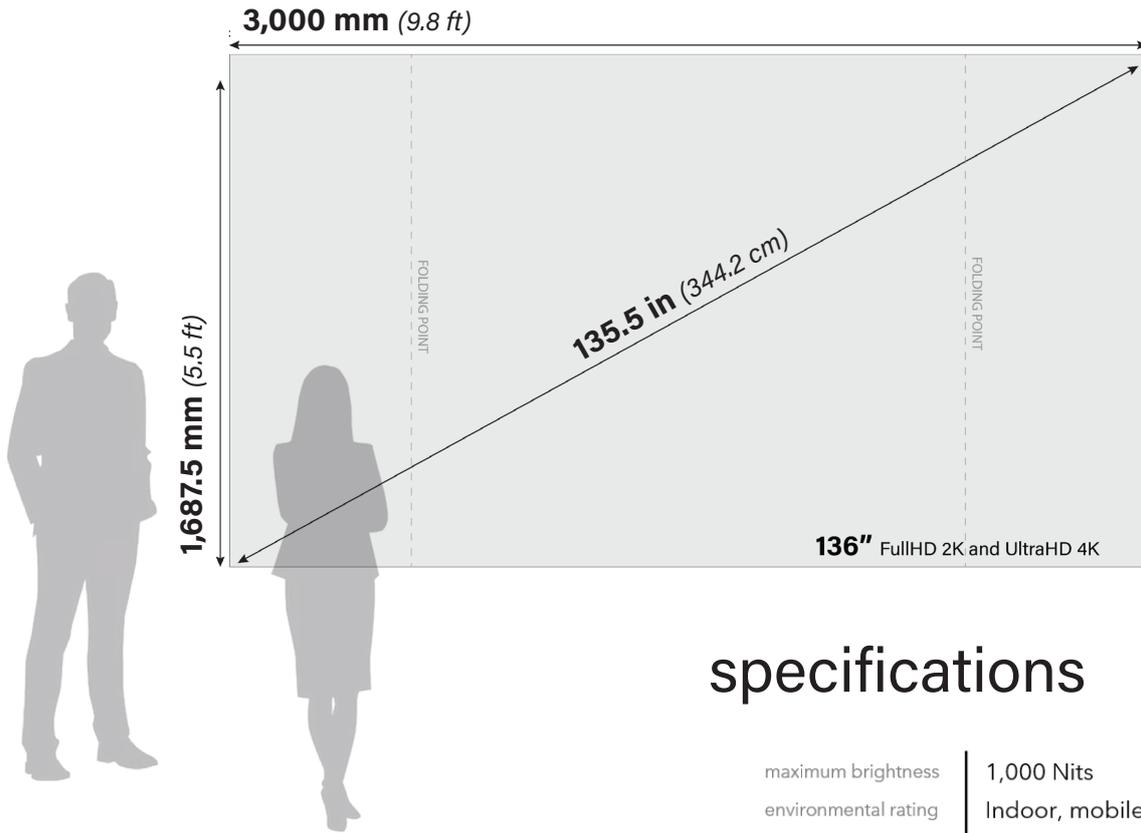


**22** **4K** | **4K - 136"**  
0.78mm COB



**2K** | **2K - 108"**  
1.2mm COB

**2K - 136"**  
1.56mm COB

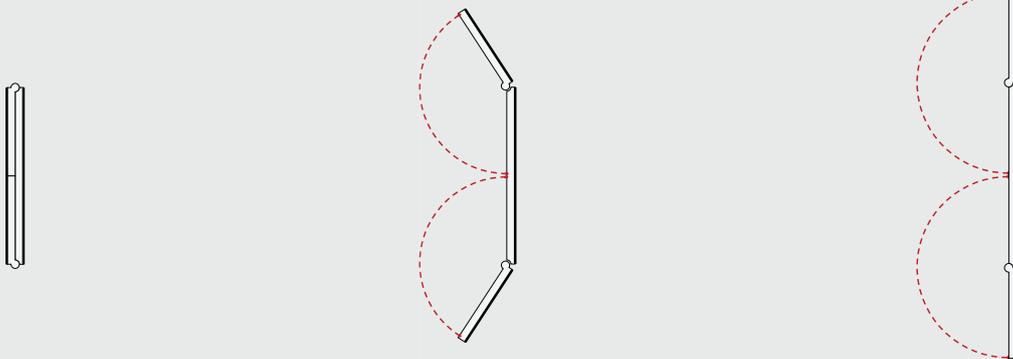


## specifications

maximum brightness	1,000 Nits
environmental rating	Indoor, mobile installation
panel ratio	16:9
operating height	Adjustable
LED half-life*	100,000 hours
refresh rate	3,840 - 7,680 Hz
frame rate	50, 60 Hz
color temperature	2,000 - 12,000 K range
processing depth	Up to 16 bit
temperatures	-10°C - +40°C operating
operating humidity	10% - 80% RH, non-condensing
operating voltage	100-240V AC, 50/60 Hz
ip rating	IP30
service access	Front

## connections

source connections	(2) HDMI, (1) 3.5mm, (2) USB3.0, (1) USB2.0, (1) RJ45
Wi-Fi modes	5G, 2.4G, Access Point
control	Remote control, touch panel



## supported controllers



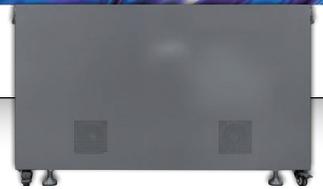
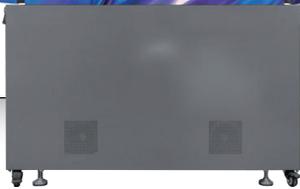
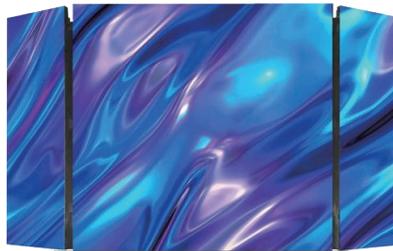
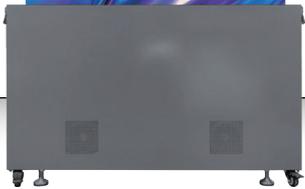
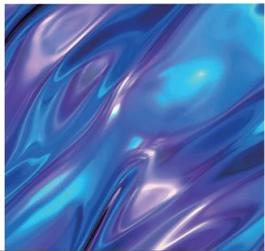
## Small footprint for easy transport and storage



Display remote control



## Convenient push-button operation



Motor remote control

# 2K

model	<b>110" FullHD</b> 1.25mm pitch
display dimensions	WIDTH   2,400 mm (7.8 ft) HEIGHT   1,350 mm (4.4 ft)
weight	470 kg (1,035lbs)
maximum watts	1,458 W
maximum heat	2,985 BTU/hr
storage dimensions	WIDTH   1,650 mm (5.4 ft) HEIGHT   1,760 mm (5.8 ft) DEPTH   520 mm (1.7 ft)

model	<b>136" FullHD</b> 1.56mm pitch
display dimensions	WIDTH   3,000 mm (9.8 ft) HEIGHT   1,687.5 mm (5.5 ft)
weight	550 kg (1,212 lbs)
maximum watts	2,278 W
maximum heat	4,664 BTU/hr
storage dimensions	WIDTH   2,050 mm (6.7 ft) HEIGHT   2,150 mm (7.0 ft) DEPTH   520 mm (1.7 ft)

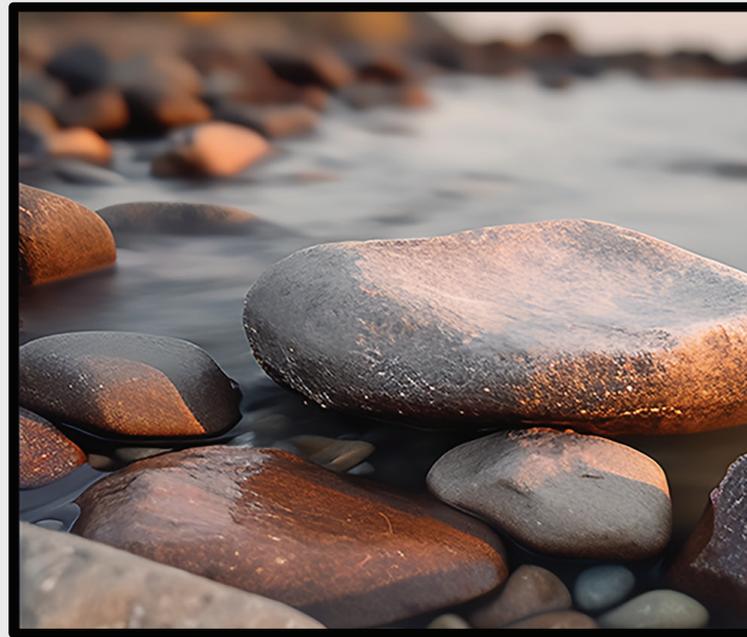


Wireless screen-sharing dongle



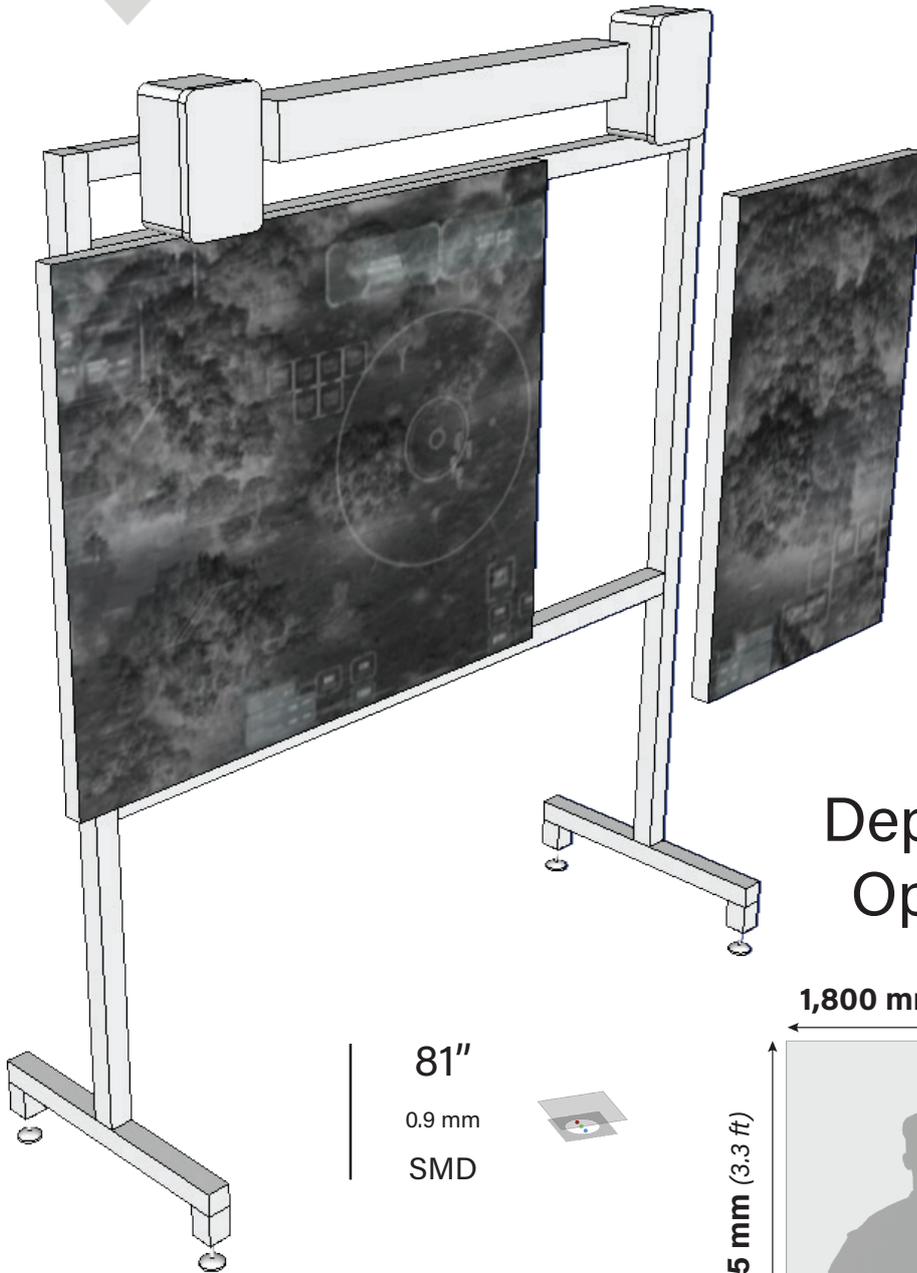
# 4K

model	<b>136" UltraHD</b> 0.78mm pitch
display dimensions	WIDTH   3,000 mm (9.8 ft) HEIGHT   1,687.5mm (5.5 ft)
weight	550 kg (1,212 lbs)
maximum watts	2,278 W
maximum heat	4,664 BTU/hr
storage dimensions	WIDTH   2,050 mm (6.7 ft) HEIGHT   2,150 mm (7.0 ft) DEPTH   520 mm (1.7 ft)





Scan for a digital copy!



ideal for  
Highly-mobile  
FullHD displays

# D-TOC

## Deployable Tactical Operations Center

**ALL-IN-ONE** Indoor, fixed installation

81"

0.9 mm

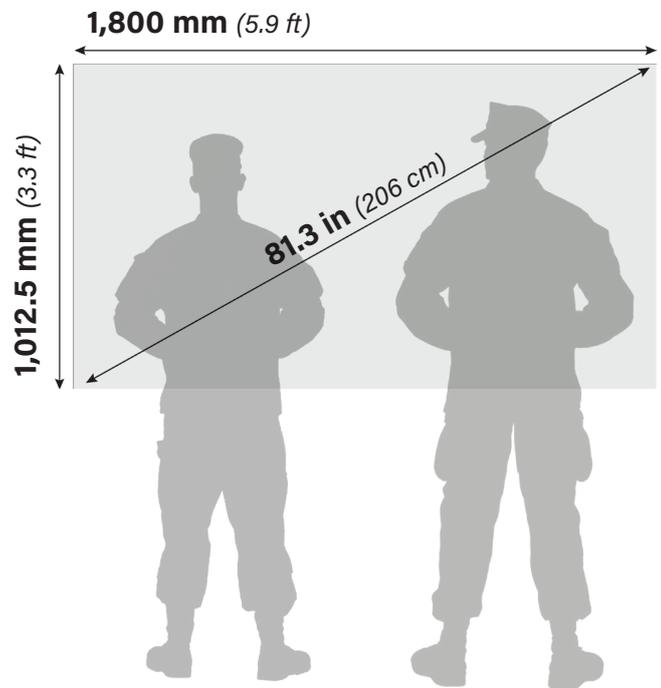
SMD



### summary

D-TOC (*Deployable Tactical Operations Center*) is a special type of mobile display which is purpose-designed for tactical military operations. Based on durable Beryllium panels, D-TOC is a FullHD display with a native aspect ratio of 16:9 and a true resolution of 1920x1080. D-TOC has a rugged epoxy coating (GOB) to ensure maximum pixel protection and performance.

Producing an 81" diagonal display, D-TOC can **quickly disassemble down to convenient carrying cases**, making D-TOC the ideal display solution when mobility and ease are the biggest considerations. Ideal solution for C5ISR applications.



### special configurations



maximum watts  
1,314 W

maximum heat  
4,480 BTU/hr

aspect ratio  
16:9

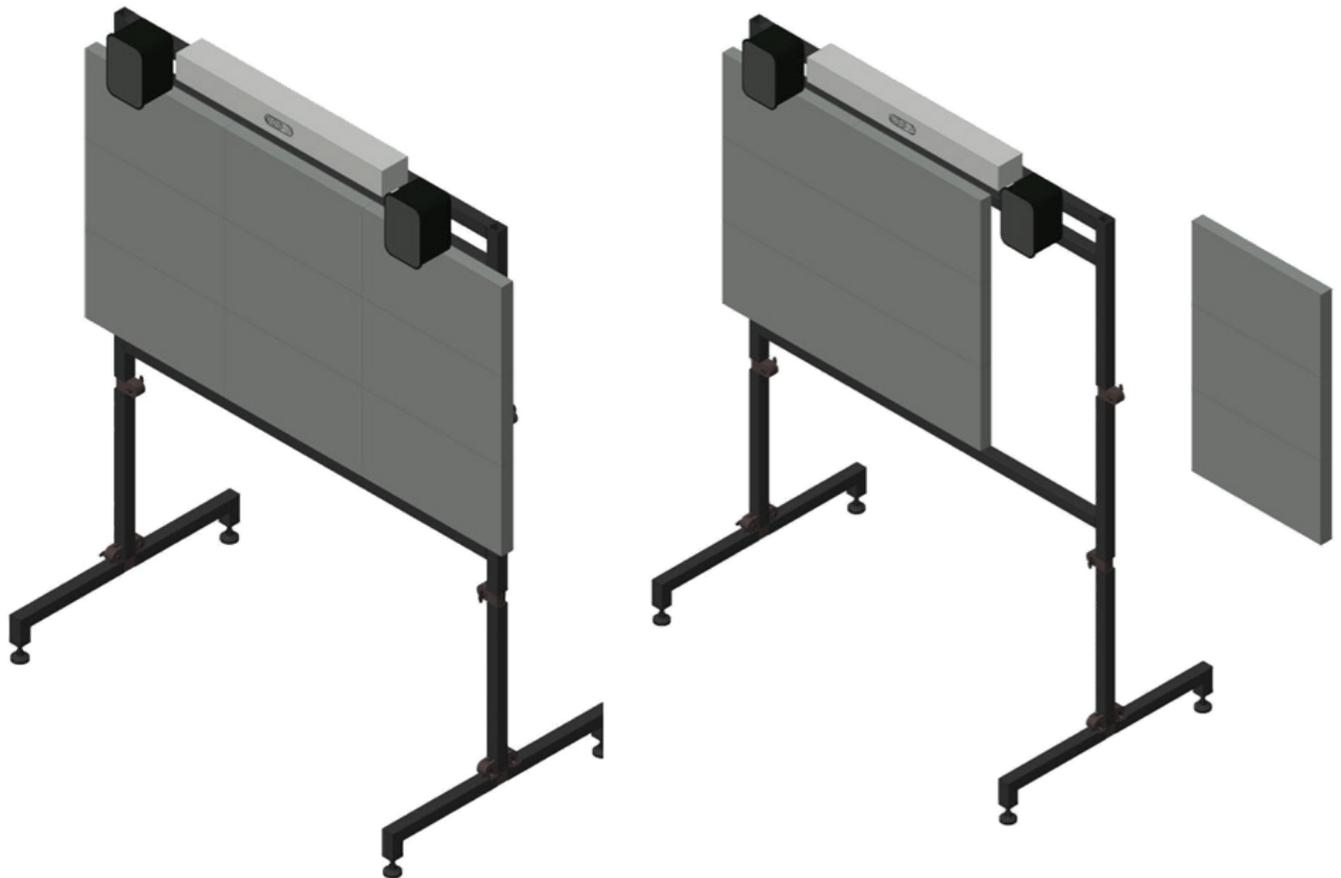
weight  
275 kg (606.3 lbs)

max brightness  
800 nits

IP rating  
IP50

# Built to serve all your **C5ISR** needs.

Command  
Control  
Communication  
Computers  
Cyber  
Intelligence  
Surveillance  
Reconnaissance



**D-TOC** forms a seamless videowall enabling the user to present up to 24 different video and audio sources in support of various operational requirements. The user can define the information to be displayed using several pre-defined and custom layouts. Supplement with a VTC system for complete audio and video conferencing.

The system design includes **NAIP-** and **DoDIN** approved equipment (where applicable). All core equipment is **TAA-compliant** and non broadcasting (radio). These certifications, coupled with our knowledge of **TEMPEST** and other security measures ensures that your system will be accepted and accredited by your command's **Information Assurance Team**.

*\*IMPORTANT NOTE: The D-TOC system is compliant for the certifications and protocols listed above. A complete NAIP or DodIN system will require additional equipment (such as Extron, Crestron or certain Cisco products) which are not provided by Vanguard LED.*

supported controllers





Scan for a digital copy!



# Cerium

*Elevate your training programs, empower your professionals, and redefine realism!*

pitch

1.5

pixel tech

SMD



ideal for

## Immersive simulation display

summary

Cerium represents **the next evolution for simulation technology**. Taking a huge leap from a simple curved display, Cerium can create a cylinder, dome, globe, tunnel, or sphere as an **immersive space** which is ideal for flight, pilot, and driver simulation.

Cerium creates a **seamless display** in a shape which only projection can achieve, but without the edge blending or vulnerability to ambient light or light paths. Cerium displays include a rugged Epoxy Coating (GOB) treatment for advanced pixel protection.

special configurations



applications

diameters

Military

2m (6.6ft)

Maritime

2.5m (8.2ft)

Helicopter

3m (9.8ft)

Airplane

3.5m (11.5ft)

Aerospace

4m (13.12ft)

5m (16.4ft)

Custom

**FREEFORM** Indoor, fixed installation

In the realm of **immersive** training experiences, the Cerium series simulation display stands as paragon of innovation and excellence. Whether it's aviation, healthcare, or military simulations, Cerium series simulation displays are the driving force behind creating life-like scenarios, enriching training environments, and ensuring optimal learning outcomes.

Cerium series simulation displays transform training from flat and dull to dynamic and immersive.



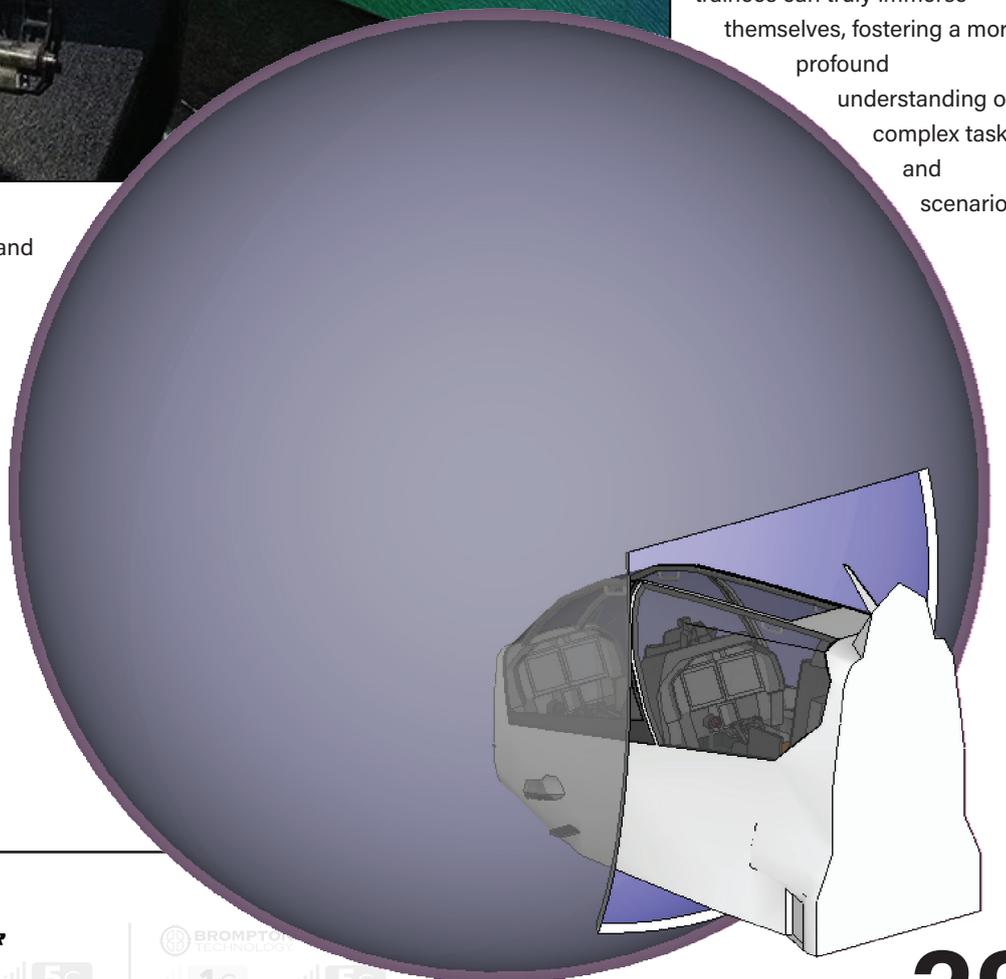
The displays boast **high resolution and advanced pixel technology** to ensure crystal-clear visuals that mimic real-world scenarios with exceptional detail. Advanced LED technology ensures vibrant colors, high contrast ratios, and a **seamless** viewing experience, capturing every nuance of the simulated environment.

Cerium series displays incorporate dynamic features such as **high refresh rates** and **low latency**, ensuring that movements and interactions in the simulation are rendered in real time.

This level of responsiveness creates an environment where trainees can truly immerse themselves, fostering a more profound understanding of complex tasks and scenarios.

With aviation's high-demands for precision and responsiveness, Cerium can be custom tailored for your solution and is compatible with various simulation software, providing seamless integration and compatibility for an array of training applications.

Vanguard's Simulation LED Displays emerge as the unparalleled choice to meet the expectation where excellence is non-negotiable. Elevate your training programs, empower your professionals, and redefine realism with Vanguard's state-of-the-art displays.



## supported controllers





# Sentinel

ideal for

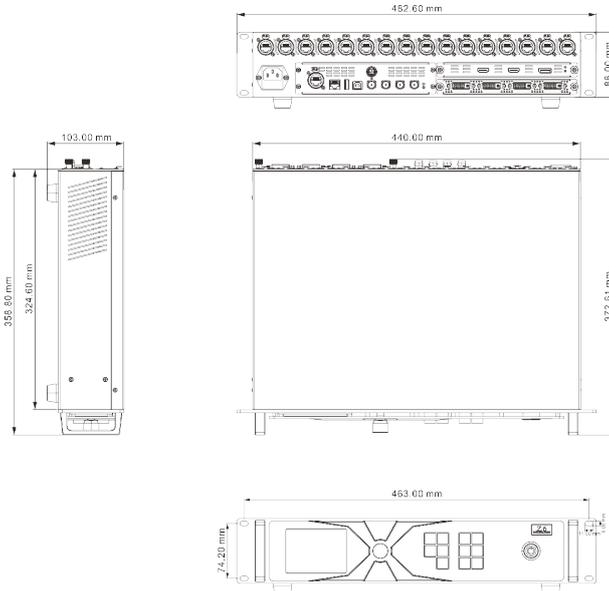
Small to medium displays, simple inputs

## summary

Sentinel controllers by Vanguard LED offer an ideal and refined solution for content and processing support for displays up to 4K resolution.

Offering full 4K input capability and up to 8.8 million pixels out, Sentinel can be a great fit for displays up to a 4K resolution. Sentinel is a video splicer, processor, and controller all in one.

Sentinel has 4K video input capability, supporting up to UltraHD resolution and HDR image processing and transmission.



## inputs



special configurations

optional

- Light sensor for automatic brightness
- Multi-function card for various sensors

model	<b>Sentinel</b>	
category	4K	
output ports	16 - 1G RJ45	
loading capacity	8.8 million pixels	
input ports	2 - 3G SDI 1 - HDMI 2.0 (and HDMI loop) 1 - DP 1.2 4 - DL-DVI	
control	1 - LAN 1 - USB I/O 1 - Genlock I/O 1 - RS232	
scaling	Yes	
image rotation	No	
genlock	Yes	
dimensions	RACK	2 RU
	WIDTH	482.6 mm (19 in)
	DEPTH	372.6 mm (14.7 in)
	HEIGHT	88 mm (3.5 in)
weight	9 kg (19.8 lbs)	
operating voltage	100 - 240 V AC, 50/60 Hz	
maximum watts	70 W	
humidity	0 - 90% RH, non-condensing	
certifications	CCC, CE, FCC, IC, CB, cTUVus, EAC, RoHS	



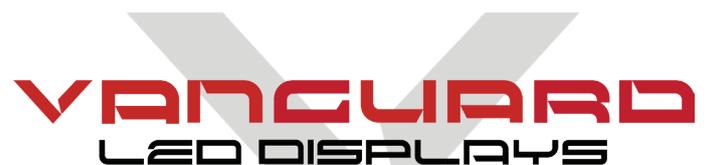
Display layouts for up to 3 layers with smooth scaling effect.

# about Vanguard LED

A leader in innovative digital LED display solutions, Vanguard offers an unrivaled range of products, technologies, and support.

Vanguard is an American-owned company, headquartered in Lakeland, Florida. Our mission statement - Complete customer satisfaction, defined by our core values of **expertise, integrity, responsiveness, service, and value.**

Our core values take many practical forms including Industry leading new technology, expert design advice at the outset of a project, timely quotes, the quickest lead times in the industry, helpful CADs and electrical drawings, professional commissioning, proficient on-site training, and stellar after-sales services.



EXPERTISE | INTEGRITY | RESPONSIVENESS | SERVICE | VALUE