

Miami-Dade Removal and Replacement of Seating Bowl LED Displays and Control Systems

Scope of Work - Arena-2-10-2023-B

Miami-Dade seeks the services of a specialized, and highly qualified and experienced vendor to procure advanced Daktronics Seating Bowl LED Displays and related Content Management System and provide all services necessary for the successful assembly and delivery of the equipment and systems to the Arena, including, but not limited to:

1. Daktronics LED Display Systems (per attached specifications)
 - a. Center Hung Hoist Systems
 - b. Cable Reel Systems
 - c. Center Hung Main Video and Ring Assemblies
 - d. Flame Ball Assembly
 - e. Corner Displays and Corner Display Structures
2. Content Management System, including any required multi-image processors, routers, scalers, etc., that is fully compatible with specified Daktronics LED displays.
3. Sound system modifications to accommodate the new Center Hung scoreboard system, including audio system recalibration of existing DAS audio equipment.
4. Review the current Manager design and verify that it will meet the expectations created by the Manager. Live mockup and redesign if necessary.
5. Identification and coordination for relocation of electronic systems that may be disrupted by the new LED displays, including security cameras, NBA environmental monitoring systems, IT access points, DAS antennas & supporting equipment, Arena/NBA sports lighting, and Speaker Hoist Controls.
6. Removal and disposal of existing equipment.

GENERAL REQUIREMENTS:

- A. Furnishing all labor, operations, materials, accessories, incidentals, services and equipment (exclusive of pre-purchased or Manager provided materials, accessories and/or equipment) indicated, specified, mentioned, scheduled or implied in this Scope of Work.
- B. Supply Daktronics LED Displays including controllers, processors, cabling, etc.
- C. Provide Content Management System, including any required multi-image processors, routers, scalers, etc.
- D. Removal and disposal of existing equipment as designated by Arena management.
- E. Provide detailed procurement and delivery timeline to the Project Management Team.
- F. Vendor must have the ability to provide the highest quality of display technology, comprehensive project management that guarantees a fully commissioned system, and long-term local technical service and support.
- G. Warrant to the Arena in writing that the materials and equipment furnished will be high quality and free of defects and equipped to sustain South Florida weather.
- H. Vendor submitting a proposal agrees that all data, records and information which proposer, its agents and employees obtain access to, create, and which are the subject of this proposal, remain at all times exclusively the property of the Arena. It is also agreed that all such data, records and information constitute, at all times, proprietary information of the Arena and that proposer will not disclose, provide or make available any such proprietary information in any form to any person or entity. In addition, vendor submitting a proposal further agrees that it will take reasonable steps and the same protective precautions to protect Arena's proprietary information from disclosure to third parties as with the proposer's own proprietary and confidential information.

APPROXIMATE PROJECT COST:

TIMELINE:

- Procurement of equipment and delivery of same must be completed within sixty (60) days of vendor approval.
- Vendor must coordinate delivery of equipment with the Special Project Team.
- Vendor must submit a detailed delivery timeline to the Special Project Team for approval.

WARRANTY:

- Manufacturer to provide a limited warranty of eight (8) years from date of receipt.

QUALIFICATIONS:

- The proposed Vendor must have the following experience and certifications:
 - Must be a firm with at least ten (10) years of experience in the broadcast, and audiovisual technology field.
 - The Vendor shall be a member of a recognized professional broadcast and audiovisual communications systems integrators organization.
 - Vendor shall provide documentation of a minimum of five (5) professional sports facilities (facility, contact name, title, address, and current phone number) where the Vendor has successfully delivered and implemented LED Displays and Systems of equivalent size and scope within the last five (5) years.
 - Capacity to meet all deadlines to ensure successful implementation.

INSURANCE:

- Vendor shall purchase and maintain during the entire project and for two years after project completion insurance with the minimum limits and coverage shown below from insurance companies acceptable to (“BPL”). BPL has the right to reject unacceptable insurance carriers.

STANDARD INSURANCE REQUIREMENTS	
Coverage Type	Limits
General Liability	\$1,000,000 Per Occurrence; \$2,000,000 General Aggregate; \$2,000,000 Completed Operations Aggregate \$1,000,000 Personal & Advertising Injury
Auto Liability (All Hired Non-Owned)	\$1,000,000 for all jobs
Umbrella	\$5,000,000 Per Occurrence; \$5,000,000 Aggregate;
Worker’s Compensation	Statutory Limits; \$1,000,000 Employers Liability
Risk of Loss	Full replacement value of all Goods F.O.B. Arena

- Vendor shall carry standard ISO General Liability coverage, written on an occurrence basis including Completed Operations. Coverages on an occurrence basis shall be maintained without interruption from date of commencement of the Vendor’s Work until date of final payment or date coverage is required to be maintained after final payment to the Vendor, whichever is later. The coverage must be endorsed to name Basketball Properties, Ltd., City of Miami, and Miami-Dade County as additional insureds on a primary and non-contributory basis.
- Umbrella coverage, each occurrence and aggregate. Coverage must be excess of the Commercial General Liability, Automobile Liability and Employers Liability and must be written on a follow form basis. Umbrella coverage shall be at least as broad as the primary Commercial General Liability Policy.
- Risk of Loss Insurance - Vendor shall provide, pay for and maintain insurance coverage, including transportation and casualty insurance, which insures the risks of loss, damage, or destruction in an amount not less than the total value of the Goods purchased. The risk of any loss, damage or destruction to any of the materials or Goods provided for in this Scope of Work from any casualty or cause shall be borne by and remain with vendor until successful delivery of the Goods to Miami-Dade Arena and acceptance of the Goods by Arena or Arena’s authorized contractor.

Daktronics, Inc.

Location: Centerhung Main Video

Model: DVN-3001-2.5MN-1400-BR-NM-2100x3600-AUTOBR-LT-SR-FOR-SBB-CRMP

Fractional Units (e.g. 18.5')

Overall Display Size (measured from physical pixel to physical pixel; not including cabinet)

Vertical	17.23	Feet	2100	Pixels
Horizontal	29.53	Feet	3600	Pixels

Total Number of Physical LEDS	7,560,000	LEDs/each display
Total Number of Physical Pixels	7,560,000	Pixels/each display

OEM LED Module and Processor Manufacturer(s)

Daktronics, Inc.

Vertical	17.23	Feet
Horizontal	29.53	Feet

PHYSICAL Pixel Pitch (not "lines")

Vertical/Vertical	2.5	millimeters
Horizontal/Horizontal	2.5	millimeters

Physical Pixel Density (not "lines")

	14858.43508	Pixels/sq ft
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Virtual Pixel Pitch

"claimed" pixel pitch	2.5	millimeters
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3 in 1 SMD LED Supplier

NationStar

Brightness

	1400	Nits
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Brightness Level adjustment

Full Scale

Gradation Method

Pulse Width Modulation (PWM)

Tonal Gradation

16-Bit

Color Temperature

3,000°-10,000° kelvin (adjustable) °K

Color Temperature adjustability

3,000°-10,000° kelvin (adjustable)

IP Rating

NA

Viewing Angles

Vertical degrees

+80/-80°	UP	Dn
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Horizontal degrees

160

Power Consumption

Average (entire display)

8391.6

Maximum (entire display)

33566.4

Normal Power requirements (Voltage, Service, Ø)

Include any ventilation (no air conditioning allowed) requirements

for entire Display

93.2 amps @ 208Y/120v 3P

Entire Display Assembly Weight

(Include internal structure) _____ 3402 lb

End of Section

LED Display System Schedule of Displays

Location: Centerhung Underbelly

Daktronics, Inc.

Model: DVN-3001-2.5MN-1400-BR-NM-1200x2600-AUTOBR-LT-SR-FOR-SBB-CRMP

Fractional Units (e.g. 18.5')

Overall Display Size (measured from physical pixel to physical pixel; not including cabinet)

Vertical	9.84	Feet	1200	Pixels
Horizontal	21.33	Feet	2600	Pixels

Total Number of Physical LEDs	3,120,000	LEDs/each display
Total Number of Physical Pixels	3,120,000	Pixels/each display

OEM LED Module and Processor Manufacturer(s)

Daktronics, Inc.

Vertical	9.84	Feet
Horizontal	21.33	Feet

PHYSICAL Pixel Pitch (not "lines")

Vertical/Vertical	2.5	millimeters
Horizontal/Horizontal	2.5	millimeters

Physical Pixel Density (not "lines")

14865.12755 Pixels/sq ft

Virtual Pixel Pitch

"claimed" pixel pitch 2.5 millimeters

3 in 1 SMD LED Supplier

NationStar

Brightness

1400 Nits

Brightness Level adjustment

Full Scale

Gradation Method

Pulse Width Modulation (PWM)

Tonal Gradation

16-Bit

Color Temperature

3,000°-10,000° kelvin (adjustable) °K

Color Temperature adjustability

3,000°-10,000° kelvin (adjustable)

IP Rating

NA

Viewing Angles

Vertical degrees

+80/-80° UP Dn

Horizontal degrees

160

Power Consumption

Average (entire display)

3463.2

Maximum (entire display)

13852.8

Normal Power requirements (Voltage, Service, Ø)

Include any ventilation (no air conditioning allowed) requirements

for entire Display

38.5 amps @ 208Y/120v 3P

Entire Display Assembly Weight

(Include internal structure) _____ 1404 lb

End of Section

LED Display System Schedule of Displays

Daktronics, Inc.

Location: Centerhung Rings

Model: DVN-3051-3.9MN-1400-BR-MA-256x14848-AUTOBR-LT-SR-FOR-SBB-CRMP-Single Curve - Convex
Fractional Units (e.g. 18.5')

Overall Display Size (measured from physical pixel to physical pixel; not including cabinet)

Vertical	3.28	Feet	256	Pixels
Horizontal	190.3	Feet	14848	Pixels

Total Number of Physical LEDS	3,801,088	LEDs/each display
Total Number of Physical Pixels	3,801,088	Pixels/each display

OEM LED Module and Processor Manufacturer(s)

Daktronics, Inc.

Vertical	3.28	Feet
Horizontal	190.3	Feet

PHYSICAL Pixel Pitch (not "lines")

Vertical/Vertical	3.906	millimeters
Horizontal/Horizontal	3.906	millimeters

Physical Pixel Density (not "lines")

6089.691501 Pixels/sq ft

Virtual Pixel Pitch

"claimed" pixel pitch 3.9 millimeters

3 in 1 SMD LED Supplier

NationStar

Brightness

1400 Nits

Brightness Level adjustment

Full Scale

Gradation Method

Pulse Width Modulation (PWM)

Tonal Gradation

16-Bit

Color Temperature

3,000°-10,000° kelvin (adjustable) °K

Color Temperature adjustability

3,000°-10,000° kelvin (adjustable)

IP Rating

NA

Viewing Angles

Vertical degrees

+60/-80°

UP

Dn

Horizontal degrees

160

Power Consumption

Average (entire display)

10300.8

Maximum (entire display)

41203.2

Normal Power requirements (Voltage, Service, Ø)

Include any ventilation (no air conditioning allowed) requirements

for entire Display

114.5 amps @ 208Y/120v 3P

Entire Display Assembly Weight

(Include internal structure) _____ 4176 lb

End of Section

LED Display System Schedule of Displays

Daktronics, Inc.

Location: Flame Ball

Model: DVN-3001-3.9MN-1400-BR-MA-3328x2304-AUTOBR-LT-SR-FOR-SBB-CRMP

Fractional Units (e.g. 18.5')

Overall Display Size (measured from physical pixel to physical pixel; not including cabinet)

Vertical	42.65	Feet	3328	Pixels
Horizontal	29.53	Feet	2304	Pixels

Total Number of Physical LEDs	7,667,712	LEDs/each display
Total Number of Physical Pixels	7,667,712	Pixels/each display

OEM LED Module and Processor Manufacturer(s)

Daktronics, Inc.

Vertical	42.65	Feet
Horizontal	29.53	Feet

PHYSICAL Pixel Pitch (not "lines")

Vertical/Vertical	3.906	millimeters
Horizontal/Horizontal	3.906	millimeters

Physical Pixel Density (not "lines")

6088.121484 Pixels/sq ft

Virtual Pixel Pitch

"claimed" pixel pitch 3.9 millimeters

3 in 1 SMD LED Supplier NationStar

Brightness

1400 Nits

Brightness Level adjustment Full Scale

Gradation Method Pulse Width Modulation (PWM)

Tonal Gradation 16-Bit

Color Temperature 3,000°-10,000° kelvin (adjustable) °K

Color Temperature adjustability 3,000°-10,000° kelvin (adjustable)

IP Rating NA

Viewing Angles

Vertical degrees +60/-80° UP Dn

Horizontal degrees 160

Power Consumption

Average (entire display) 20779.2

Maximum (entire display) 83116.8

Normal Power requirements (Voltage, Service, Ø)

Include any ventilation (no air conditioning allowed) requirements

for entire Display 230.9 amps @ 208Y/120v 3P

Entire Display Assembly Weight

(Include internal structure) _____ 8424 lb

End of Section

LED Display System Schedule of Displays

	Location:	Level 100 Vomitory		
Daktronics, Inc.	Model:	DVN-3001-3.9MN-1400-BR-MA-128x384-AUTOBR-LT-SR-FOR-SBB-CRMP		
Overall Display Size (measured from physical pixel to physical pixel; not including cabinet)		Fractional Units (e.g. 18.5')		
	Vertical	1.64	Feet	128 Pixels
	Horizontal	4.92	Feet	384 Pixels
	Total Number of Physical LEDS	49,152		LEDs/each display
	Total Number of Physical Pixels	49,152		Pixels/each display
OEM LED Module and Processor Manufacturer(s)		Daktronics, Inc.		
	Vertical	1.64		Feet
	Horizontal	4.92		Feet
PHYSICAL Pixel Pitch (not "lines")	Vertical/Vertical	3.906		millimeters
	Horizontal/Horizontal	3.906		millimeters
Physical Pixel Density (not "lines")		6091.612136		Pixels/sq ft
Virtual Pixel Pitch	"claimed" pixel pitch	3.9		millimeters
	3 in 1 SMD LED Supplier	NationStar		
Brightness		1400		Nits
	Brightness Level adjustment	Full Scale		
	Gradation Method	Pulse Width Modulation (PWM)		
	Tonal Gradation	16-Bit		
	Color Temperature	3,000°-10,000° kelvin (adjustable) °K		
	Color Temperature adjustability	3,000°-10,000° kelvin (adjustable)		
	IP Rating	NA		
Viewing Angles	Vertical degrees	+60/-80°	UP	Dn
	Horizontal degrees	160		
Power Consumption	Average (entire display)	133.2		
	Maximum (entire display)	532.8		
	Normal Power requirements (Voltage, Service, Ø)			
	<u>Include any ventilation (no air conditioning allowed) requirements for entire Display</u>	1.5 amps @ 208Y/120v 3P		

Entire Display Assembly Weight

(Include internal structure) _____ 54 lb

End of Section

LED Display System Schedule of Displays

Daktronics, Inc.

Location: Level 100 Vomitory

Model: DVN-3001-3.9MN-1400-BR-MA-128x768-AUTOBR-LT-SR-FOR-SBB-CRMP

Fractional Units (e.g. 18.5')

Overall Display Size (measured from physical pixel to physical pixel; not including cabinet)

Vertical	1.64	Feet	128	Pixels
Horizontal	9.84	Feet	768	Pixels

Total Number of Physical LEDS	98,304	LEDs/each display
Total Number of Physical Pixels	98,304	Pixels/each display

OEM LED Module and Processor Manufacturer(s)

Daktronics, Inc.

Vertical	1.64	Feet
Horizontal	9.84	Feet

PHYSICAL Pixel Pitch (not "lines")

Vertical/Vertical	3.906	millimeters
Horizontal/Horizontal	3.906	millimeters

Physical Pixel Density (not "lines")

6091.612136 Pixels/sq ft

Virtual Pixel Pitch

"claimed" pixel pitch 3.9 millimeters

3 in 1 SMD LED Supplier

NationStar

Brightness

1400 Nits

Brightness Level adjustment Full Scale

Gradation Method Pulse Width Modulation (PWM)

Tonal Gradation 16-Bit

Color Temperature 3,000°-10,000° kelvin (adjustable) °K

Color Temperature adjustability 3,000°-10,000° kelvin (adjustable)

IP Rating NA

Viewing Angles

Vertical degrees +60/-80° UP Dn

Horizontal degrees 160

Power Consumption

Average (entire display) 266.4

Maximum (entire display) 1065.6

Normal Power requirements (Voltage, Service, Ø)

Include any ventilation (no air conditioning allowed) requirements

for entire Display 3 amps @ 208Y/120v 3P

Entire Display Assembly Weight

(Include internal structure) _____ 108 lb

End of Section

LED Display System Schedule of Displays

Location: Level 100 Vomitory

Daktronics, Inc.

Model: DVN-3001-3.9MN-1400-BR-MA-128x896-AUTOBR-LT-SR-FOR-SBB-CRMP

Fractional Units (e.g. 18.5')

Overall Display Size (measured from physical pixel to physical pixel; not including cabinet)

Vertical	1.64	Feet	128	Pixels
Horizontal	11.48	Feet	896	Pixels

Total Number of Physical LEDS	114,688	LEDs/each display
Total Number of Physical Pixels	114,688	Pixels/each display

OEM LED Module and Processor Manufacturer(s)

Daktronics, Inc.

Vertical	1.64	Feet
Horizontal	11.48	Feet

PHYSICAL Pixel Pitch (not "lines")

Vertical/Vertical	3.906	millimeters
Horizontal/Horizontal	3.906	millimeters

Physical Pixel Density (not "lines")

6091.612136 Pixels/sq ft

Virtual Pixel Pitch

"claimed" pixel pitch 3.9 millimeters

3 in 1 SMD LED Supplier

NationStar

Brightness

1400 Nits

Brightness Level adjustment Full Scale

Gradation Method Pulse Width Modulation (PWM)

Tonal Gradation 16-Bit

Color Temperature 3,000°-10,000° kelvin (adjustable) °K

Color Temperature adjustability 3,000°-10,000° kelvin (adjustable)

IP Rating NA

Viewing Angles

Vertical degrees +60/-80° UP Dn

Horizontal degrees 160

Power Consumption

Average (entire display) 310.8

Maximum (entire display) 1243.2

Normal Power requirements (Voltage, Service, Ø)

Include any ventilation (no air conditioning allowed) requirements

for entire Display 3.5 amps @ 208Y/120v 3P

Entire Display Assembly Weight

(Include internal structure) _____ 126 lb

End of Section

LED Display System Schedule of Displays

Daktronics, Inc.

Location: Level 100 Vomitory

Model: DVN-3001-3.9MN-1400-BR-MA-128x1024-AUTOBR-LT-SR-FOR-SBB-CRMP

Fractional Units (e.g. 18.5')

Overall Display Size (measured from physical pixel to physical pixel; not including cabinet)

Vertical	1.64	Feet	128	Pixels
Horizontal	13.12	Feet	1024	Pixels

Total Number of Physical LEDS	131,072	LEDs/each display
Total Number of Physical Pixels	131,072	Pixels/each display

OEM LED Module and Processor Manufacturer(s)

Daktronics, Inc.

Vertical	1.64	Feet
Horizontal	13.12	Feet

PHYSICAL Pixel Pitch (not "lines")

Vertical/Vertical	3.906	millimeters
Horizontal/Horizontal	3.906	millimeters

Physical Pixel Density (not "lines")

6091.612136 Pixels/sq ft

Virtual Pixel Pitch

"claimed" pixel pitch 3.9 millimeters

3 in 1 SMD LED Supplier

NationStar

Brightness

1400 Nits

Brightness Level adjustment

Full Scale

Gradation Method

Pulse Width Modulation (PWM)

Tonal Gradation

16-Bit

Color Temperature

3,000°-10,000° kelvin (adjustable) °K

Color Temperature adjustability

3,000°-10,000° kelvin (adjustable)

IP Rating

NA

Viewing Angles

Vertical degrees

+60/-80° UP Dn

Horizontal degrees

160

Power Consumption

Average (entire display)

355.2

Maximum (entire display)

1420.8

Normal Power requirements (Voltage, Service, Ø)

Include any ventilation (no air conditioning allowed) requirements

for entire Display

3.9 amps @ 208Y/120v 3P

Entire Display Assembly Weight

(Include internal structure) _____ 144 lb

End of Section

LED Display System Schedule of Displays

Daktronics, Inc.

Location: C1 - Centerhung

Model: DVN-3001-2.5MN-1400-BR-NM-2400x3600-AUTOBR-LT-SR-FOR-SBB-CRMP

Fractional Units (e.g. 18.5')

Overall Display Size (measured from physical pixel to physical pixel; not including cabinet)

Vertical	19.69	Feet	2400	Pixels
Horizontal	29.53	Feet	3600	Pixels

Total Number of Physical LEDs	8,640,000	LEDs/each display
Total Number of Physical Pixels	8,640,000	Pixels/each display

OEM LED Module and Processor Manufacturer(s)

Daktronics, Inc.

Vertical	19.69	Feet
Horizontal	29.53	Feet

PHYSICAL Pixel Pitch (not "lines")

Vertical/Vertical	2.5	millimeters
Horizontal/Horizontal	2.5	millimeters

Physical Pixel Density (not "lines")

14859.51311 Pixels/sq ft

Virtual Pixel Pitch

"claimed" pixel pitch 2.5 millimeters

3 in 1 SMD LED Supplier

NationStar

Brightness

1400 Nits

Brightness Level adjustment

Full Scale

Gradation Method

Pulse Width Modulation (PWM)

Tonal Gradation

16-Bit

Color Temperature

3,000°-10,000° kelvin (adjustable) °K

Color Temperature adjustability

3,000°-10,000° kelvin (adjustable)

IP Rating

NA

Viewing Angles

Vertical degrees

+80/-80° UP Dn

Horizontal degrees

160

Power Consumption

Average (entire display)

9590.4

Maximum (entire display)

38361.6

Normal Power requirements (Voltage, Service, Ø)

Include any ventilation (no air conditioning allowed) requirements

for entire Display

106.6 amps @ 208Y/120v 3P

Entire Display Assembly Weight

(Include internal structure) _____ 3888 lb

End of Section

LED Display System Schedule of Displays

Daktronics, Inc.

Location: C2 - Centerhung

Model: DVN-3001-3.9MN-1400-BR-MA-1536x2304-AUTOBR-LT-SR-FOR-SBB-CRMP

Fractional Units (e.g. 18.5')

Overall Display Size (measured from physical pixel to physical pixel; not including cabinet)

Vertical	19.69	Feet	1536	Pixels
Horizontal	29.53	Feet	2304	Pixels

Total Number of Physical LEDs	3,538,944	LEDs/each display
Total Number of Physical Pixels	3,538,944	Pixels/each display

OEM LED Module and Processor Manufacturer(s)

Daktronics, Inc.

Vertical	19.69	Feet
Horizontal	29.53	Feet

PHYSICAL Pixel Pitch (not "lines")

Vertical/Vertical	3.906	millimeters
Horizontal/Horizontal	3.906	millimeters

Physical Pixel Density (not "lines")

6086.456569 Pixels/sq ft

Virtual Pixel Pitch

"claimed" pixel pitch 3.9 millimeters

3 in 1 SMD LED Supplier NationStar

Brightness

1400 Nits

Brightness Level adjustment Full Scale

Gradation Method Pulse Width Modulation (PWM)

Tonal Gradation 16-Bit

Color Temperature 3,000°-10,000° kelvin (adjustable) °K

Color Temperature adjustability 3,000°-10,000° kelvin (adjustable)

IP Rating NA

Viewing Angles

Vertical degrees +60/-80° UP Dn

Horizontal degrees 160

Power Consumption

Average (entire display) 9590.4

Maximum (entire display) 38361.6

Normal Power requirements (Voltage, Service, Ø)

Include any ventilation (no air conditioning allowed) requirements

for entire Display 106.6 amps @ 208Y/120v 3P

Entire Display Assembly Weight

(Include internal structure) _____ 3888 lb

End of Section

LED Display System Schedule of Displays

Daktronics, Inc.

Location: D1 & D2 - Corner Displays

Model: DVN-3001-5.9MN-1400-BR-MA-882x2268-AUTOBR-LT-SR-FOR-SBB-CRMP

Fractional Units (e.g. 18.5')

Overall Display Size (measured from physical pixel to physical pixel; not including cabinet)

Vertical	17.23	Feet	882	Pixels
Horizontal	44.29	Feet	2268	Pixels

Total Number of Physical LEDs	2,000,376	LEDs/each display
Total Number of Physical Pixels	2,000,376	Pixels/each display

OEM LED Module and Processor Manufacturer(s)

Daktronics, Inc.

Vertical	17.23	Feet
Horizontal	44.29	Feet

PHYSICAL Pixel Pitch (not "lines")

Vertical/Vertical	5.952	millimeters
Horizontal/Horizontal	5.952	millimeters

Physical Pixel Density (not "lines")

2621.323842 Pixels/sq ft

Virtual Pixel Pitch

"claimed" pixel pitch 6 millimeters

3 in 1 SMD LED Supplier

NationStar

Brightness

1400 Nits

Brightness Level adjustment Full Scale

Gradation Method Pulse Width Modulation (PWM)

Tonal Gradation 16-Bit

Color Temperature 3,000°-10,000° kelvin (adjustable) °K

Color Temperature adjustability 3,000°-10,000° kelvin (adjustable)

IP Rating NA

Viewing Angles

Vertical degrees +60/-80° UP Dn

Horizontal degrees 160

Power Consumption

Average (entire display) 12587.4

Maximum (entire display) 50349.6

Normal Power requirements (Voltage, Service, Ø)

Include any ventilation (no air conditioning allowed) requirements

for entire Display 139.9 amps @ 208Y/120v 3P

Entire Display Assembly Weight

(Include internal structure) _____ 5103 lb

End of Section

LED Display System Schedule of Displays

Daktronics, Inc.

Location: E - Centerhung Rings

Model: DVN-3051-2.5MN-1400-BR-NM-400x23200-AUTOBR-LT-SR-FOR-SBB-CRMP - Single Curve - Convex Fractional Units (e.g. 18.5')

Overall Display Size (measured from physical pixel to physical pixel; not including cabinet)

Vertical	3.28	Feet	400	Pixels
Horizontal	190.3	Feet	23200	Pixels

Total Number of Physical LEDS	9,280,000	LEDs/each display
Total Number of Physical Pixels	9,280,000	Pixels/each display

OEM LED Module and Processor Manufacturer(s)

Daktronics, Inc.

Vertical	3.28	Feet
Horizontal	190.3	Feet

PHYSICAL Pixel Pitch (not "lines")

Vertical/Vertical	2.5	millimeters
Horizontal/Horizontal	2.5	millimeters

Physical Pixel Density (not "lines")

14867.41089 Pixels/sq ft

Virtual Pixel Pitch

"claimed" pixel pitch 2.5 millimeters

3 in 1 SMD LED Supplier

NationStar

Brightness

1400 Nits

Brightness Level adjustment Full Scale

Gradation Method Pulse Width Modulation (PWM)

Tonal Gradation 16-Bit

Color Temperature 3,000°-10,000° kelvin (adjustable) °K

Color Temperature adjustability 3,000°-10,000° kelvin (adjustable)

IP Rating NA

Viewing Angles

Vertical degrees +80/-80° UP Dn

Horizontal degrees 160

Power Consumption

Average (entire display) 10300.8

Maximum (entire display) 41203.2

Normal Power requirements (Voltage, Service, Ø)

Include any ventilation (no air conditioning allowed) requirements

for entire Display 114.5 amps @ 208Y/120v 3P

Entire Display Assembly Weight

(Include internal structure) _____ 4176 lb

End of Section

LED Display System Schedule of Displays

Daktronics, Inc.

Location: G - Event Floor

Model: DVN-3001-3.9MN-1400-BR-MA-192x384-AUTOBR-LT-SR-FOR-SBB-CRMP

Fractional Units (e.g. 18.5')

Overall Display Size (measured from physical pixel to physical pixel; not including cabinet)

Vertical	2.46	Feet	192	Pixels
Horizontal	4.92	Feet	384	Pixels

Total Number of Physical LEDS	73,728	LEDs/each display
Total Number of Physical Pixels	73,728	Pixels/each display

OEM LED Module and Processor Manufacturer(s)

Daktronics, Inc.

Vertical	2.46	Feet
Horizontal	4.92	Feet

PHYSICAL Pixel Pitch (not "lines")

Vertical/Vertical	3.906	millimeters
Horizontal/Horizontal	3.906	millimeters

Physical Pixel Density (not "lines")

6091.612136 Pixels/sq ft

Virtual Pixel Pitch

"claimed" pixel pitch 3.9 millimeters

3 in 1 SMD LED Supplier

NationStar

Brightness

1400 Nits

Brightness Level adjustment

Full Scale

Gradation Method

Pulse Width Modulation (PWM)

Tonal Gradation

16-Bit

Color Temperature

3,000°-10,000° kelvin (adjustable) °K

Color Temperature adjustability

3,000°-10,000° kelvin (adjustable)

IP Rating

NA

Viewing Angles

Vertical degrees

+60/-80° UP Dn

Horizontal degrees

160

Power Consumption

Average (entire display)

199.8

Maximum (entire display)

799.2

Normal Power requirements (Voltage, Service, Ø)

Include any ventilation (no air conditioning allowed) requirements

for entire Display

2.2 amps @ 208Y/120v 3P

Entire Display Assembly Weight

(Include internal structure) _____ 81 lb

End of Section

LED Display System Schedule of Displays

Daktronics, Inc.

Location: G1 - Event Floor

Model: NPN-6200-1.5MN-1200-BR1-HC-432x768-AUTOBR-LT-RD-F-SBA-CNTRM

Fractional Units (e.g. 18.5')

Overall Display Size (measured from physical pixel to physical pixel; not including cabinet)

Vertical	2.25	Feet	432	Pixels
Horizontal	4	Feet	768	Pixels

Total Number of Physical LEDs	331,776	LEDs/each display
Total Number of Physical Pixels	331,776	Pixels/each display

OEM LED Module and Processor Manufacturer(s)

Daktronics, Inc.

Vertical	2.25	Feet
Horizontal	4	Feet

PHYSICAL Pixel Pitch (not "lines")

Vertical/Vertical	1.588	millimeters
Horizontal/Horizontal	1.588	millimeters

Physical Pixel Density (not "lines")

36864 Pixels/sq ft

Virtual Pixel Pitch

"claimed" pixel pitch 1.6 millimeters

3 in 1 SMD LED Supplier

NationStar

Brightness

1200 Nits

Brightness Level adjustment

Full Scale

Gradation Method

Pulse Width Modulation (PWM)

Tonal Gradation

16-Bit

Color Temperature

3,000°-10,000° kelvin (adjustable) °K

Color Temperature adjustability

3,000°-10,000° kelvin (adjustable)

IP Rating

NA

Viewing Angles

Vertical degrees

+80/-80°

UP

Dn

Horizontal degrees

160

Power Consumption

Average (entire display)

157.596

Maximum (entire display)

630.38

Normal Power requirements (Voltage, Service, Ø)

Include any ventilation (no air conditioning allowed) requirements

for entire Display

1.8 amps @ 208Y/120v 3P

Entire Display Assembly Weight

(Include internal structure) _____ 62.8 lb

End of Section

LED Display System Schedule of Displays

Daktronics, Inc.

Location: G2 - Event Floor

Model: NPN-6200-2.5MN-1500-BR1-HC-270x480-AUTOBR-LT-RD-F-SBA-CNTRM

Fractional Units (e.g. 18.5')

Overall Display Size (measured from physical pixel to physical pixel; not including cabinet)

Vertical	2.25	Feet	270	Pixels
Horizontal	4	Feet	480	Pixels

Total Number of Physical LEDs	129,600	LEDs/each display
Total Number of Physical Pixels	129,600	Pixels/each display

OEM LED Module and Processor Manufacturer(s)

Daktronics, Inc.

Vertical	2.25	Feet
Horizontal	4	Feet

PHYSICAL Pixel Pitch (not "lines")

Vertical/Vertical	2.541	millimeters
Horizontal/Horizontal	2.541	millimeters

Physical Pixel Density (not "lines")

14400 Pixels/sq ft

Virtual Pixel Pitch

"claimed" pixel pitch 2.5 millimeters

3 in 1 SMD LED Supplier

NationStar

Brightness

1500 Nits

Brightness Level adjustment

Full Scale

Gradation Method

Pulse Width Modulation (PWM)

Tonal Gradation

16-Bit

Color Temperature

3,000°-10,000° kelvin (adjustable) °K

Color Temperature adjustability

3,000°-10,000° kelvin (adjustable)

IP Rating

NA

Viewing Angles

Vertical degrees

+80/-80°

UP

Dn

Horizontal degrees

160

Power Consumption

Average (entire display)

158.76

Maximum (entire display)

635.04

Normal Power requirements (Voltage, Service, Ø)

Include any ventilation (no air conditioning allowed) requirements

for entire Display

1.8 amps @ 208Y/120v 3P

Entire Display Assembly Weight

(Include internal structure) _____ 62.8 lb

End of Section

LED Display System Schedule of Displays