

NEXT STAX 9.5MM LED VIDEO DISPLAY

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. LED matrix display

1.02 REFERENCES

- A. Standard for Electric Signs, UL 48
- B. Standard for CSA C22.2
- C. Federal Communications Commission Regulation Part 15
- D. National Electric Code

1.03 SUBMITTALS

- A. Product Data: Submit detailed illustrations, data, and literature from the manufacturer outlining the proposed displays and accessories that will be installed. Include complete specifications for each display and accessory such as size, power consumption, color accuracy, brightness levels, viewing angles, and any other relevant metrics. Additionally, provide all necessary documentation to guarantee that the products shop drawings: Submit mechanical and electrical drawings.
- B. Maintenance data: Submit manufacturer's installation, operation, and maintenance manuals.

1.04 DELIVERY, STORAGE, AND HANDLING

- A. Product delivered on site
- B. Display and equipment to be housed in a clean, dry environment

1.05 PROJECT CONDITIONS

- A. Environmental Constraints: Prior to installing display equipment, ensure that the mounting structure is firmly secured and allow sufficient time for the concrete to cure completely.
- B. On-Site Measurements: Confirm the precise location, height, and layout of the structure for the display equipment. Validate the dimensions through on-site measurements
- C. Ensure that the mounting structure is capable of bearing the weight of the display as well as the wind load, taking into account any auxiliary equipment
- D. The installation can be carried out under suitable weather conditions that meet the acceptable criteria.quality assurance

1.06 FOR OUTDOOR USE

- A. ETL listed to UL 48
- B. ETL listed to CSA 22.2 #207
- C. CE compliant
- D. FCC compliant
- E. Installed per NEC

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1.07 WARRANTY

- A. Provide 5 years of no cost parts exchange including ground shipping on electronics parts due to manufacturing defects. Depending on the circumstances and at our discretion, NextLED will exchange or repair and return failed parts.
- B. Provide toll-free service coordination.
- C. Provide technical online and phone support during NextLED business hours.

PART 2 PRODUCTS

2.01 MANUFACTURER

- A. NextLEDSigns, LLC, 3526 N. Comotara, Wichita, Kansas 67226

2.02 COMMUNICATION TYPE

- A. Cellular Modem Router

2.03 PRODUCT

- A. STAX 9.5mm video displays can present real-time data, animations, graphics, recorded video clips, and text. Displays are constructed by assembling cabinet sizes that are unlimited in their configuration. The cabinets consist of frame and module sections, each measuring one foot in height and two feet in width. The modules are equipped with surface mount display (SMD) pixels, featuring a row and column spacing of 9.54mm.

2.04 DISPLAY

A. Physical Parameters

1. Pixel Configuration: 3-in-1 SMD
2. Pixel Pitch (mm): 9.54mm
3. Pixel Matrix per Panel: 32 tall x 64 wide
4. Pixel spacing measurement must be measured from the center points of neighboring physical pixels, rather than neighboring physical and virtual pixels.
5. Frame Paint Color
 - a. Matte black
6. Frame Construction
 - a. All-aluminum construction for light weight and corrosion resistance
 - b. Service Access: Front and Rear
 - c. Frame Material: Aluminum / Powdercoat
 - d. Size (Inches): 12" tall x 24" wide
 - e. Frame Depth (frame only): 2.75"
 - f. Frame Depth (w/ module): 3.625"
 - g. Module and frame weight (lbs): 13

B. Electronic Parameters

1. Color Capacity: 16 bit (281 trillion colors)
2. Refresh Rate: 3840hz.

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3. Frame frequency: 50/60hz
- C. Color Calibration
 1. Color calibration: Color, brightness, adjustable gamma correction, color control technology and enhancement algorithms for optimal picture quality.
- D. Calibration
 1. Pixel-to-pixel and module-to-module optical color calibration must be performed at the factory. The manufacturer must also provide easy-to-use calibration software that allows individual modules and pixels to be independently adjusted while in the display.
 2. If modules should need replacement during the life of the display, the calibration software must match newer modules' brightness levels to older modules' levels to preserve picture quality and maintain a uniform display appearance.
- E. Optical Parameters
 1. Brightness (NIT): 8500+
 2. Color Temperature (K): 3200 - 9000
 3. Contrast Ratio: 4000:1
 4. Horizontal Viewing Angle (deg): 160
 5. Vertical Viewing Angle (deg): 70
 6. Quality Control: Diodes sorted by intensity and color wavelength. Single Bin
- F. Electrical Parameters
 1. AC Input Voltage (V): Auto switching 120 - 240
 2. AC Input Frequency (Hz): 50/60
 3. Max / Average power per module (AMPS): 1.35 / .66
- G. Environmental Parameters
 1. Storage Temperature (F): -40 - 180
 2. operating Temperature (F): -20 - 180
 3. Storage Humidity (%): 10% - 90%
 4. Working Humidity (%): 10% - 90%
 5. Typical Life (hrs): 100,000
 6. IP Rating: 67

2.05 CONTROLLER

- A. Intel® Celeron®/Pentium®/Atom®-E Processor
- B. Intel® Apollo Lake Platform (SOC)
- C. Intel® HD 500 Graphics, 4K Resolution, HDMI+DP
- D. 2G/8GB DDR3L Memory
- E. Realtek® Gigabit LAN, M.2 11ac WiFi+BT
- F. 2 USB 3.0, 2 USB 2.0
- G. mSATA-6Gb/s
- H. Power Supply: DC12V-2A Input
- I. OS Support: Windows 10, IoT, Linux, Android
- J. Applications: Set Top Box, Digital Signage, POS/Kiosk, Traffic Controller, etc
- K. Animation rates of up to 60 frames per second
- L. Networking: 10/100/1000 Ethernet (RJ-45 LAN) @2
- M. Dimensions: 4.96"(W) x 4.33"(D) x 1.33"H

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2.06 CONTROL SOFTWARE

- A. Must be developed by the manufacturer of the Display.
- B. Must be mobile first designed and accessible from all devices.
- C. Must be accessible from Google Chrome, Firefox, and Bing web browsers.
- D. Scheduling software control software must provide:
 - 1. Scheduling
 - 2. Running and deleting messages
 - 3. Direct control of an infinite number of displays located on a network
 - 4. Content playlists with loop, shuffle, random and next play functionality
 - 5. Thumbnail preview of content clips
 - 6. Onscreen display monitor
- E. Content Editor Software features:
 - 1. Library of responsive, editable, templates for all sizes.
 - a. Standard one size templates are not equivalent.
 - 2. Content creation from blank canvas for simple messages
 - 3. Inline text editing
 - 4. Outlined, Drop shadowed, Bold, Italic, and Underlined text modes
 - 5. Ability to copy and paste text from most Windows applications
 - 6. Import common image and animation formats, including BMP, JPEG and AVI
 - 7. Content preview
 - 8. Content layering
 - 9. Real-time data (RTD) integration allows operators to create messages with information that automatically updates without user intervention. Such data may include scores, game time, player/team statistics, time-of-day, date or temperature.
 - 10. Profanity protection and Spell Check
 - 11. Multiple transition effects for entry, hold and exit

PART 3 EXECUTION

3.01 EXAMINATION

- A. Confirm the readiness of the mounting structure to accommodate the display by ensuring that the placement of conduit and junction boxes aligns with the specified locations outlined in the plans and shop drawings. Additionally, verify that the concrete has sufficiently cured in accordance with the provided specifications.

3.02 INSTALLATION

- A. All power and control cables for the display will be carefully guided through conduit. The Electrical Contractor will handle the power supply to the display, as well as the installation of any raceways as indicated on the electrical plans. However, the contractor responsible for the display equipment will be in charge of handling the display control wiring, including the necessary conduit installation.

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- B. Install display to in location detailed and in accordance with manufacturer's instructions. Verify unit is plumb and level.

3.03 INSTALLATION—CONTROLLER BOX

- A. Install boxes, cover plates, and jacks in designated locations according to the plans.
- B. Thoroughly test the functionality of the display, controller, and all control jacks. Leave the control unit and any other loose items in the custody of the owner's designated representative.
- C. Provide comprehensive training to the operator on the operation of the display and controller.
- D. The manufacturer is responsible for supplying all necessary signal conversion hardware to enable direct wire control of the electronic display.

END OF SECTION