



## 55" Single-sided LCD Transit Monitor



### Model: NISSM-550LC-305-MTA, Landscape

- ✓ 55" Fully sealed ceiling mount monitor
- ✓ Embedded Intel i5 processor, 4G LTE networking
- ✓ HVAC - Heater, ventilation and air circulation
- ✓ UL872, Sign controller – IoT sensors, Remote computer power reset
- ✓ UL48 Outdoor signs compliant – Dielectric voltage withstand test, Bond impedance test, Leakage current test and Glass impact test
- ✓ Hardware health monitoring system – Temperature, Brightness



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## LCD Screen (Front)

Parameter	Specification
Video Orientation	Landscape
Screen Dimensions (W x H)	1210.6mm x 681.4mm; (47.66in. x 26.83in.)
Enclosure Dimensions (W x H x D)	1391mm x 857.91mm x 194.3mm; (54.76in. x 33.78in. x 7.65in.)
Resolution	1920 x 1080 pixels
Color	1.07 billion colors (10-bit)
Dimming	50-100% automatic dimming
Calibrated Intensity	500 Cd/m <sup>2</sup>
Color Temperature Modes	Warm / Medium / Cool
Refresh Rate	120 Hz
Contrast Ratio	2,000:1 (Typical); 10,000:1 (Dynamic)
Viewing Angle	178 degrees (side/side) 178 degrees (up/down)
Burn Time (one static image)	30 min

## Power, Computer & Electronics

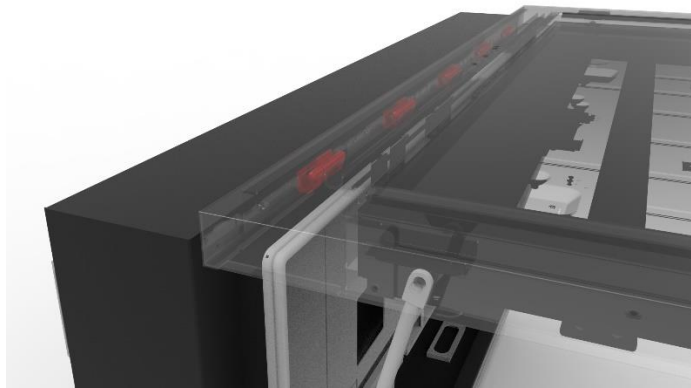
Parameter	Specification	
Power Consumption	400 W (Average); 600 W (Maximum)	
Embedded computer	CPU	i5 Processor
	RAM	8GB
	Storage	128GB HDD
	Dimensions (W x D x H)	150mm x 50mm x 150 mm; (5.9in. x 2.0in. x 5.9in.)
	OS	Window 10
Inputs / Outputs	HDMI DVI (720p/1080i/1080p) Composite Video Input PC Input via 15-pin LAN (RJ45, Cat 6) RS-232C Wi-Fi 802.11ac + Bluetooth 4.0 Module Optional: LTE Modem	
On Screen Display (OSD)	English (default),	
Hardware Maintenance Software	Installed networking module to control hardware	

## System Level Design & Durability

Parameter	Specification
Rated Operating Conditions	Temperature: -35°C to +45°C Humidity: 20% to 80%
Heating, Ventilation & Air Circulation (HVAC)	Automated system for heating & cooling with active air inflow & exhaust <i>[patent pending]</i>
External Housing	Fully-sealed, weather-proof enclosure Powder coated surface treatment Available finishing materials: Stainless steel, Aluminum, Architectural glass
Glass	Anti-vandal, tempered glass
Certification	FCC, CSA, Components UL
Warranty	36 Months
Mean Time Between Failure	50,000 hours
Electric Sign Health Monitoring System  [Model: NRMCB-300]	<p>Remote Health Monitoring capabilities:</p> <ul style="list-style-type: none"> <li>- Monitor internet connection</li> <li>- Environmental control via IoT sensors <ul style="list-style-type: none"> <li>• (2) Temperature sensors</li> <li>• (1) Ambience sensor</li> <li>• (1) Moisture sensor</li> <li>• (1) Pixel moving sensor to detect screen is working or not</li> <li>• (1) Door sensor for enhanced security and safety</li> </ul> </li> <li>- Sequential power booting program <ul style="list-style-type: none"> <li>• Remote power reset</li> <li>• Remote computer reset</li> <li>• Remote LCD reset</li> <li>• Remote IoT reset</li> </ul> </li> </ul>

## Maintenance Door Concept

This Nanov Display product is designed with easy maintenance access in mind. You can swing open the enclosure door to access the monitor in no time at all. Next, to access the electronics directly, the screen can pivot upwards thanks to its mounting with heavy-duty pneumatic spring.

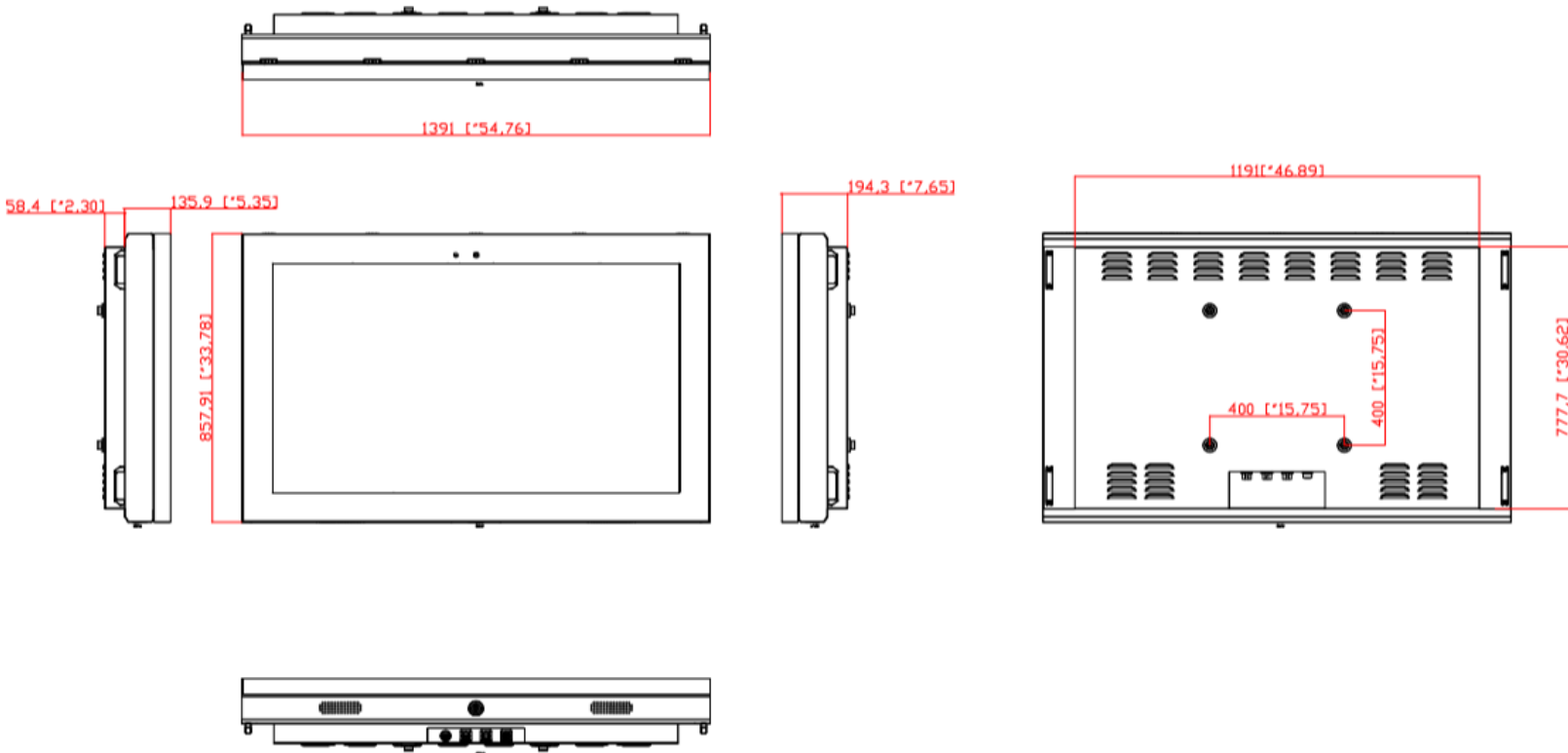


Front opening mechanic – Easy maintenance

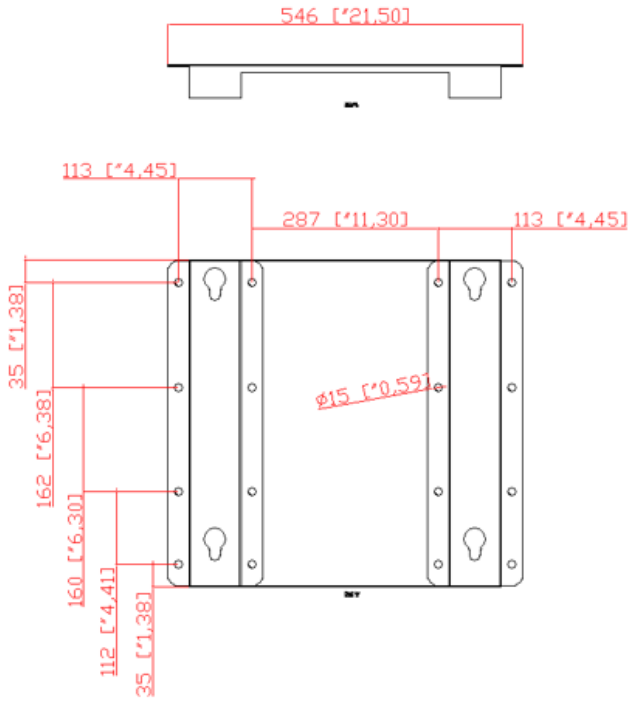


## Physical Dimensions

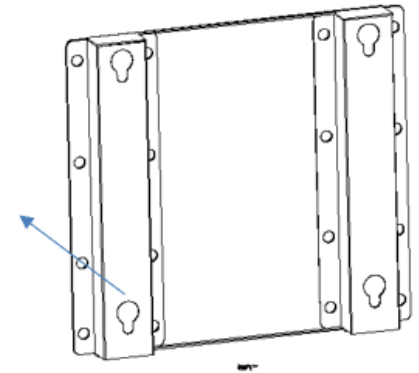
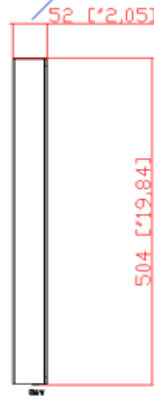
Total System Weight: 100 kg (220 lb.) per unit



## NISSM-550LC-305-MTA Mounting Dimensions



Height check



M12(W1/2") Anchor bolt



## 5 Port Switch Specification

### Model ipTIME H605

Parameter	Specification
Switch Name	5port. 10/100Mbps switching hub
Standard	IEEE 802.3 10BASE-T Ethernet IEEE 802.3u 100BASE-TX Fast Ethernet ANSI/IEEE standard 802.3 N-Way auto-negotiation
Protocol	CSMA/CD
LAN Port	10/100Mbps 5Port
LAN wire Max length	UTP CAT-5/5e/6/7, 100m(MAX)
LAN wire type	Auto detect cable type (Direct / Cross)
Transmission method	Non-blocking switch Store and forward
MAC Address	4K MAC with Auto Learning
LED	PWR, LAN 1~5
Power	External DC Adapter
Size	84.4 x 54 x 25.7 (mm)
Operational Temperature	Operating 0°C ~ 60°C
Operational Humidity	10% to 80%



## 4G/LTE Modem/Router Specification

Hardware Features	
Chipset	QCA9531/650Mhz
FLASH	SPI 16MB
RAM	DDR2 128MB
Protocol	IEEE802.11n/802.11g/802.11b/802.3/802.3u
Transmit Power	802.11b 18dBm+-2dBm 802.11g 15dBm+-2dBm 802.11n 15dBm+-2dBm
Reception Sensitivity	802.11b: -83dBm@10% PER 802.11g -74dBm@10% PER 802.11n -68dBm@10% PER
Wireless Speed	Max 300Mbps
Working Frequency	2.4GHz (2T2R)
Antenna Type	4 external 5dBi antenna
Interface	1 * PCI-E slot 1 * SIM card slot 1 * 10/100M WAN port (Auto MDI/MDIX) 1 * 10/100M LAN port (Auto MDI/MDIX)
LED	Power, PCIE, 2.4G, WAN, LAN1, LAN2, LAN3, LAN4
Button	Reset
Power Supply	DC 12V/1A
Max power consumption	< 12W
Dimensions	141*85*26MM

<b>Software Features</b>	
Default Setting	IP Address: 192.168.1.1
WAN Type	PPPoE/ Dynamic IP/ Static IP/ 3G/ 4G
Working Mode	AP; Router
System	Supports SDK, OpenWRT, eCos
DDNS	Support
WEB Style Change	Support
Static Router	Support
System Log	Support
DHCP Server	DHCP server Client List; Static address assignment;
Virtual Server	Port Forwarding DMZ
Security	Client List Filter MAX Address Filter URL Filter Remote WEB management
Others	MAC address clone Configuration file import and export Web upgrade
<b>Others</b>	
Operating Temperature	0°C ~ 40°C (32°F ~ 104°F)
Storage Temperature	-40°C ~ 70°C (-40°F ~ 158°F)
Operating Humidity	10% ~ 90% non-condensing
Storage Humidity	5% ~ 90% non-condensing

# Nanov Health Monitoring System

## General Description

Nanov Sign Controller is the critical component of the LCD signs. The controller consists of two boards: the main board and power board. The hardware controlling capacity are as follows:

- Brightness sensor- Auto brightness control vs environment sensor
- Temperature sensors- Auto fan speed control vs internal temperature
- Power reset: Modem, Computer, Panel
- Detect when a sign is non-operational via AD board signal
- Detect when a sign is not communication via modem -auto ping/reset
- Send an email or text alert indicating status of the signs – Option or API

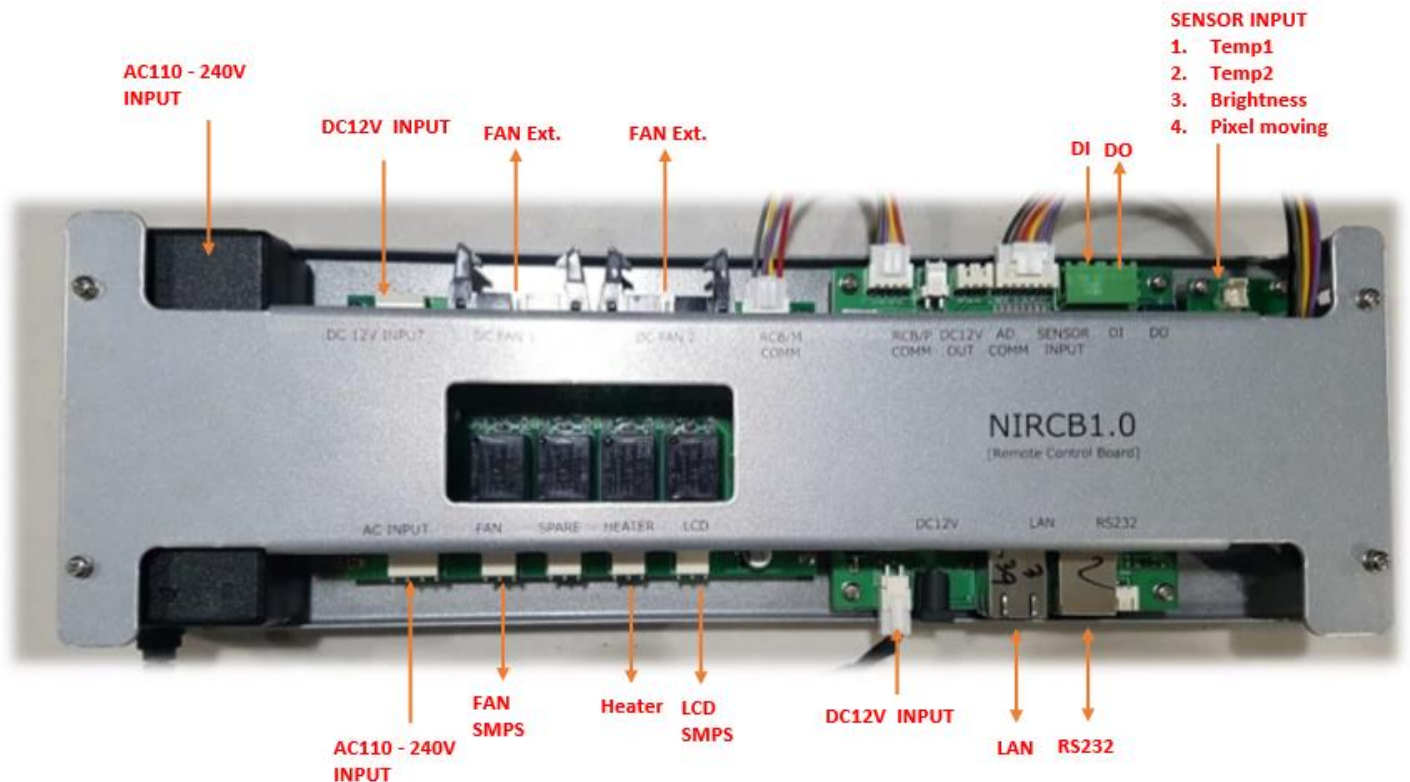


Fig. 1- NIRC1.0 Nanov Sign Controller

# Dashboard

Keywords
 delete

- Groups
  - unassigned
  - Deployed
  - Lab
  - Ready
  - SI
- Status
  - ON-LINE
  - OFF-LINE
- Operation Mode
  - Auto
  - Manual
- LCD Color
  - LT
  - LF
- Door
  - Opened
  - Closed

	Name	Type	Group	IP	MAC	Status
<input type="checkbox"/>	SouthGarland-11-025-1946-132A	G3	Deployed	192.168.32.3	70:B3:D5:2D:04:D4	ON-LINE
<input type="checkbox"/>	MLK-12-007-1945-063A-F	G3	Deployed	192.168.32.3	70:B3:D5:2D:04:C9	ON-LINE
<input type="checkbox"/>	MLK-12-007-1945-063B-F	G3	Deployed	192.168.32.4	70:B3:D5:2D:04:CA	ON-LINE
<input type="checkbox"/>	LakeRayHubbard-09-033-1945-075A	G3	Deployed	192.168.32.3	70:B3:D5:2D:05:12	ON-LINE
<input type="checkbox"/>	LakeRayHubbard-09-033-1945-075B	G3	Deployed	192.168.32.4	70:B3:D5:2D:05:15	ON-LINE
<input type="checkbox"/>	MLK-12-006-1945-066A-F	G3	Deployed	192.168.32.3	70:B3:D5:2D:05:58	ON-LINE
<input type="checkbox"/>	MLK-12-006-1945-066B-F	G3	Deployed	192.168.32.4	70:B3:D5:2D:05:66	ON-LINE
<input type="checkbox"/>	SouthGarland-11-023-1946-097A	G3	Deployed	192.168.32.3	70:B3:D5:2D:05:72	ON-LINE
<input type="checkbox"/>	SouthGarland-11-023-1946-097B	G3	Deployed	192.168.32.4	70:B3:D5:2D:05:73	ON-LINE
<input type="checkbox"/>	JackHatchell-08-019-1946-089B	G3	Deployed	192.168.32.4	70:B3:D5:2D:05:78	ON-LINE
<input type="checkbox"/>	JackHatchell-08-019-1946-089A	G3	Deployed	192.168.32.3	70:B3:D5:2D:05:74	ON-LINE
<input type="checkbox"/>	JackHatchell-08-020-1946-084A	G3	Deployed	192.168.32.3	70:B3:D5:2D:05:84	ON-LINE
<input type="checkbox"/>	JackHatchell-08-020-1946-084B	G3	Deployed	192.168.32.4	70:B3:D5:2D:05:82	ON-LINE
<input type="checkbox"/>	SouthGarland-11-024-1946-082A	G3	Deployed	192.168.32.3	70:B3:D5:2D:05:79	ON-LINE

# LCD Signs Control

Home / Equipment

Equip Info
Condition
Control Set
Control Power
History

ⓘ Modified setting (Follow the control settings for the default setting or you can modify for each equipment.)

🔴 Equipment Value    🔴 User Control Value

Operation Mode: Auto   

LCD Display ON/OFF: ON   

Brightness: 70%   

Volume: 50%   

Input Source: HDMI

ⓘ Modified setting (Follow the control settings for the default setting or you can modify for each equipment.)

🔴 Equipment Value    🔴 User Control Value

LED R: 255   

LED G: 255   

LED B: 0

# Archive History

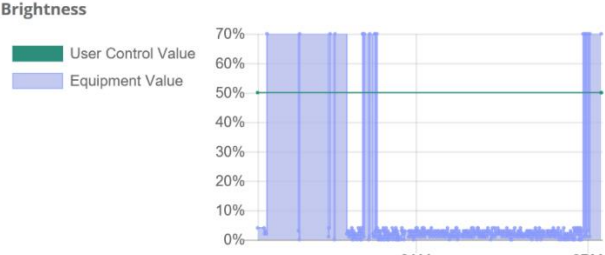
Equip Info
Condition
Control Set
Control Power
History

**Equipment** SouthGarland-11-025-1946-132A  
\* Only one selected device will display history.

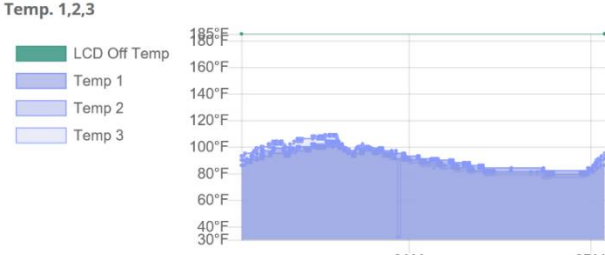
**Period**  1 Day  1 Week  1 Month Excel

Show Result

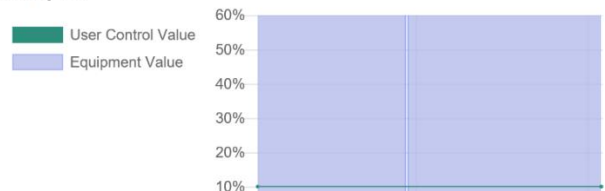
**Brightness**



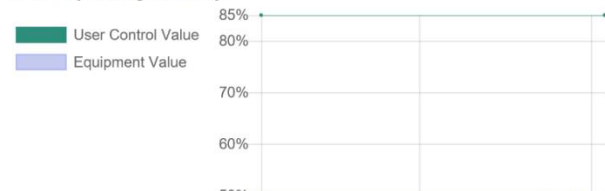
**Temp. 1,2,3**



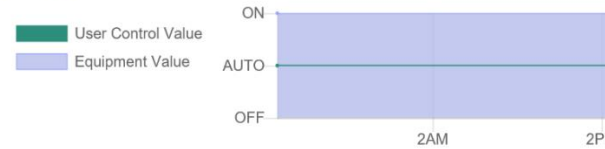
**FAN Speed**



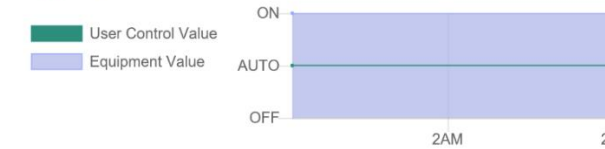
**Heater Operating Humidity**




**LCD POWER**



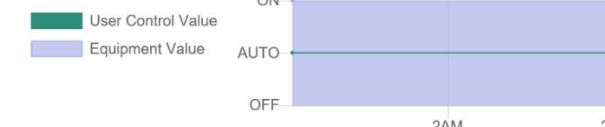
**FAN POWER**




**HEATER POWER**




**LCD Display ON/OFF**



**Pixel Moving Sensor**



**Door Status**



**Keywords**  delete

	Name	Type	Group	IP	MAC	Status
<input checked="" type="checkbox"/>	SouthGarland-11-025-1946-132A	G3	Deployed	192.168.32.3	70:B3:D5:2D:04:D4	ON-LINE
<input type="checkbox"/>	1046 116A	G3		102.169.32.151	70:B3:D5:2D:05:00	ON-LINE

## Safety Compliance

LCD Panel: UL 60695

LCD Sign Controller: UL 879

Computer: UL E216813

For electric message signs compliant, the following certification and test report shall be provided.

- Dielectric voltage withstand test
- Glass impact test, IK 08
- Rain test
- Leakage current test
- Bond impedance test
- Input test
- Lock rotor test
- Abnormal operation test
- Maximum output voltage test
- Maximum output current and power test

LCD Sign controller

The following controls shall be provided, and operate either remotely (via internet), locally, and from a handheld remote control unit communicating with IoT sensors.

- \* LCD panel Power on/off
- \* Input selection/lock
- \* Brightness
- \* Fan speed
- \* Embedded computer reset
- \* Heater power on/off

Other: Control panel shall not be affected by weather elements (e.g. heat, sun, rain, wind, etc.)

VMS DISPLAY HEALTH MONITORING CONTROL VMS display assembly shall have the following remote hardware control monitoring and capabilities via the internet:

- IoT sensors activities report – Temperature, Brightness
- Internet on/off report
- Alert alarm report

## Application



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