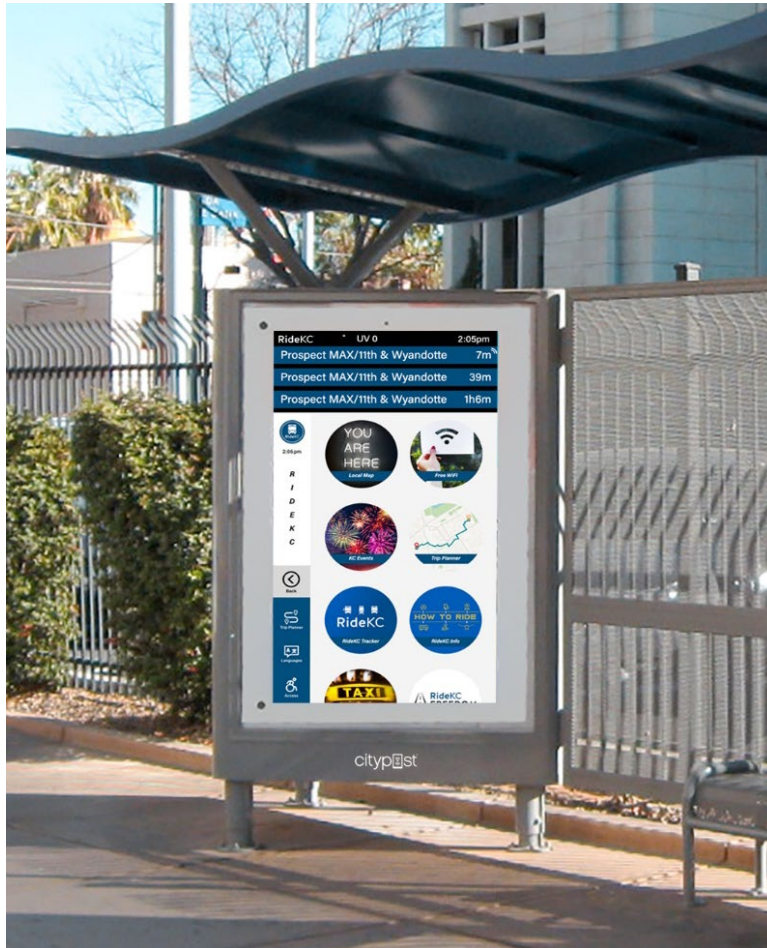




85" Single-sided Digital Transit LCD Sign



Model: NBASM-850PC-395-RTC, 85", Portrait

- ✓ 4000 cd, Sunlight readable, exterior weatherproof monitor
- ✓ Tamper-proof, anti-reflection, tempered glass over 85" screen
- ✓ Embedded Intel i7 processor, 5G 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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Screen

Parameter	Specification
Video Orientation	Portrait
Screen Dimensions (W x H)	1053mm x 1872mm: (41.5 inches x 73.7 inches)
Enclosure Dimensions (W x H x D)	1233mm x 2159mm x 188mm; (48.54 inches x 85 inches x 7.41 inches)
Resolution	3840 x 2160 pixels
Color	1.07 billion colors (8-bit)
Dimming	50-100% automatic dimming
Calibrated Intensity	4000 Cd/m ²
Color Temperature Modes	Warm / Medium / Cool
Refresh Rate	60 Hz
Contrast Ratio	3,200:1 (Min.); 4,000:1 (Typical)
Viewing Angle	178 degrees (side/side) 178 degrees (up/down)
Burn Time (one static image)	30 min
Camera	Two Axis Camera on top of LCDs

Power, Computer Specification

Parameter	Specification	
Power Consumption	1360W Typical	
Embedded computer Specification	CPU	Intel Core i7 Processor
	RAM	16 GB
	SSD	256 GB
	OS	Windows 10
Inputs / Outputs	1) HDMI, DVI (720p/1080i/1080p) 2) USB 3) PC input via 15 pin Sub 4) LAN (RJ45, Cat 6)	
Single dedicated receptacle power outlet	8A rated	

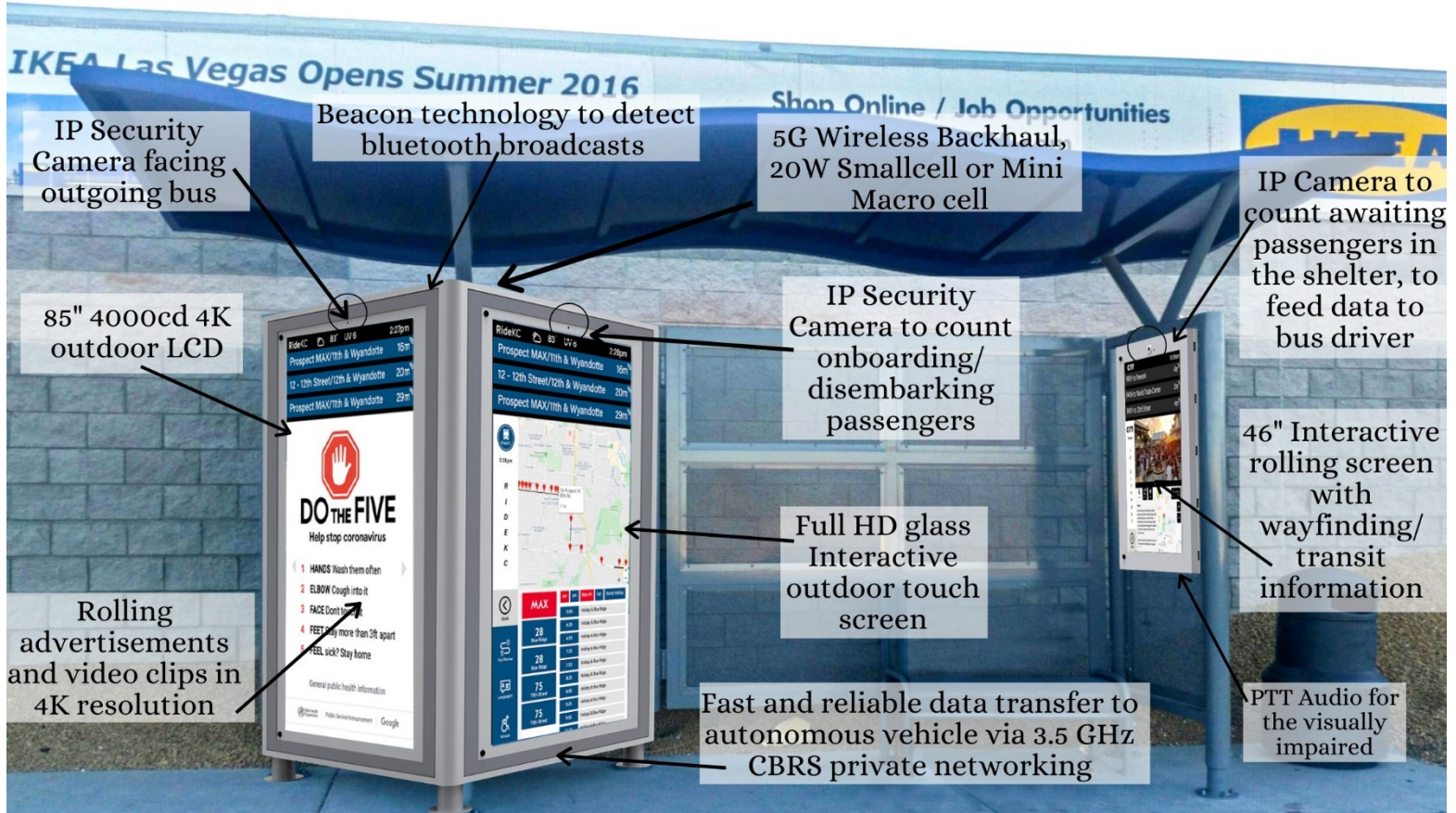
Mechanical Specification

Parameter	Specification
Sealing	Sealing around kiosk penetrations, windows, and ventilation fans
Wiring	UL certified Power Supplies UL Code Rated Wiring Plan
Ambient Light Sensor	1) Sensor shall be positioned in same location as cameras above the monitors 2) Default setting of ambient light sensor shall be adjusted to minimum of one hour

Electronics Specification

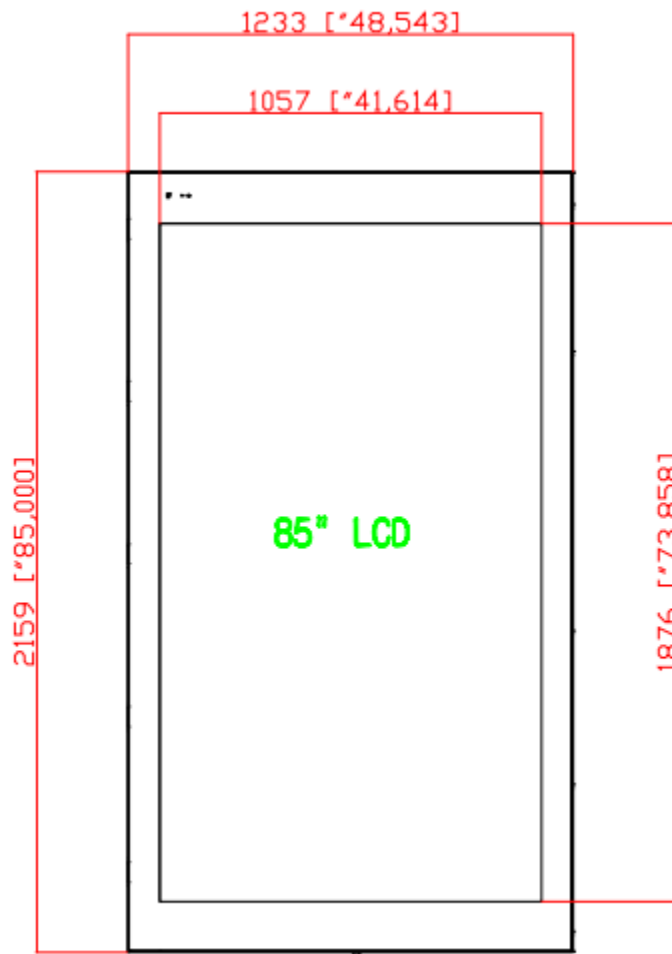
Parameter	Specification
Rated Operating Conditions	Temperature: -30°C to +40°C Humidity: 20% to 80%
Heating, Ventilation & Air Circulation (HVAC)	Automated system for heating & cooling with active air inflow & exhaust
External Housing	Fully-sealed, weather-proof enclosure Powder coated surface treatment
Enclosure sealing / weather proofing	Enclosures shall comply with UL 48 including outdoor rain test
Glass	Anti-vandal, tempered glass
Certification	FCC, UL 48, UL879 Sign Controller
Warranty	36 Months, Depot Warranty
Mean Time Between Failure	50,000 hours
Electric Sign Controller Health Monitoring System [Model: NRMCB-300]	Controller interface: <ul style="list-style-type: none"> - Environmental control via IoT sensors <ul style="list-style-type: none"> • (2) Temperature sensors • (1) Ambience sensor • (1) Moisture sensor • (1) Pixel moving sensor to detect screen activity • (1) Door sensor for enhanced security - Sequential power booting program <ul style="list-style-type: none"> • Computer power reset • LCD panel reset • Heater and fans on/off

Smart Bus Shelter Features



Physical Dimensions

Total System Weight: 120 kg per unit



Parsec K9 – Pro Series Antenna

Specification

Model: PTA PRO9K 4LTE 4WiFi GPS

Product Description

Parsec's K-9 series PTA PRO9K 4LTE 4WIFI GPS is a low height nine-in-one double MIMO LTE, double MIMO Wi-Fi, and GNSS external waterproof antenna. The PTA PRO9K 4LTE 4WIFI GPS supports either the simultaneous operation of two separate LTE modems or 4x4 MIMO. This rugged low-profile omni-directional antenna works on all of the common North American LTE bands with high efficiency. Also supports CBRS and LAA. The antenna requires a single 1.5-inch mounting hole to be placed on the top of the kiosk RF Transparent Lightbox.

Features

- LTE frequency range: 617 – 894 MHz
1710 – 2700 MHz
3400 – 3800 MHz
5150 – 5925 MHz
- Wi-Fi frequency range: 2400 – 2483.5 MHz
4900 – 5900 MHz
- Double MIMO LTE
- High Isolation
- High Efficiency: 70%
- Low Height

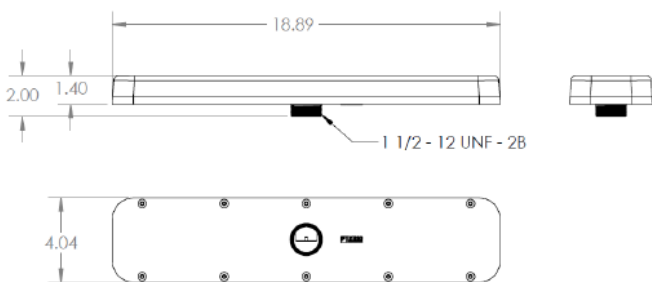
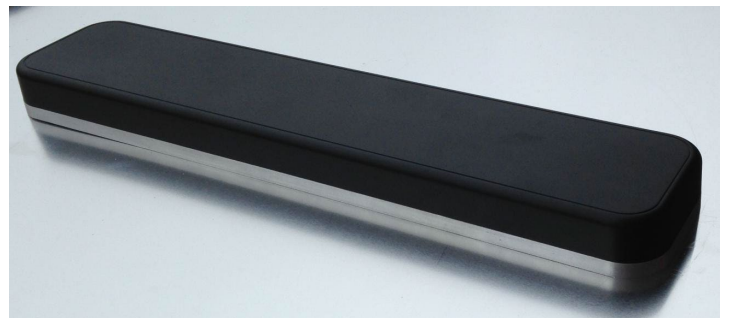


Figure 2. Product Dimensions



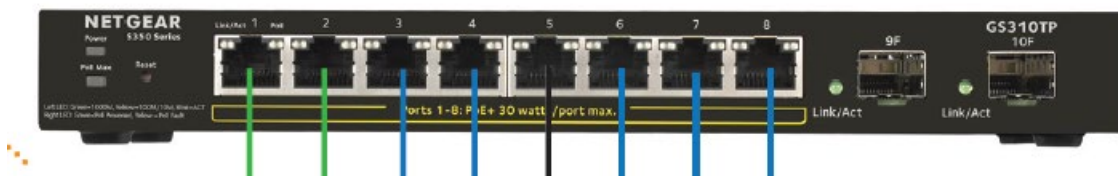
Managed Pro Switch Specification

Model: GS310TP

Features

- Conforms to IEEE 802.3, 802.3u and 802.3ab Ethernet Standards
- 2 Ports Dedicated SFP Fiber Ports
- 8 ports auto-negotiation 10/100/1000Mbps Ethernet RJ-45 ports
- Automatic MDI/MDIX crossover for each RJ-45 port
- Backpressure for Half-duplex mode and Flow control for Full-duplex mode
- Store-and-forward switching architecture
- 4K entry MAC address table and automatic address learning
- Jumbo Frame support (9KByte)
- L2/L3/L4 Access Control Lists
- QoS (Quality of Service) for traffic prioritization including port based, 802.1p and L2/L3/L4 DSCP-based
- Performs non-blocking full wire speed
- Snmp V1, V2c, V3 and RMON
- LED-indicator for Power, LNK/ACT

GS310TP



Model Name	GS310TP
Form-Factor	Desktop
Hardware at Glance	
Parameter	Description
10/100/1000 Base-T RJ45 ports	8 ports
1000BASE-X Fiber SFP Ports	2 ports
PoE+802.3at Ports (Budget)	8 PoE+ (55W)
Power Supply	1 external PSU, DC 54V 1.25A
Fans	Fan-less
Software at Glance: Layer 2 Features	
Parameter	Description
Management	Web Browser-based GUI (HTTP/HTTPS), PC-Based Smart Control Center Utility (SCC) RMON, SNMP
IPv4 ACL and QoS	L2, L3, L4, ingress
IPv4 Multicast Filtering	IGMPSnooping, Querier, Fast Leave, L2 Multicast Router
Auto-VOIP/Auto Video	Yes
IEEE(802.3az) Energy Efficient Ethernet	Yes
MAC VLANs	8K or 16K Max MAC 64 VLANs Static, Dynamic, Voice
Convergence Advanced Features	LLDP-MED RADIUS 802.1X LACP, STP, SNMP
Environmental Characteristics	
Storage	-20°C ~ 70°C
Humidity	10% to 90%
Size	236 x 101 x 30mm
Power Full Load	69.3 W
Heat Dissipation (Max)	236.59 BTU/hr.

Modem Specification

Cradlepoint Model: IBR1700

Parameter	Specification
Model	MA1-1700 1200-NNA
LTE	Embedded 600 Mbps or 1 Gbps* LTE Advanced Pro modem & DC-HSPA+ fallback
WIFI	Simultaneous Tri Band 802.11 a/b/g/n/ac Wave 2 MU-MIMO
Material	Metal
Ignition Sensing	Automatic ON & time-delay OFF
OBDII Support	Yes, with accessory cable
Input Range	9-33 VDC (and low voltage shutoff)
Weight	3 lb. 7 oz (1.7 kg)
Support	Phone support: 24-hour weekdays with emergency response on weekends, Web: 24x7, Chat: 24x5
Cloud Managed	Yes, with NetCloud Manager
Carriers / Operators	AT&T, Verizon, T-Mobile, Sprint, Canada (Bell, Rogers, TELUS), Europe, Australia/New Zealand***
Ethernet Ports	5 LAN/WAN switchable 10/100/1000
Ruggedized	Yes, IP64, Shock/Vib/Humidity MIL Spec 810G & SAE J1455
GPS / GNSS	Yes, with active antenna & dead reckoning (GNSS/GPS + 3D Accel. + OBD-II)
Operating Temperature	-30 °C to 70 °C (-22 °F to 158 °F)
Size	8.8 × 7.5 × 1.7 in (224.3 × 190 × 44 mm)
Fallover	Yes
Dual Modem Capable	Yes, field-upgradable MC400 modem slot

Nanov Sign Controller

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
- Alarm via email or text

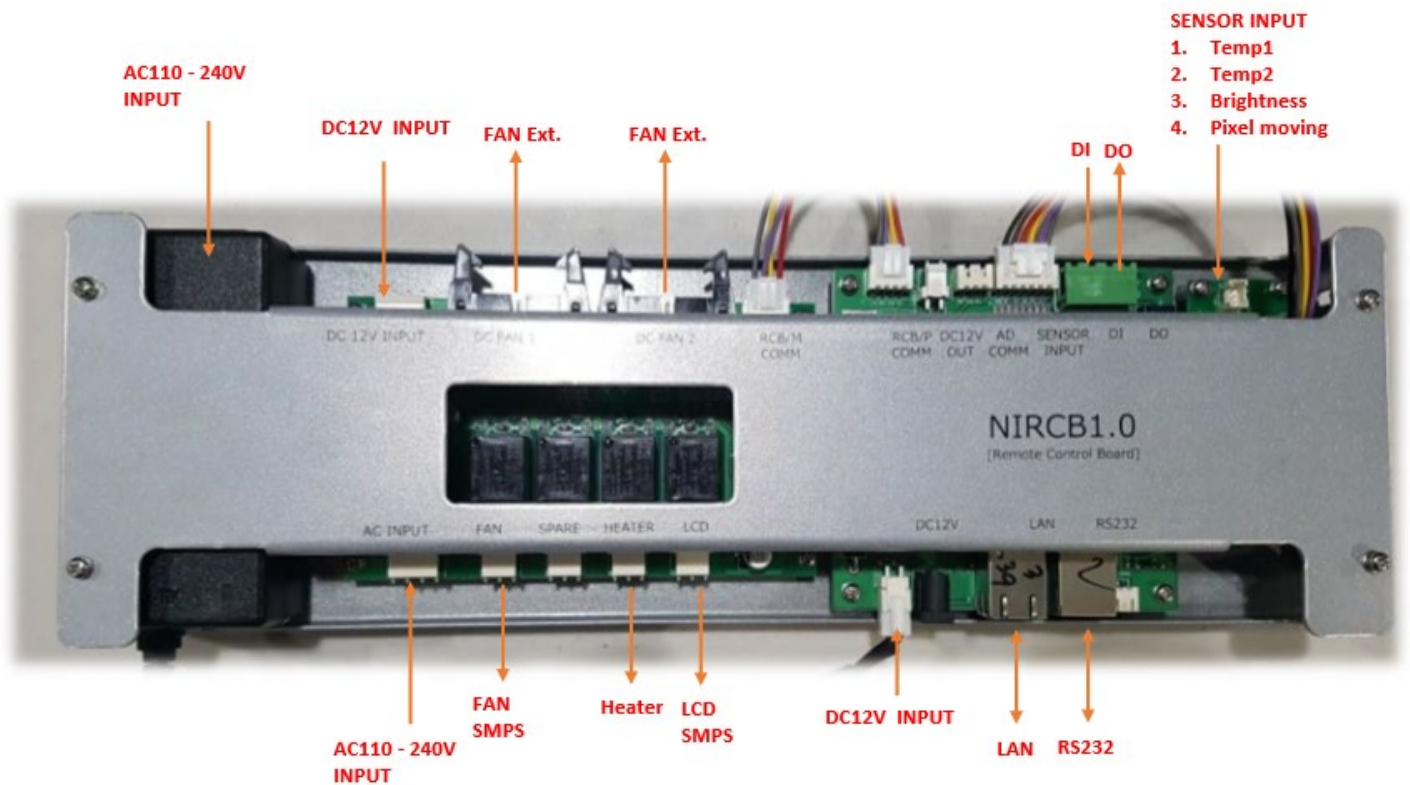


Fig. 1- NIRC1.0 Nanov Sign Controller

Remote Health Monitoring System Dashboard

Keywords

	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

Refresh

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.)

Operation Mode	Auto	Auto	LED R	255	
LCD Display ON/OFF	ON	ON	LED G	255	
Brightness	70%	70%	LED B	0	
Volume	50%	50%			
Input Source	HDMI	HDMI			

Archive History

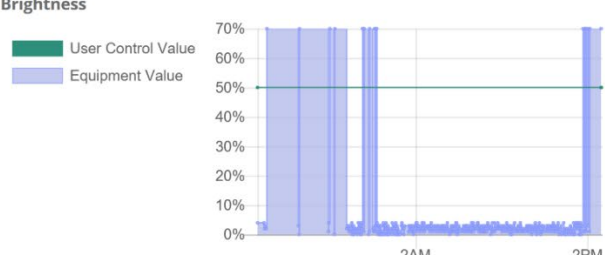
Equip Info
Condition
Control Set
Control Power
History

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

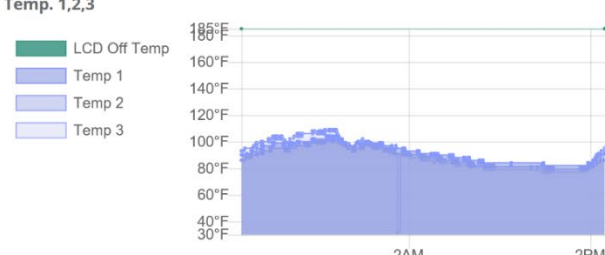
Period 1 Day 1 Week 1 Month Excel

Show Result

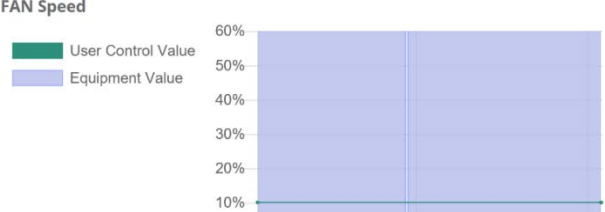
Brightness



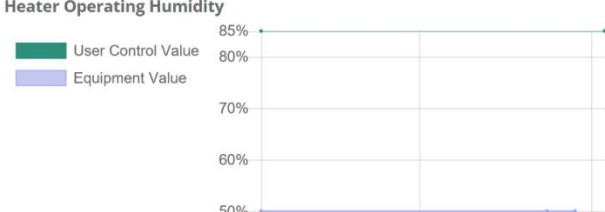
Temp. 1,2,3



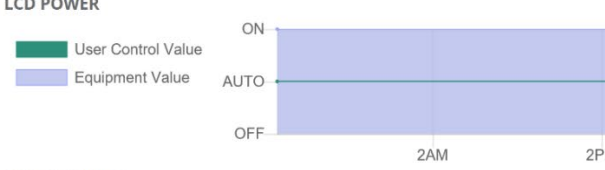
FAN Speed



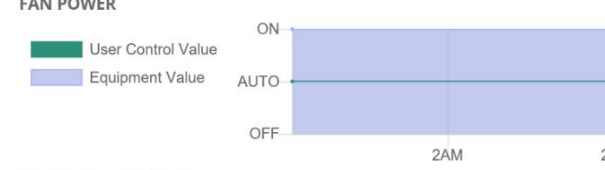
Heater Operating Humidity




LCD POWER




FAN POWER




HEATER POWER



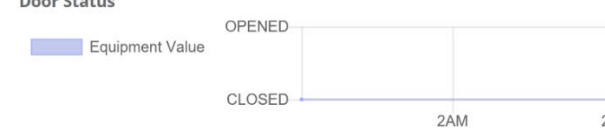
LCD Display ON/OFF



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		192.168.32.151	70:B3:D5:2D:05:00	ON-LINE

Remote Access Disclaimer

Remote access of Nanov Sign controller (NRMCB-300)

It is the customer's decision to connect sign controllers via the internet. At any point, the customer can pull the internet line out. The customer can always request to send IoT data to their own server but developing an API or Amazon server user fee is paid for by the customer.

Nanov controllers are connected to the following sensors to monitor hardware health system – heater, computer, fan, temperature sensor, pixel moving sensor, door sensor, LCD panel. The controllers are registered with the MAC address. When the internet is connected to the controller for the first time, the controller searches for the Nanov Amazon server connection and registers the IP address automatically. When the customer designates their own server, Nanov re-routes the sign controller to the customer server. Nanov provides a confidential ID and PW to the customer when they are connected into the Nanov server. Nanov provides three months of complimentary server access to the customer. For the first three months, Nanov can use the IoT sensor data to monitor the hardware health of the LCD signs and recommend default set up value to customer. After three months, Nanov has a right to request disconnecting the internet from the controller. The customer will then pull the internet line out from the controller.

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

Conceptual Drawing



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