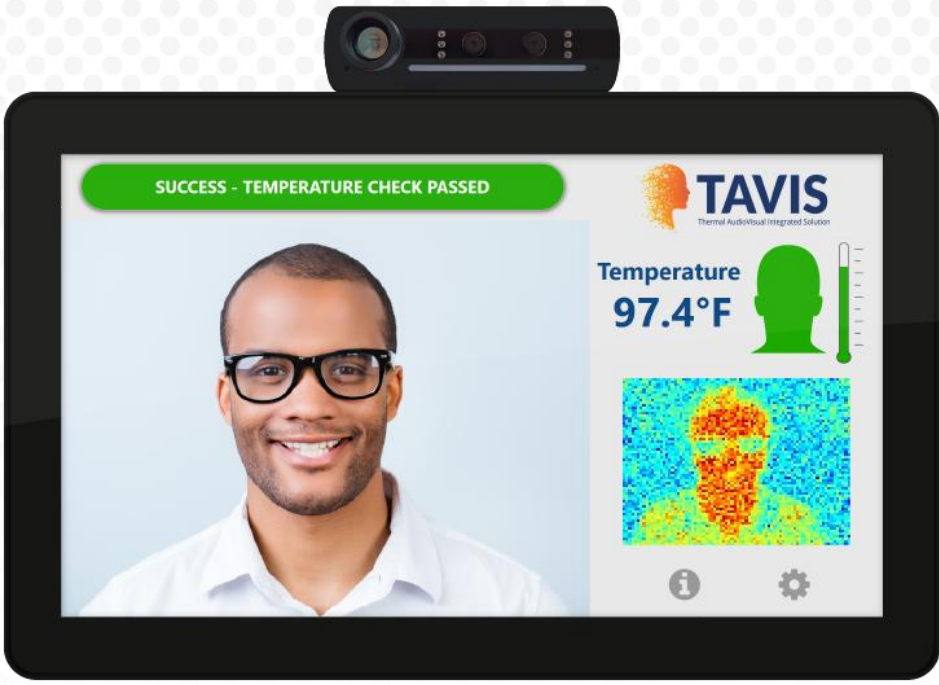
Aurora

TAVIS

Thermal AudioVisual Integrated Solution

TAV-10, TAV-15, TAV-21



SAFETY INSTRUCTIONS

Please review the following safety precautions. If this is the first time using this model, then read this manual before installing or using the product. If the product is not functioning properly, please contact your local dealer or Aurora for further instructions.

The lightning symbol in the triangle is used to alert you to the presence of dangerous voltage inside the product that may be sufficient to constitute a risk of electric shock to anyone opening the case. It is also used to indicate improper installation or handling of the product that could damage the electrical system in the product or in other equipment attached to the product

The exclamation point in the triangle is used to alert you to important operating and maintenance instructions. Failure to follow these instructions could result in injury to you or damage to the product.

Be careful with electricity:

- **Power outlet**: To prevent electric shock, be sure the electrical plug used on the product power cord matches the electrical outlet used to supply power to the Aurora product. Use only the power adapter and power connection cables designed for this unit.
- **Power cord**: Be sure the power cord is routed so that it will not be stepped on or pinched by heavy items.
- **Lightning**: For protection from lightning or when the product is left unattended for a long period, disconnect it from the power source.

Also follow these precautions:

- **Ventilation**: Do not block the ventilation slots if applicable on the product or place any heavy object on top of it.Blocking the air flow could cause damage. Arrange components so that air can flow freely. Ensure that there is adequate ventilation if the product is placed in a stand or cabinet. Put the product in a properly ventilated area, away from direct sunlight or any source of heat.
- **Overheating**: Avoid stacking the Aurora product on top of a hot component such as a power amplifier.
- **Risk of Fire**: Do not place unit on top of any easily combustible material, such as carpet or fabric.
- **Proper Connections**: Be sure all cables and equipment are connected to the unit as described in this manual.
- **Object Entry**: To avoid electric shock, never stick anything in the slots on the case or remove the cover.
- **Water Exposure**: To reduce the risk of fire or electric shock, do not expose to rain or moisture.
- **Cleaning**: Do not use liquid or aerosol cleaners to clean this unit. Always unplug the power to the device before cleaning.
- **ESD**: Handle this unit with proper ESD care. Failure to do so can result in failure.

FCC STATEMENT

Any Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

(1)This device may not cause harmful interference.

(2)This device must accept any interference received, including interference that may cause undesired operation.

IMPORTANT NOTE:

Note: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

—Reorient or relocate the receiving antenna.

—Increase the separation between the equipment and receiver.

—Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.

—Consult the dealer or an experienced radio/TV technician for help.

FCC Radiation Exposure Statement:

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment .

This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

This equipment should be installed and operated with minimum distance 20cm between the radiator &you body.

Trademarks

All trademarks in this document are the properties of their respective owners.

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PACKAGE CONTENTS

Please make sure the following items are included within your package. Contact your dealer if any items are missing or damaged.The power Adaptors are optional.

TAVIS Thermal AudioVisual Integrated Solution- TAV Series

TAV-10

- 1 QTY 10” TAVIS Thermal AudioVisual Integrated Solution tablet
- 1 QTY Power Adaptor
- 1 QTY Power Cable

TAV-15

- 1 QTY 15.6” TAVIS Thermal AudioVisual Integrated Solution tablet
- 1 QTY Power Adaptor
- 1 QTY Power Cable

TAV-21

- 1 QTY 21.5” TAVIS Thermal AudioVisual Integrated Solution tablet
- 1 QTY Power Adaptor
- 1 QTY Power Cable

Note: Go to www.auroramm.com for the latest manual and firmware.

RECOMMENDED WALL MOUNTS

- **APS-1**
  The APS-1 is an adjustable pole stand for the TAVIS Thermal AudioVisual Integrated Solution Series. The 25 pound weight base assures its stability. The height range is ~45” – 76” and the angle is adjustable.

APS-1	
Specifications	Measurements
Height	45”-76”
Angle	Adjustable Tilt
Base Dimensions [L x W x H]	15” x 19” x 0.25” 38.1cm x 48.26cm x 0.635cm
Weight	26lbs (11.793kg)
VESA Mount	75mm x 75mm 100mm x 100mm
Package Contents	Monitor Column, Column Base, Auxilary Screws

- **APS-2-B (Black) & APS-2-W (White)**
  The APS-2 is an adjustable VESA pole stand with base compartment. The base compartment is designed to hold up to a 50000mA hour battery for portable applications. There are optional locking caster wheels available for easy roll-around use (APS-2-CS).

APS-2	
Specifications	Measurements
Height	45”-76” (965mm – 1650mm)
Angle	Adjustable Tilt
Base Dimensions [L x W x H]	14.71” x 13.189” x 1.87” 360mm x 335mm x 47.5mm
Weight	30.5lbs (13.835kg)
VESA Mount	75mm x 75mm 100mm x 100mm
Package Contents	Monitor Column, Column Base, Auxilary Screws
Options	APS-2-CS Locking Caster Wheel Kit

- **DTM-3**
  The DTM-3 is an adjustable desktop mount for the TAVIS Thermal AudioVisual Integrated Solution Series. It can tilt up or down, making alignment with a person easy. The DTM-3 is suggested as the desk mount for the TAV-10. (The TAV-15 will also fit, if you need the lowest profile mount.)

DTM-3	
Specifications	Measurements
Base Dimensions [L x W x H]	8” x 8.5” x 9” 20.32cm x 21.59cm x 22.86cm
Weight	2.806lbs (1.273kg)
VESA Mount	75mm x 75mm 100mm x 100mm
Package Contents	DTM-3 Desktop Mount

- **DTM-4-B (Black) & DTM-4-W (White)**
  The DTM-4 is an adjustable desktop mount for the TAVIS Thermal AudioVisual Integrated Solution Series. It can tilt up or down, making alignment with a person easy. The DTM-4 is suggested as the desk mount for the TAV-10.

DTM-4	
Specifications	Measurements
Base Dimensions [L x W x H]	9.45” x 8.27” x 7.01” 24cm x 21cm x 17.8cm
Weight	4.094lbs (1.86kg)
VESA Mount	75mm x 75mm 100mm x 100mm
Package Contents	DTM-4 Desktop Mount

- **WMT-1**
  The WMT-1 is a wall mount for the TAVIS Thermal AudioVisual Integrated Solution Series. It can tilt up or down.

WMT-1	
Specifications	Measurements
Angle]	Adjustable Tilt
Base Dimensions [L x W x H]	5” x 4.5” x 1.45” 12.7cm x 11.43cm x 3.68cm
Weight	0.907lbs (411.4g)
VESA Mount	75mm x 75mm 100mm x 100mm
Package Contents	WMT-1 Wall Mount

RECOMMENDED CONTROL PORT EXPANSION

LXC-1

LXC-1 is a IP port expansion that will add RS-232, Relays, IO, and IR to the TAVIS unit.

For all of our latest options, please visit https://auroramultimedia.com/product-categories/control-systems/ .

INTRODUCTION

About

The TAVIS (Thermal AudioVisual Integrated Solution)Tablet Series is an all-in-one infrared temperature sensing tablet comprised of three sizes (10.1”, 15.6”, & 21.5”). To ensure that people entering a location are not presenting a high temperature, the TAVIS tablets will provide alerts when a person is running a high temperature within 1 second from up to5 feet (1.5 meters) away. The system uses advanced algorithm for detecting and calculating heat signatures even the tear ducts (Canthus) at close distances, achieving more accurate readings with IR technology. The highly accurate 80x64 sensor measures with a tolerance of+/- 0.5 degreeFahrenheit(+/- 0.3 degree Celsius).

Mask detection has become an important part of screening. TAVIS uses advanced AI algorithms to quickly identify if a person is wearing masking.

TAVIS + ReAX™ offers state-of-the-art digital signage capabilities, security features and control systems integration. Beyond the thermal detection features, TAVIS + ReAX™ can be used in conjunction with QR codes to check in employees, confirm identification with gestures, connect to a secure database, provide on-screen instructions and much more. With ReAX™, you can import your own HTML, CSS, or JavaScript code to design TAVIS’s interface. Even with no coding experience, ReAX Core Studio™ allows the average user to create his or her desired interface using the studio’s intuitive tools.

To compliment the TAVIS hardware, Aurora has developed a Server software TAVIS Central which allows full monitoring of all TAVIS units at a facility. Reporting, alerts, statistics, firmware updating, remote monitoring, and even recording capabilities are available.

Documentation

Aurora provides many documents to support the TAVIS Thermal AudioVisual Integrated SolutionSeries and accessories. Below is a list of the available documents that can be found on the download tab of the TAVIS Thermal AudioVisual Integrated Solutionproducts or the customer portal.

- TAVIS TAV Series Info Sheet
- TAV-10 Dimensions, TAV-15 Dimensions &TAV-21 Dimensions
- TAVIS Quick Reference Guide
- TAVIS Firmware Update Guide

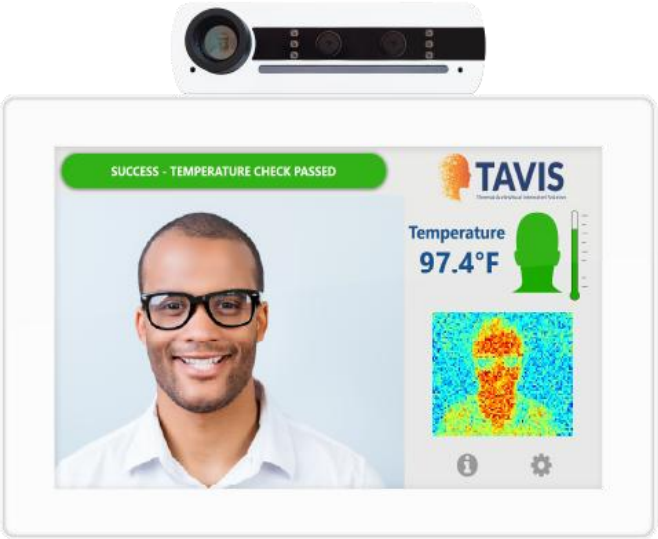
Features

TAVIS – A Generation Ahead

- 10.1”, 15.6”, 21.5”, & Box version (TAV-10, TAV-15, TAV-21)
- Scan Distance: Up to 5’ (1.5m)
- 2 Person Forehead Scanning
- Scan speed: Less than 1 Second
- Canthus (Tear Duct) Eye Detection (Highest Possible Accuracy from 12”away)
- Mask Detection
- Eye Wear Detection
- Anti-Spoofing (Prevents Objects Being Utilized to Simulate Pass or Fail)
- Future Firmware Upgrades &Options
- Facial Recognition (Localized or Centralized)
- 4K Digital Signage Capabilities
- Age, Gender, & Ethnicity Prediction
- QR Code Detection
- Gesture Responses
- Streaming Video for Security
- Email Alerts
- RGB Color Indicator Bar
- Portrait or Landscape Mounting
- Available in Black or White
- Made in the USA
- Embedded ReAX Control for Automation & Integration with Third-Party Devices and Access Systems
- Customizable Web Pages (Mobile too)

Patent Pending

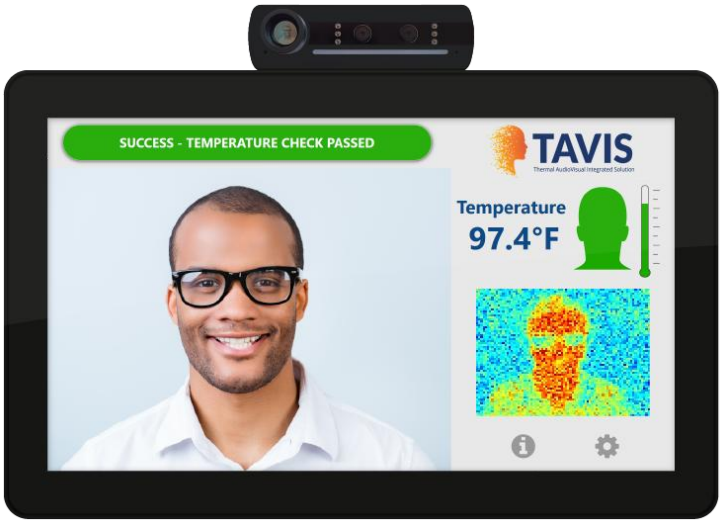
TAV-10-B



TAV-10-W

Technical Specifications

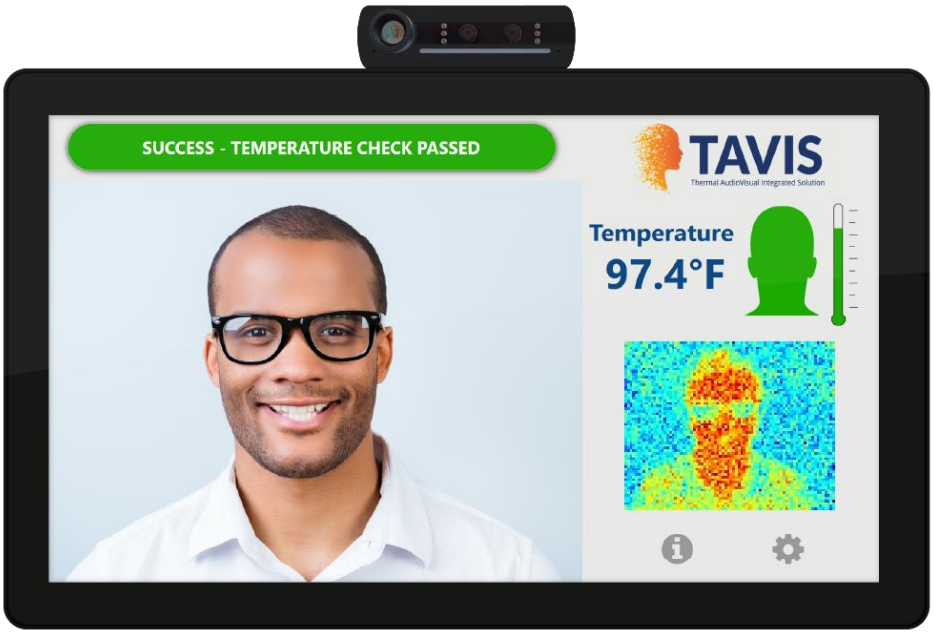
- Scan Distance: (.3m to 1.5m) 1’ to 5’
- Accuracy: +/- 0.5°F (+/- 0.3°C)
- 80x64 Resolution (5x More than 32x32)
- Android 9 and Linux (Q1)
- 6 Core Processor, 4GB RAM, 32GB Flash
- HDMI Output for Remote Viewing
- Stereo Mics with Audio Processing
- WiFi and 1G Ethernet
- PoE, PoE+, PoE++ (10.1”, 15.6”, 21.5”)
- VESA Mounting



TAV-15-B

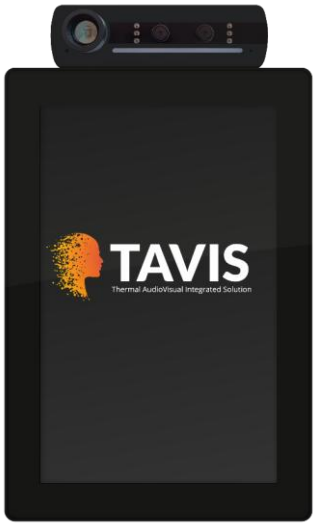
Advanced Optional Features

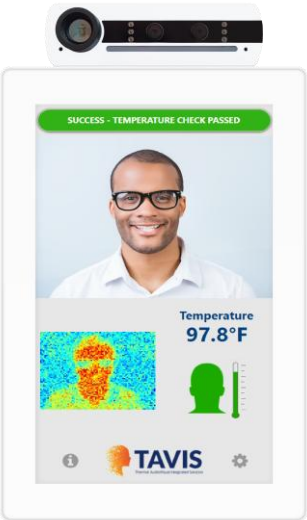
- Criminal Database Crosschecking
- Centralized Server Software
- Centralized Facial Recognition
- Two Way Audio Video Support Desk (Q1)
- Voice Recognition (Q1)
- 4G Data Connection



TAV-21-B

TAVIS Front





Front Display Monitor

- 10.1” 1280 x 800 Resolution (TAV-10)
- 15.6” 1920 x 1080 Resolution (TAV-15)
- 21.5” 1920 x 1080 Resolution (TAV-21)

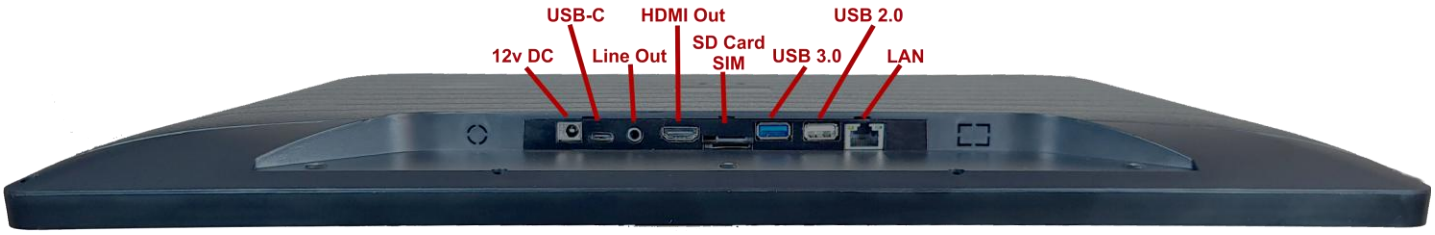
For black add -B to part number

For white add -W to part number (Note: TAV-15 & TAV-21 have 100pc minimum and lead-time for white)

Thermal Sensor Camera Module (TAV-A80)

- 80 x 64 Heiman Sensor IR Longwave +/- 0.5°F (+/- 0.3°C) Accuracy
- 2 MP Binocular Camera (RGB & IR)
- Night Vision with IR Camera and IR LEDs
- Stereo Audio Microphone
- Audio Digital Signal Processing IC for Noise Cancelation, Echo Cancelation, Feedback Suppression, & Automatic Gain Control.
- Programable Light Bar (Red, Green, Blue, Brightness)

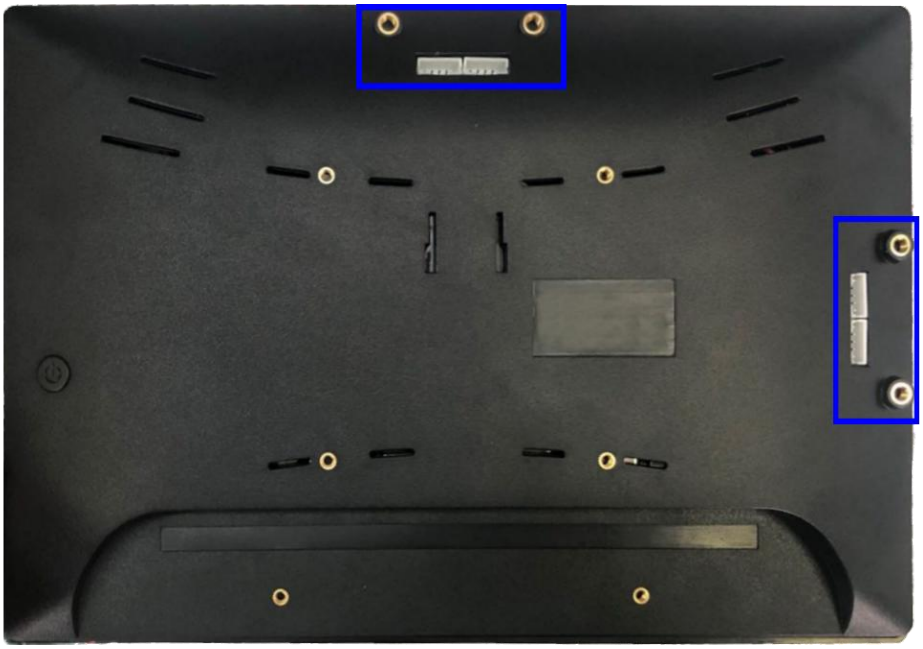
TAVIS Bottom Ports



Inputs / Outputs

- 12v DC Input
- USB Type C
- 3.5mm Audio Line L/R Out
- HDMI 2.0 Output
- SD Card Slot
- SIM Card Slot (4G Option)
- USB 3.0
- USB 2.0
- 1G LAN PoE

TAVIS Rear



Thermal Sensor Module Mounting

The TAVIS devices are very flexible allowing use in portrait or landscape depending on the application. There are 2 mounting locations, one at the top and one on the side. When TAVIS is shipped it is mounted on the top for Landscape viewing. To move there are 2 screws and 2 cables that must be removed and moved to the other location.

Bottom Port Cover

The TAVIS has a cover for the bottom ports which is held on with 2 screws. This allows protection from tampering and makes the unit have a cleaner look and feel.

VESA Mounting

TAV-10: 75mm x 75mm

TAV-15 & TAV-21: 100mm x 100mm

Button

TAV-10has a rear standby button.

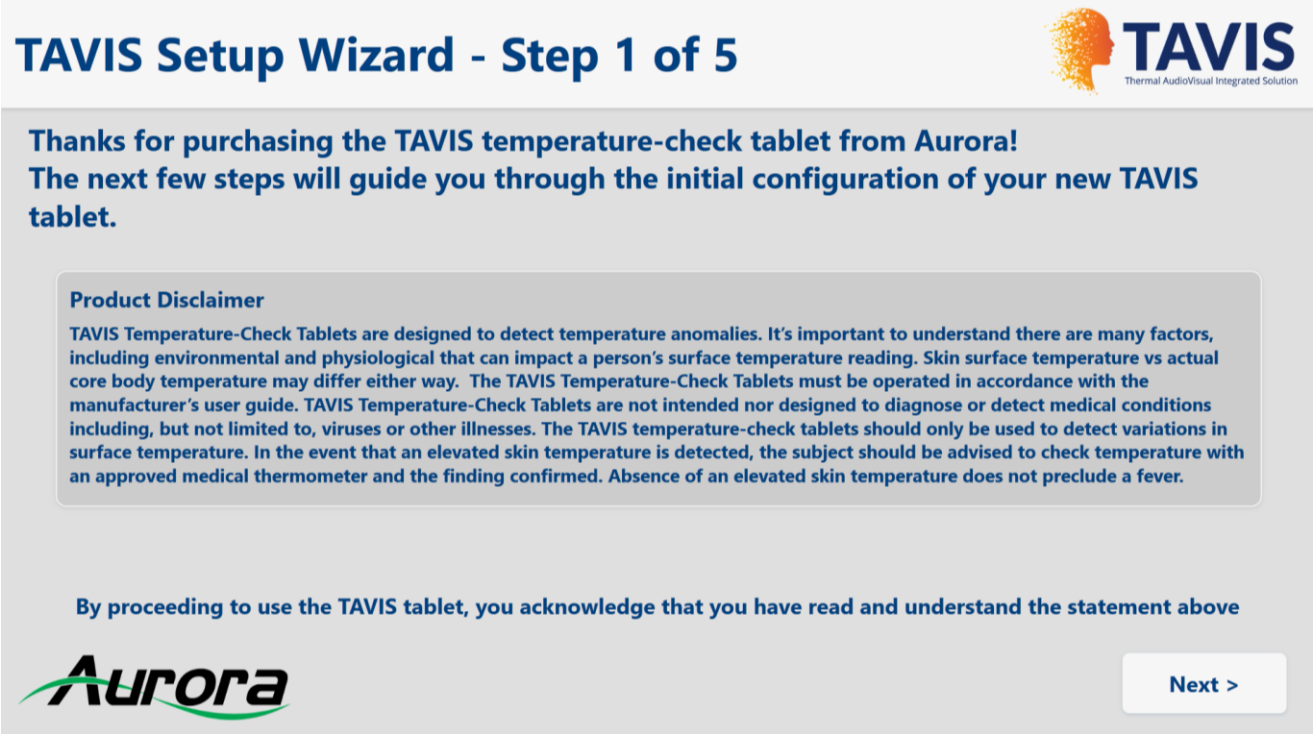
UNDERSTANDING THE BASICS

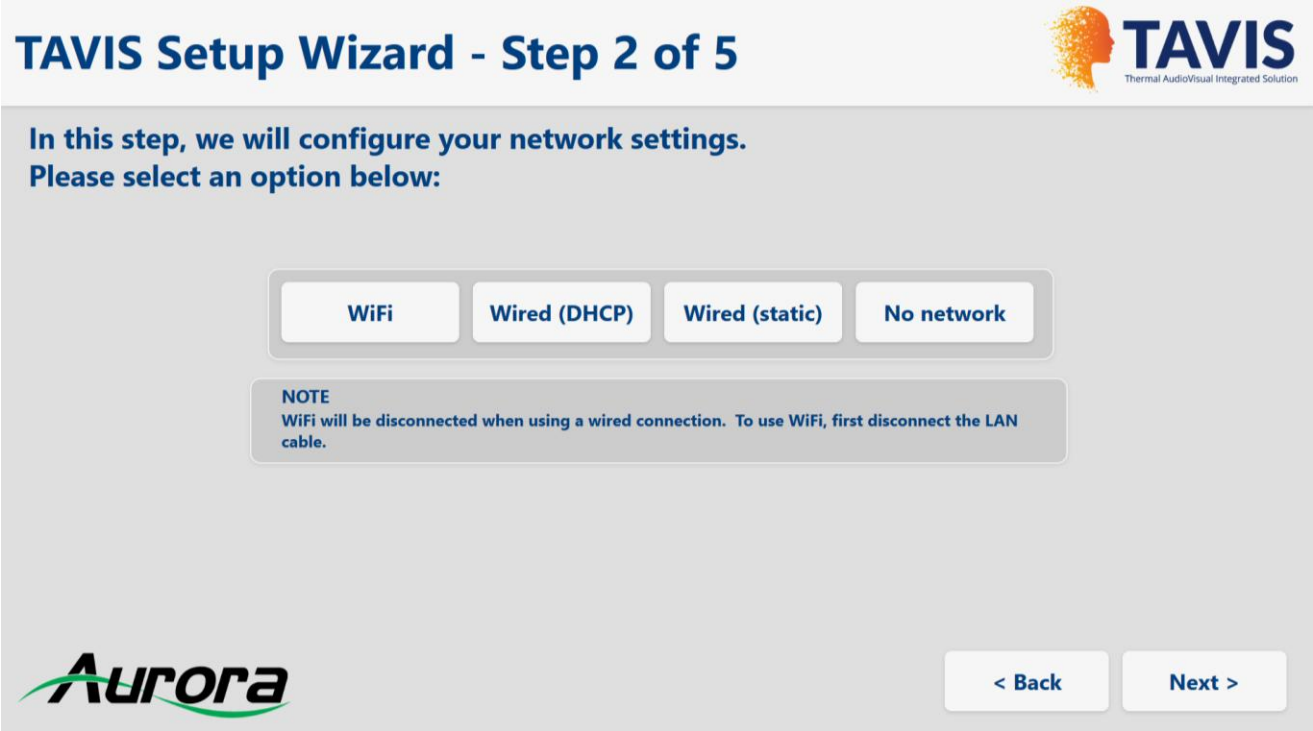
Powering on the Device

TAVIS will begin operating once it is connected to a power source. Please allow up to fifteen minutes warmup prior to use for the most accurate results.If it is your first-time powering on the device, please follow the setup wizard on screen to configure your settings and calibrate your device.

First time setupup wizard

The first time you run the TAVIS panel a setup wizard will appear upon boot to make setting up the unit easier.




TAVIS Setup Wizard - Step 2 of 5
TAVIS
Thermal AudioVisual Integrated Solution
In this step, we will configure your network settings.
Please select an option below:
WiFi
Wired (DHCP)
Wired (static)
No network
NOTE
WiFi will be disconnected when using a wired connection. To use WiFi, first disconnect the LAN cable.
Aurora
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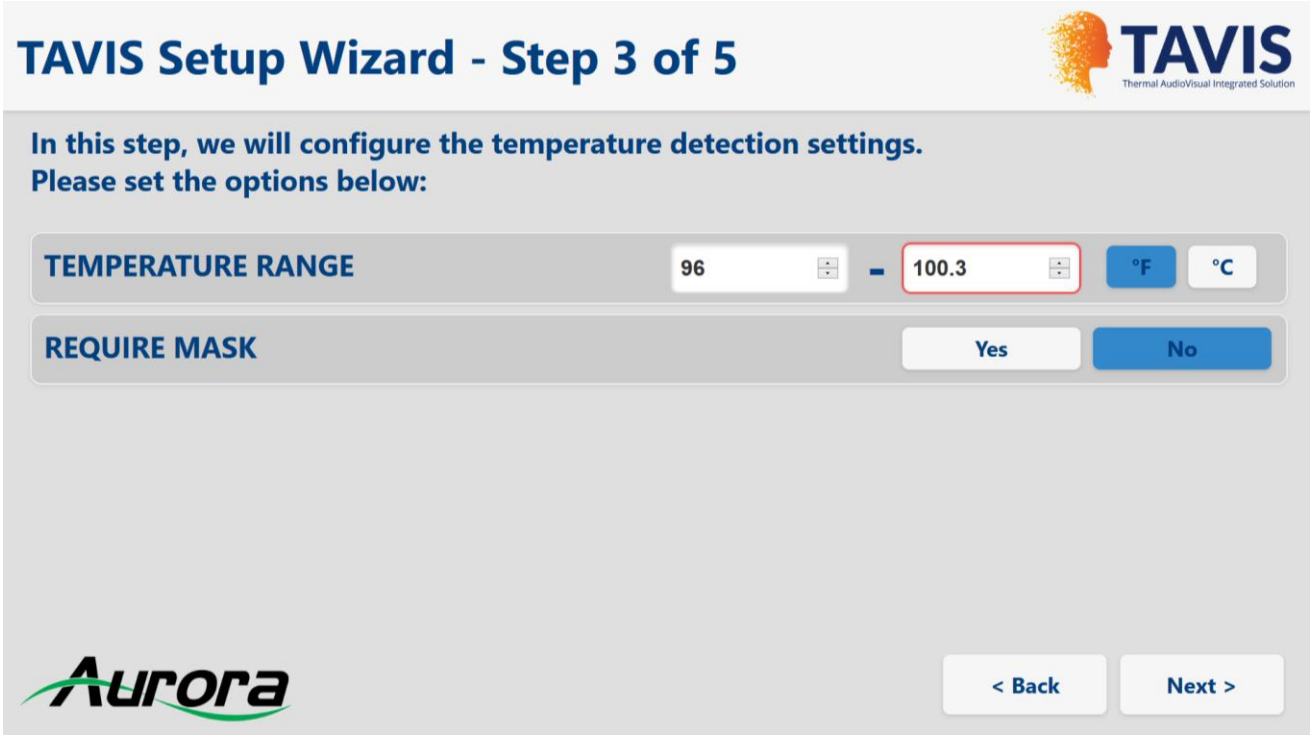
Next >


TAVIS Setup Wizard - Step 3 of 5
TAVIS
Thermal AudioVisual Integrated Solution
In this step, we will configure the temperature detection settings.
Please set the options below:
TEMPERATURE RANGE
96
100.3
°F
°C
REQUIRE MASK
Yes
No
Aurora
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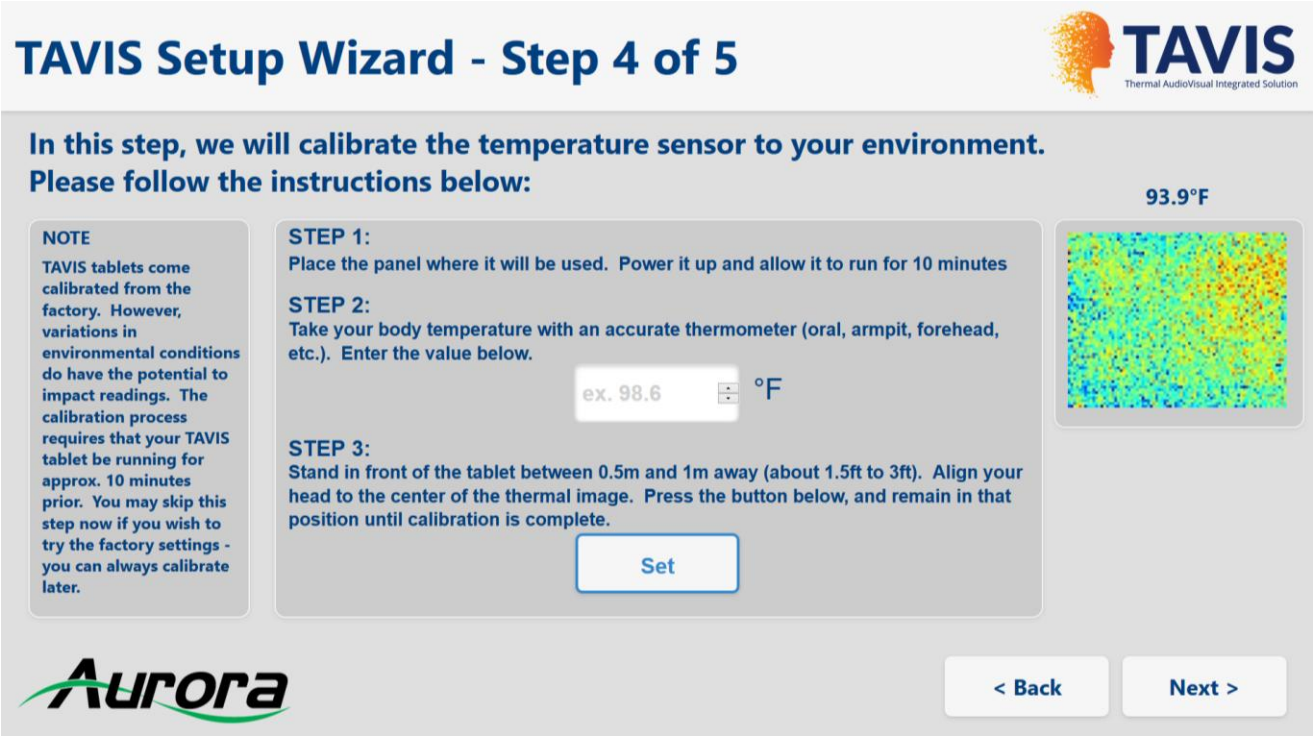
TAVIS Setup Wizard - Step 4 of 5
TAVIS
Thermal AudioVisual Integrated Solution
In this step, we will calibrate the temperature sensor to your environment.
Please follow the instructions below:
93.9°F
NOTE
TAVIS tablets come calibrated from the factory. However, variations in environmental conditions do have the potential to impact readings. The calibration process requires that your TAVIS tablet be running for approx. 10 minutes prior. You may skip this step now if you wish to try the factory settings - you can always calibrate later.
STEP 1:
Place the panel where it will be used. Power it up and allow it to run for 10 minutes
STEP 2:
Take your body temperature with an accurate thermometer (oral, armpit, forehead, etc.). Enter the value below.
ex. 98.6
°F
STEP 3:
Stand in front of the tablet between 0.5m and 1m away (about 1.5ft to 3ft). Align your head to the center of the thermal image. Press the button below, and remain in that position until calibration is complete.
Set
Aurora
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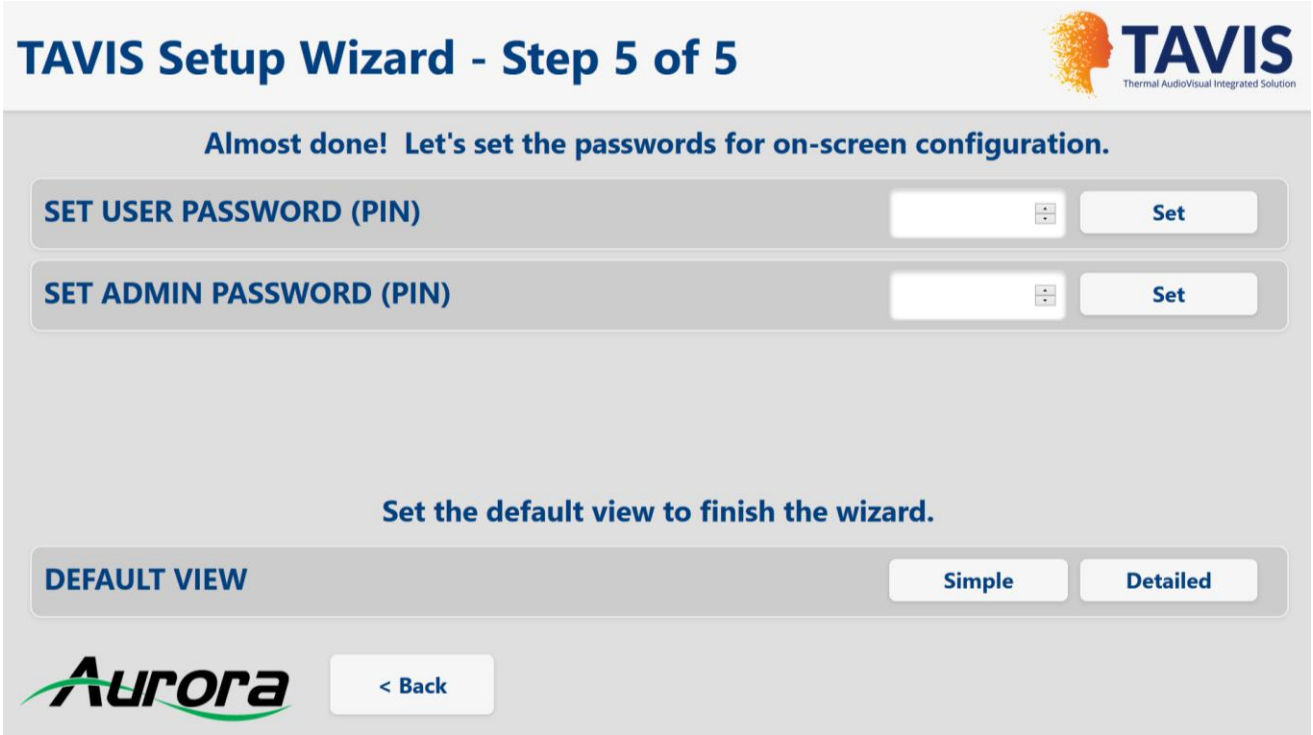
TAVIS Setup Wizard - Step 5 of 5
TAVIS
Thermal AudioVisual Integrated Solution
Almost done! Let's set the passwords for on-screen configuration.
SET USER PASSWORD (PIN)
Set
SET ADMIN PASSWORD (PIN)
Set
Set the default view to finish the wizard.
DEFAULT VIEW
Simple
Detailed
Aurora
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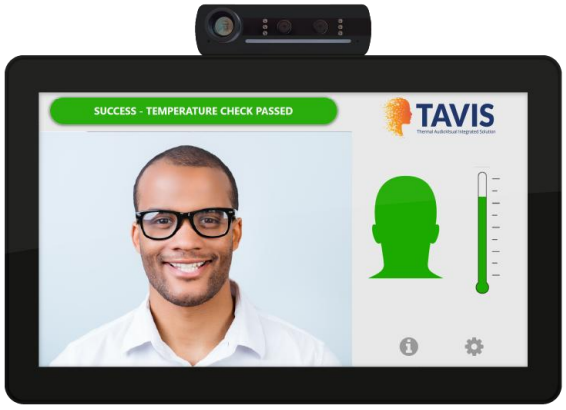
Understanding the Display

TAVIS has two primary interfaces: *simple* and detailed. By default, the user will see scanning instructions, the camera's video on screen, and a notification to whether or not they have passed or failed their temperature reading.The settings and additional information may be accessed by clicking the "gear" or "i" icon in the bottom right corner. The detailed view includes everything from the simple view, as well as an active thermal image, the user's temperature, and whether or not their face and their face mask are detected. For more details, please see the "default interface" section of this manual.

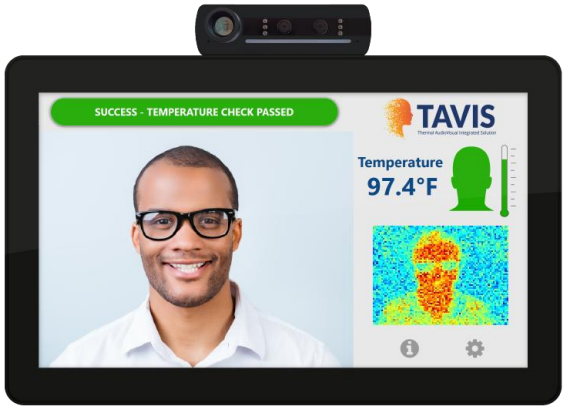
Accessing the Settings

After you have followed the setup wizard, the settings will be available by clicking the "gear" icon in the lower right-hand corner on either the simple interface or the detailed interface. You will be prompted to enter a password, which by default is "12345".

SIMPLE INTERFACE



DETAILEDINTERFACE



HARDWARE INSTALLATION

Device Placement

There are several factors to consider when deciding the proper placement for TAVIS Thermal AudioVisual Integrated Solution. These factors include the environment, optimal scan range, and persons being scanned.

Considering the Environment

TAVIS's scanning functionality operates best when placed in a temperature-controlled environment, such as OSHA's standard 68 – 78 degrees Fahrenheit indoor office recommendation. The air temperature may affect two things:

1) The default reading
2) The skin temperature of the individual

The default reading can set off false alarms if the air temperature is within 0.5 degrees Fahrenheit of TAVIS's target temperature threshold. By default, this would mean the air temperature must not exceed 100 degrees Fahrenheit.

In the case that the individual is waiting in the room for extended periods of time prior to being scanned, his or her skin temperature may rise or fall, depending on the severity of the temperature. Extremely cold environments may cause the skin temperature to drop to as low as 92 degrees Fahrenheit. For the most accurate reading, find the location where the environment maintains a consistent and comfortable air temperature.

In addition to the air temperature, please be cautious of reflective surfaces and physical obstacles between TAVIS and the target scan area. If an object is placed between the thermal camera and the person being scanned, the object will obscure the person from view. There must be an uninterrupted line of vision between the camera and the person being scanned. Even transparent objects, such as glass and plexiglass, will skew the reading, since the thermal camera will read the heat being emitted from that object. If possible, position the camera so that the optical field does not include any windows; by doing so, TAVIS will not pick up the outside temperature or be at risk from the glare of the windows' reflective surfaces.

TAVIS must be placed within range of a power outlet in order to power the device or use battery pack or PoE LAN. If you are using an external monitor to view TAVIS's active display, please ensure that TAVIS has a secure HDMI connection to the secondary monitor. In the case that you are using ReAX™ to interact with multiple devices, please ensure that all relevant connections have a secure pathway. For Over the Air Updates, place TAVIS within range of a wireless router with internet access.

Obtaining Optimal Scan Range

TAVIS Thermal AudioVisual Integrated Solution can be affixed to a number of mounts, including desktop mounts, wall mounts and pole stand mounts. A mount is highly recommended, as it encourages hands-free access and allows you to set up TAVIS to a desired height and angle. Any size TAVIS may be affixed to Aurora Multimedia's recommended pole mounts or wall mounts.

The type of mount you choose should be considered with the height of the people who will most often use TAVIS in mind. For example, a desktop mount is best suited for an environment where a counter is present near the operator. For elementary school, where the target height of individuals would be much shorter than the height of your average adult an adjustable pole stand can be more useful. In a wide-open area, such as a shopping mall, a pole mount may be best, as the wall may be too far from the door and there may be no desk for the tablet to rest on. The wall mount would be best suited for areas like waiting rooms, where the placement would not be obtrusive, but also facilitate use while an individual is being checked in or waiting to enter the next room.

Placing the Pole Mount

The APS-1 or APS-2 pole mount by Aurora Multimedia allows TAVIS to be set in place nearly anywhere. By default, we recommend that you place TAVIS within the 60" to 65" range. Depending on your placement within that range, TAVIS will be capable of scanning people who are 4.5 feet (54") to 6.5 feet (78") tall. This gives TAVIS a consistent vertical optical range of 26" when within the recommended 0.5m (1.6 ft) to 1.5m (5 ft) distance from the base of the pole stand. This allows for an 18" range of coverage when comfortably allowing room for an entire person's head. By using the lever to adjust the angle of TAVIS, the pole stand is able to increase the vertical optical range. The further distance allows for 2 people scanning while a closer range of about 12" to 18" allows for single person canthus (tear duct) sensing.

Any wires connecting to TAVIS should run through the inside of the pole stand and out under the pole stand's base. Please ensure that the pole stand is not situated where it may be an obstacle for people passing by. The pole stand should rest on a flat surface, with its wires secured.

Placing the Desktop Mount

Desktop mounts have the added benefit of being able to adjust the angle of TAVIS. By adjusting the angle, the vertical optical range increases from 26" to over 32", allowing for a larger range of heights to interact with TAVIS without further adjustment. The additional optical range, combined with the lower base height of the unit (desktop level), allows the desktop mount to accommodate people of all heights.

In the case that TAVIS is mounted on a desktop 41” from the ground at a 30-degree tilt, the vertical optical range will be 46” to over 72”. Depending on the placement of the tablet, altering the tilt may be able to accommodate those who fall short of the 46” mark.

Depending on the model of the desktop mount, you may be able to affix the mount onto the tabletop with metal screws. This will provide a sturdier alternative to having a freestanding desktop mount.

Placing the Wall Mount

The WMT-1 wall mount is able to tilt up or down from its neutral position, allowing the end user to accommodate people of many different statures. The wall mount is capable of being placed low and tilted up, perpendicular to the ground at a medium height position, or tilted down at a higher angle. Each of those three default positions offers its own advantages or disadvantages. If the wall mount is lower, it ensures that people of all heights will be able to take advantage of TAVIS’s touch screen capabilities. If the mount is higher, the downward tilt will be able to scan people of all heights, but the touch screen may be out of reach for some people.

For most purposes, we recommend mounting the WMT-1 at approximately 60” - 65” from the ground, with a slight tilt downwards as a default. This will comfortably accommodate individuals from 3 feet tall to over 6 feet tall. Please use your own discretion when placing the device in order to best accommodate your users.

Software Setup

1. The setup wizard will run when you first power on the device. Please read the disclaimer and click “Next” to continue.
2. Configure your network settings, if any.
3. Choose between Fahrenheit and Celsius. Then enter the maximum allowed temperature and whether or not to require a face mask.
4. Calibrate your device by following the instructions on screen.
5. Set your 5-digit pin to access the security settings again in the future.

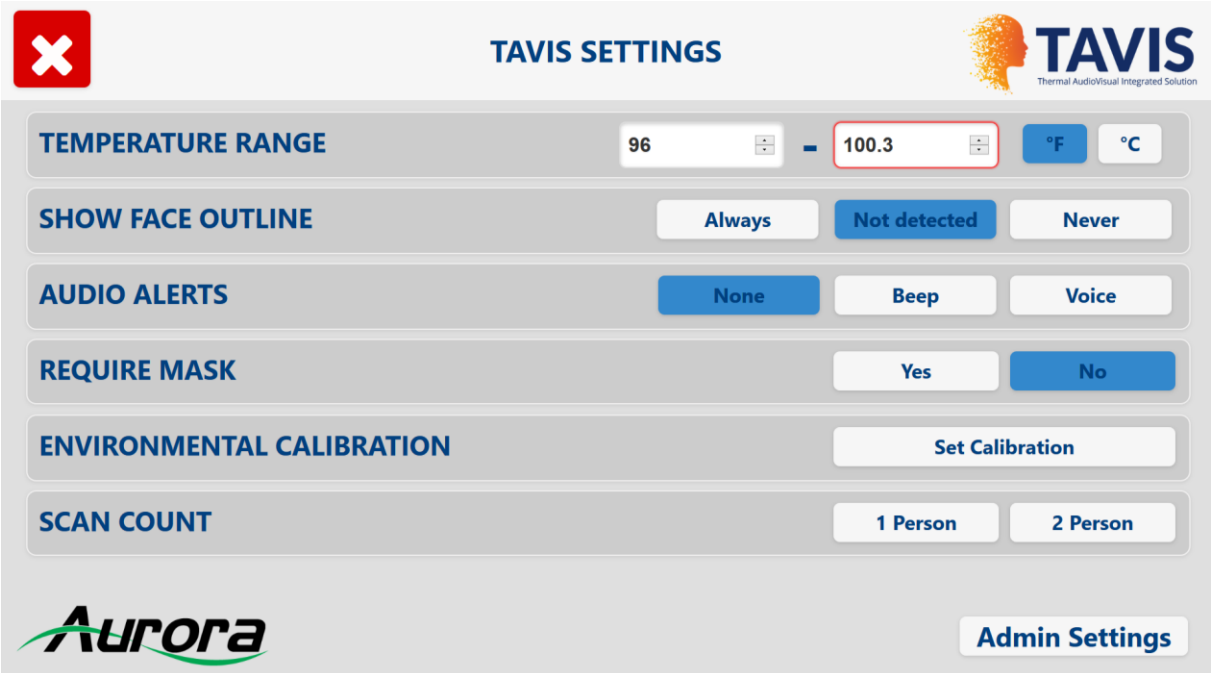
To access your settings again, click the “⚙” in the bottom right corner and enter your pin. If you have not entered your own pin, you can access the menu by entering the default value of “12345”.

Important

- Make certain all units are using the latest firmware by signing onto the customer portal at www.auroramm.com
- Do not use VESA mounting screws longer then 5mm or damage may occur to unit. Do not use power tool to affix the screen. Handheld screwdriver is best as to not over torque.

SOFTWARE SETTINGS

TAVIS Settings



TEMPERATURE RANGE:This setting will determine the minimum and maximum temperature allowed before raising a flag that the person being scanned has an elevated skin temperature. The audio alert will play through the tablet's speakers when the sensor records a temperature higher than the maximum temperature. You may display your temperature in Fahrenheit or Celsius by selecting °F or °C.

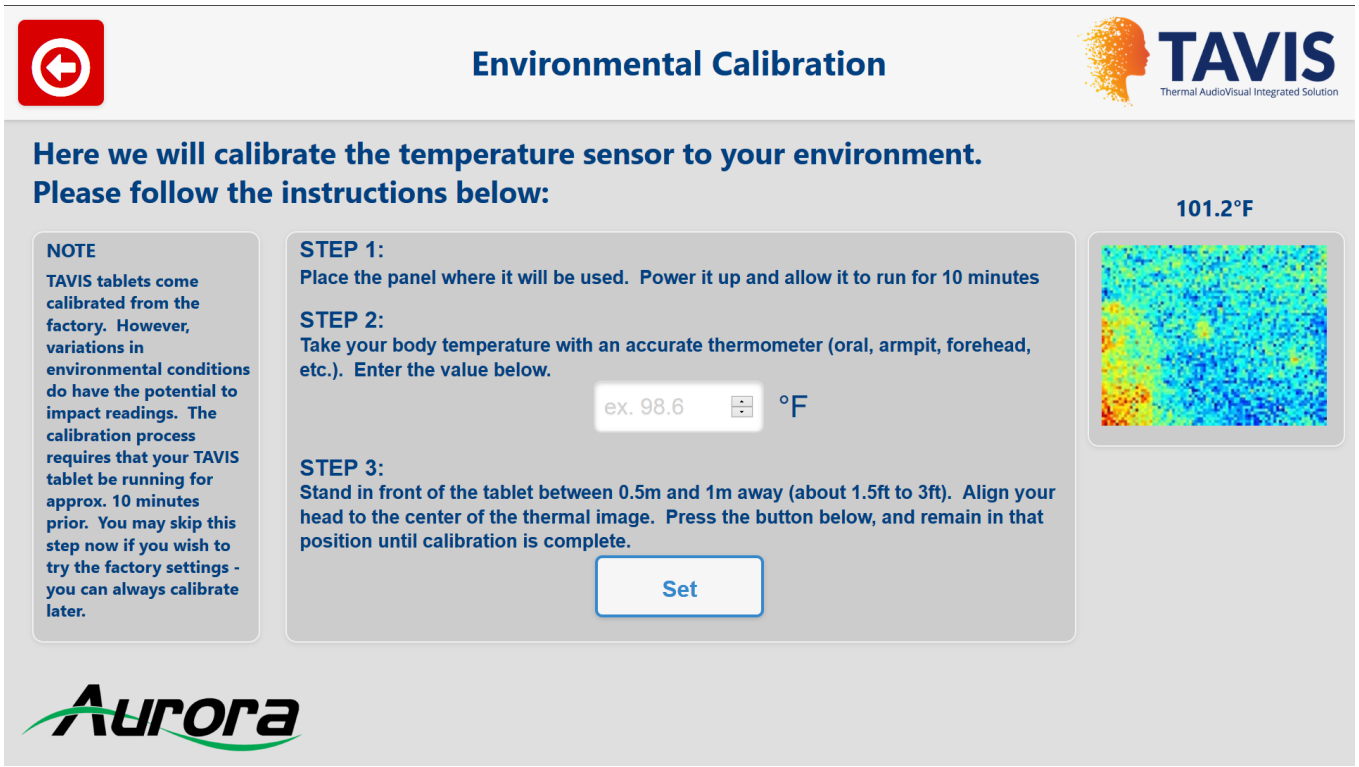
SHOW FACE OUTLINE:Facial outline will put a human head outline in the center of the screen. This can assist in the alignment for a person when approaching the tablet.

AUDIO ALERTS*:* Select between a beep indicator of exceeded range or a voice prompt playback.

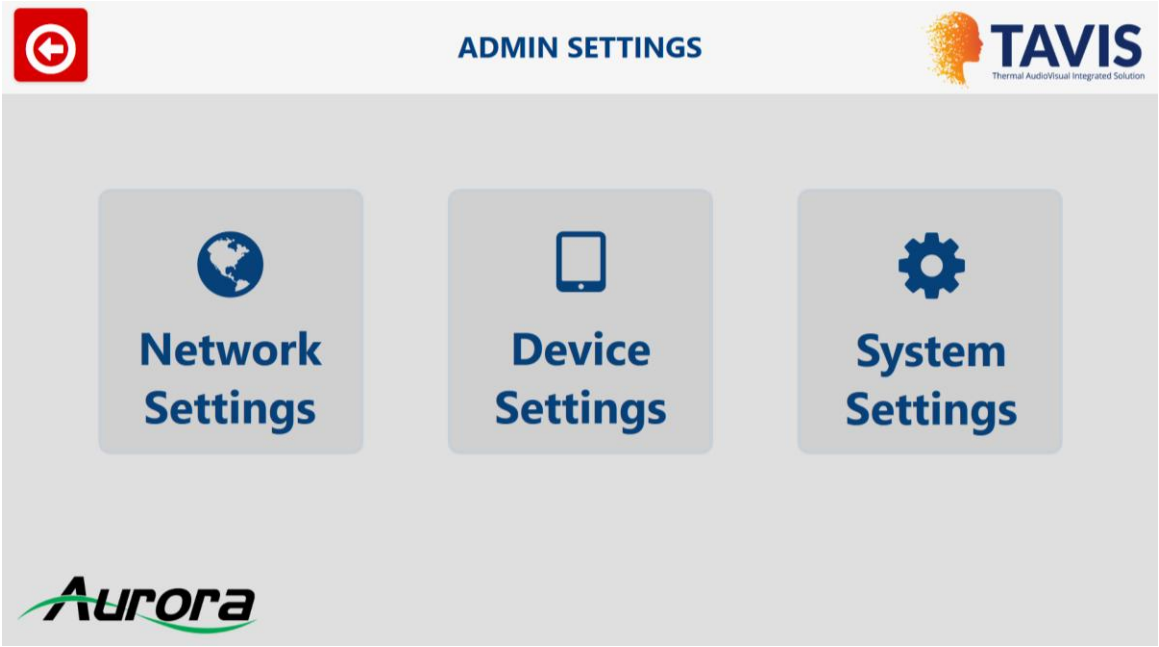
REQUIRE MASK: If selected to yes, the TAVIS will indicator a pass or fail if a person is wearing a mask on their face.

KIOSK CONTROLS*:*Selecting close will allow access into the Android level setups. Reload will start Kiosk back up.

ENVIRONMENTAL CALIBRATION*:* Will select setup page for a baseline calibration with the local calibration of where the unit is placed.

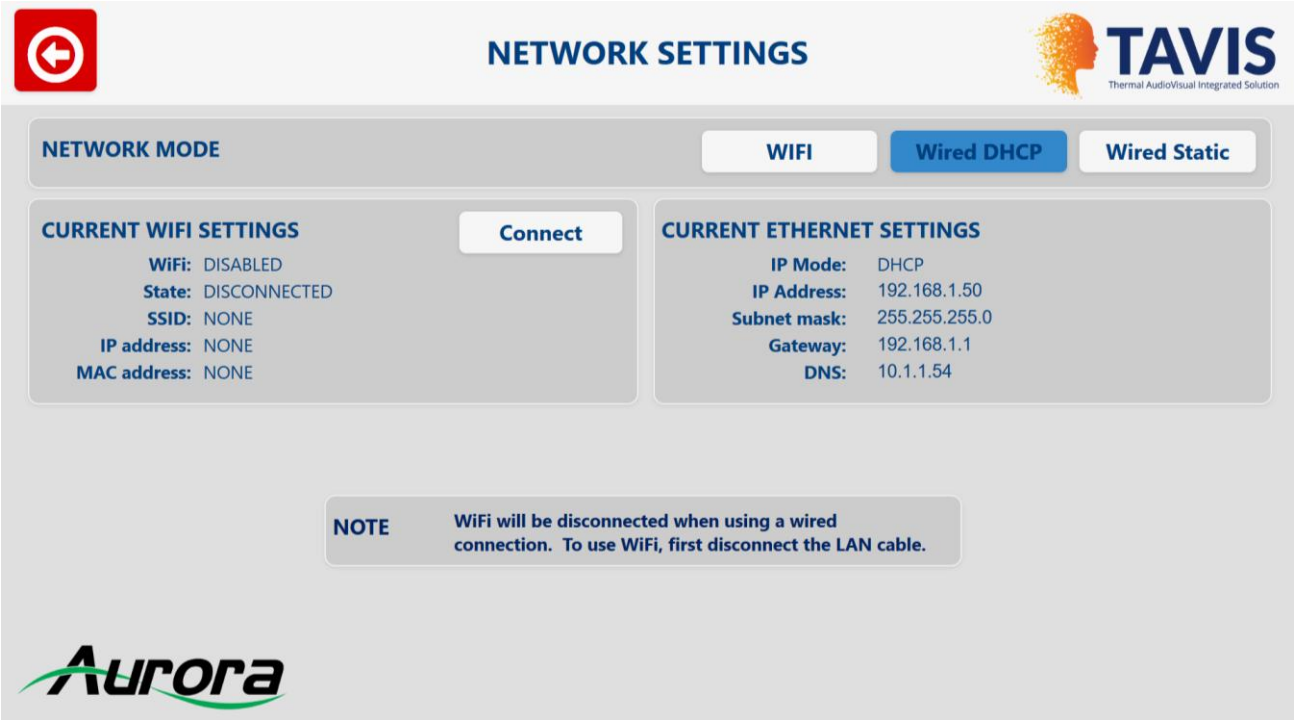


Admin Settings



The ADMIN SETTINGS menu allows access to the Network, Device and System Settings.

Network Settings

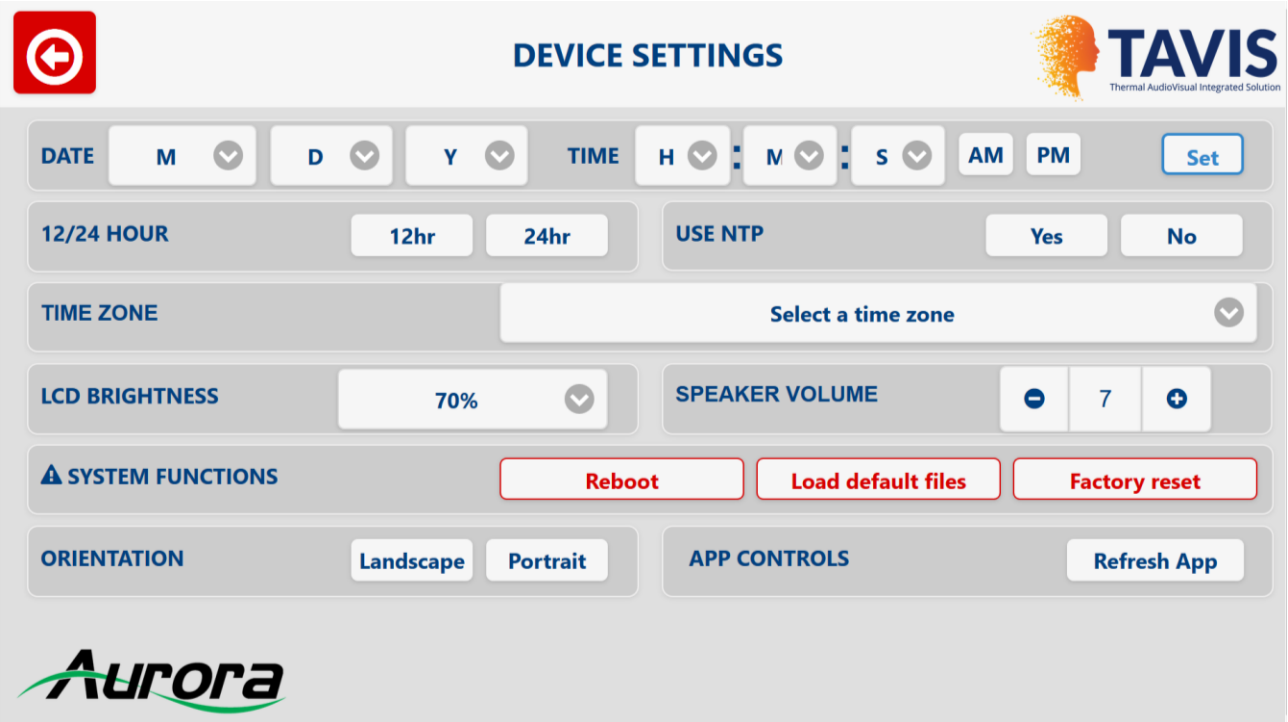


Under the ethernet tab, you can choose WIFI, Wired DHCP, Wired Static Mode. Your current wired ethernet settings are displayed, including:

- IP mode
- IP address
- Subnet mask
- Gateway
- DNS

For remote operation of TAVIS, you will use the IP address of your device as detailed on this screen.

Device Settings



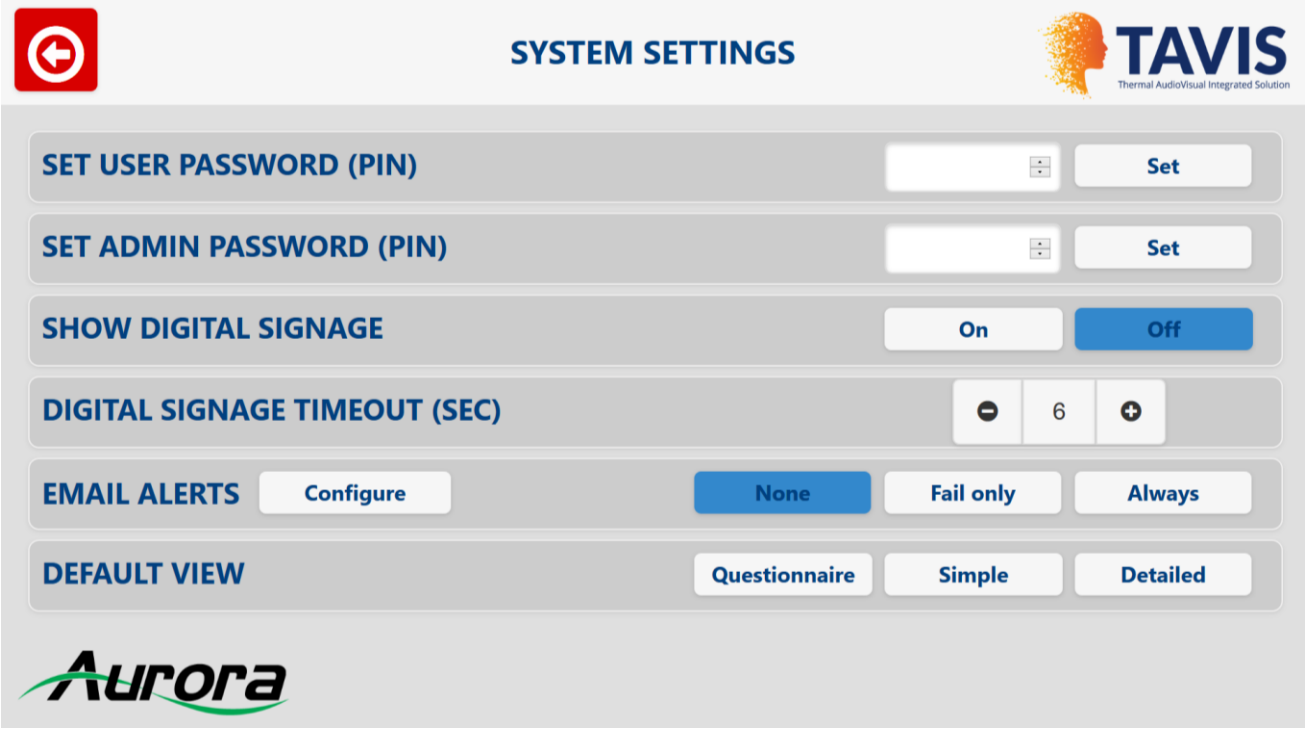
DATE/TIME: You are able to set the date and time and display the time in standard or military. NTP is available if the network you are on supports this function and time and date will be automatically adjusted. If you are not using NTP, it is advisable to select a time zone for daylight savings if applicable in your region.

LCD BRIGHTNESS: Adjust the level of the front LCD display. This can also help when using battery-based systems as the lower the brightness the longer the battery will last due to lower power consumption.

SPEAKER VOLUME: Adjust overall volume level which should be set based on the ambient noise of the environment.

SYSTEM FUNCTIONS: Allows you to soft reboot, load the default files or do a full factory reset.

System Settings

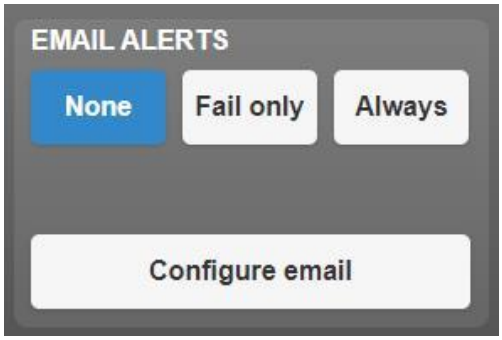


PASSWORDS: Allows the setting of a user and admin password independently for better security.

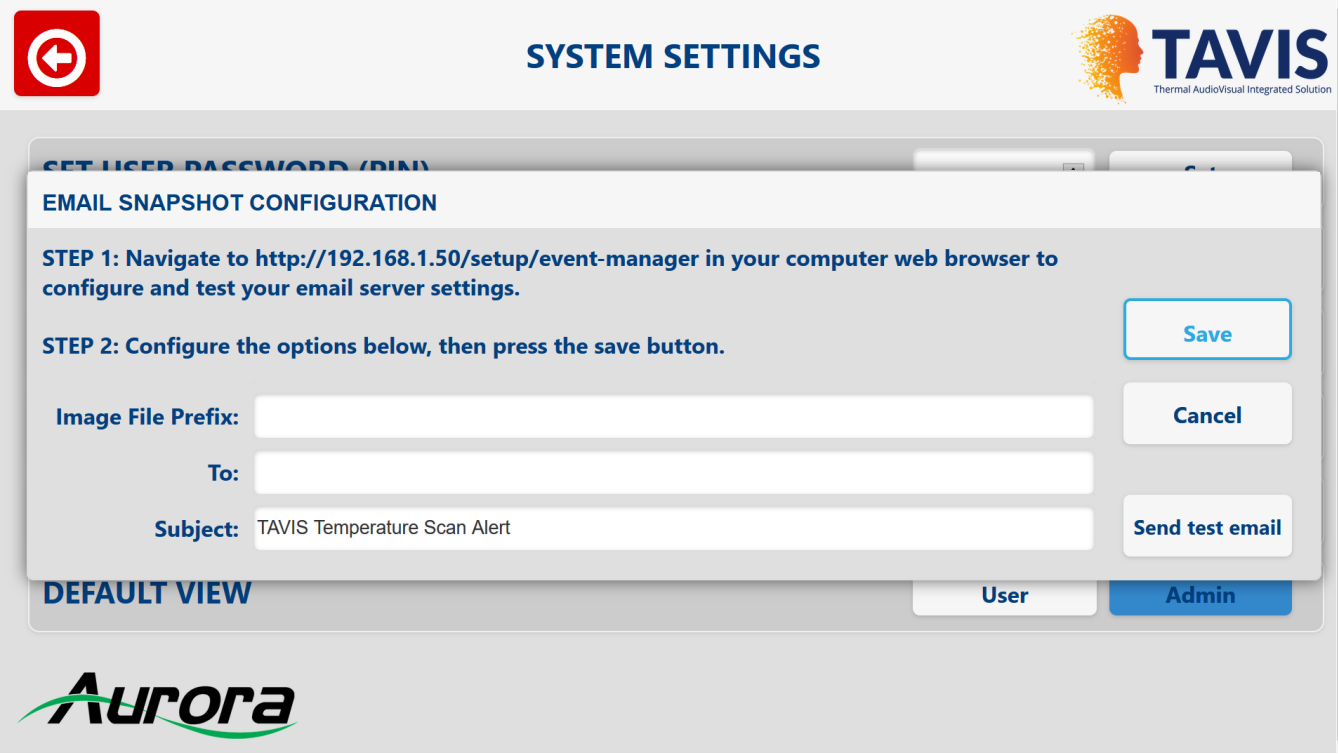
SHOW DIGITAL SIGNAGE: Allows for a graphic to be shown prior when no person is detected in field of view for thermal scan.

DIGITAL SIGNAGE TIMEOUT Thiswill alter the rate at which your digital signage is displayed (in seconds).

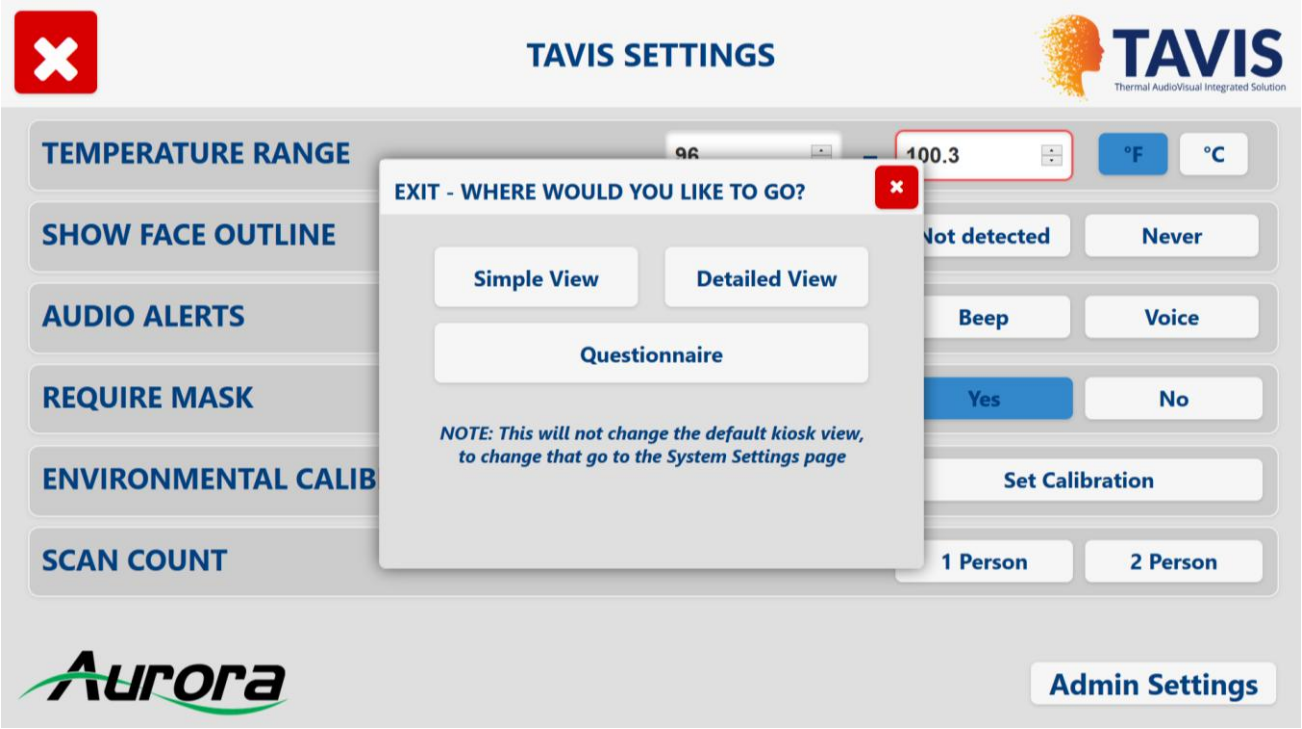
EMAIL ALERTS: Configure the settings of the email account to be used. You can also set it to when it sends the email if it is none, fail only, or always. The temperature along with the photo and thermal scan will be sent.



As shown in the snapshot below, you can set up your email notifications by accessing http://TAVIS-IP/setup/event-manager , where TAVIS-IP should be replaced with the IP address of your device, as detailed under the *Ethernet or WiFi* tabs in the settings. Here, you may choose the email address that will receive the information, as well as the subject of the email.



Exiting the Menu



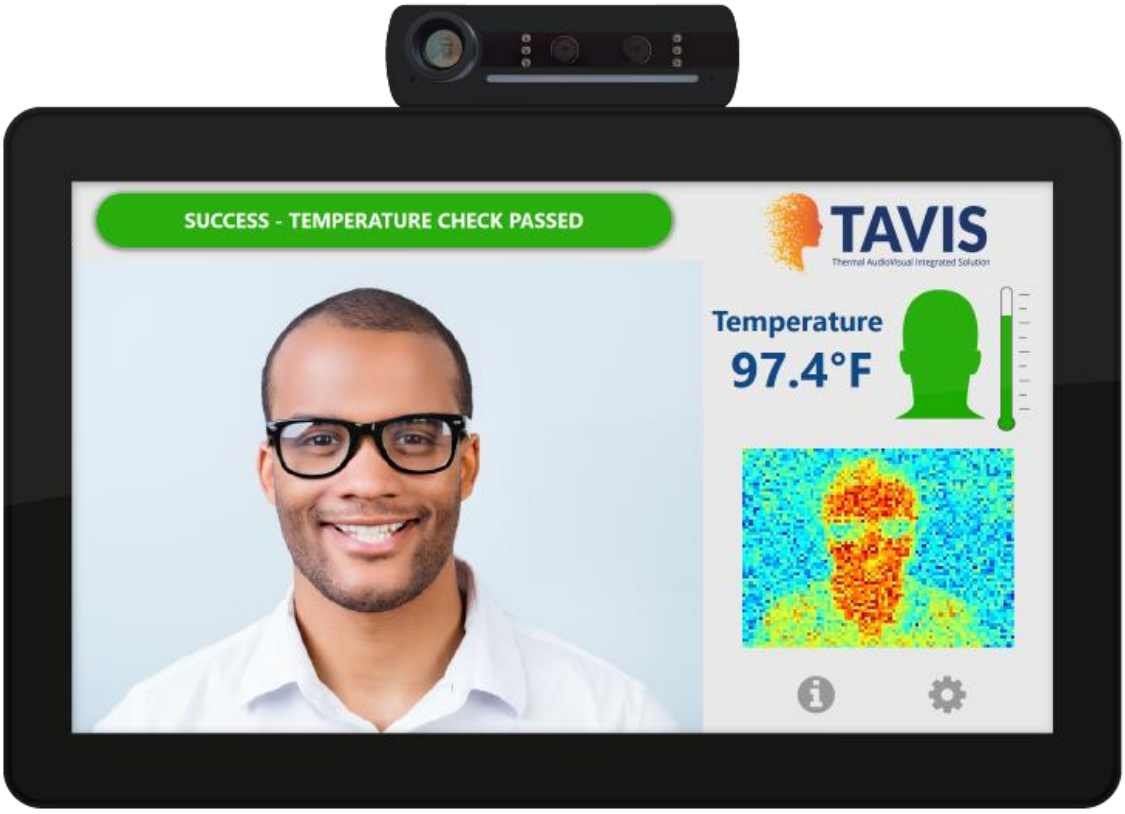
When you exit, please choose between the simple interface or the detailed interface:

The simple interface will show you what the user sees, but the detailed interface will show you what the administrator sees, including any additional options. For more information, please see the following sections of this manual.

In order to access the detailed interface, you will need to enter your password, which by default is “12345”.

Display Modes

Detailed Interface



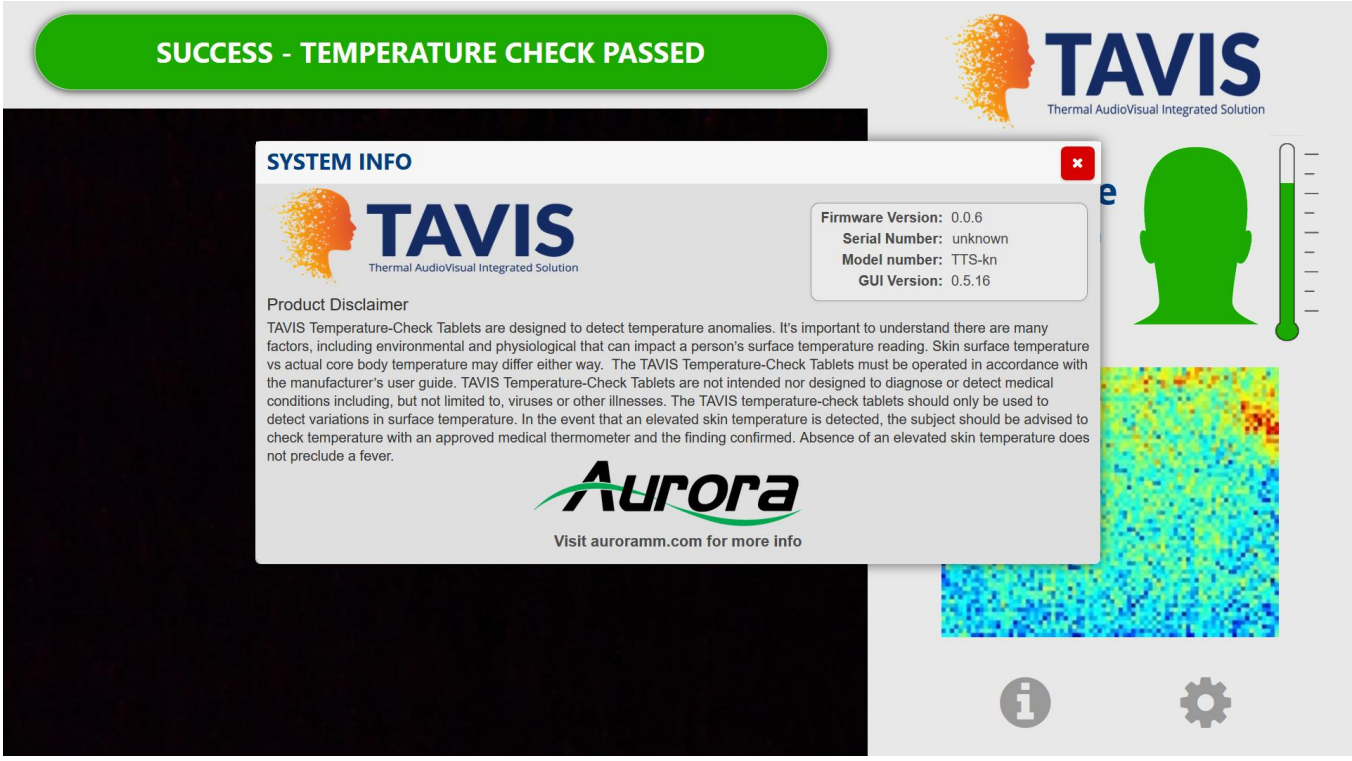
Status Bar:Provides a notification for the person being scanned. This will inform the individual is he or she has passed the requirements, failed or needs to follow additional instructions. The color is blue when it is scanning, green when a person has passed, yellow if the person must follow additional instructions (such as putting on a mask) and red if the person has an elevated skin temperature.

Live Video: This area shows the person(s) to be scanned. If outline is selected, there would be a human head outline in the center of the screen. The head outline will include a mask if a mask if it is a requirement.

Temperature Readout: This area shows the temperature and also a head and thermometer indicator. The indicators will change based on temperature and mask pass or fail.

Active Thermogram. The red area represents the hottest temperature.

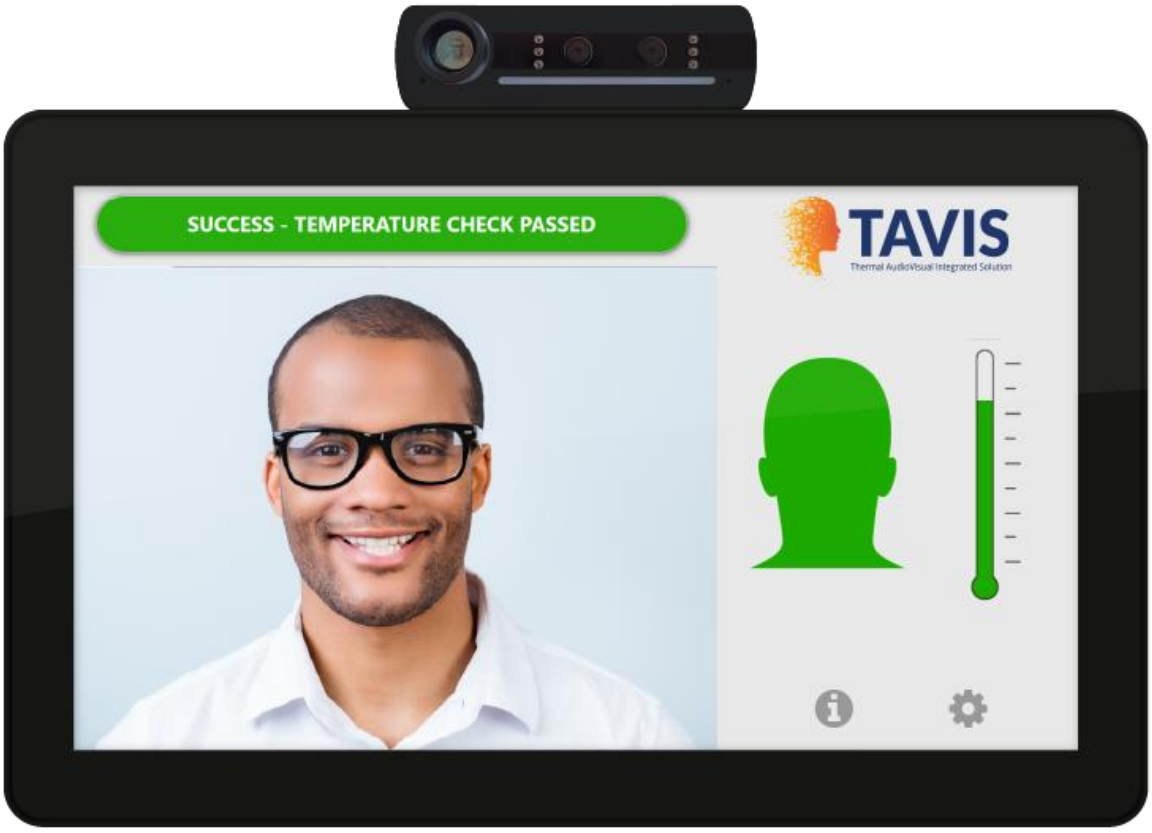
System Info Icon (i): This provides additional information.



By selecting the “i” icon, you will be brought to the system information screen. This screen is useful for checking the firmware version, serial number and app version. Additionally, the end user may learn more about the intended use of the product and Aurora Multimedia Corporation.

Setup (Gear Icon): Will request password to access the settings pages.

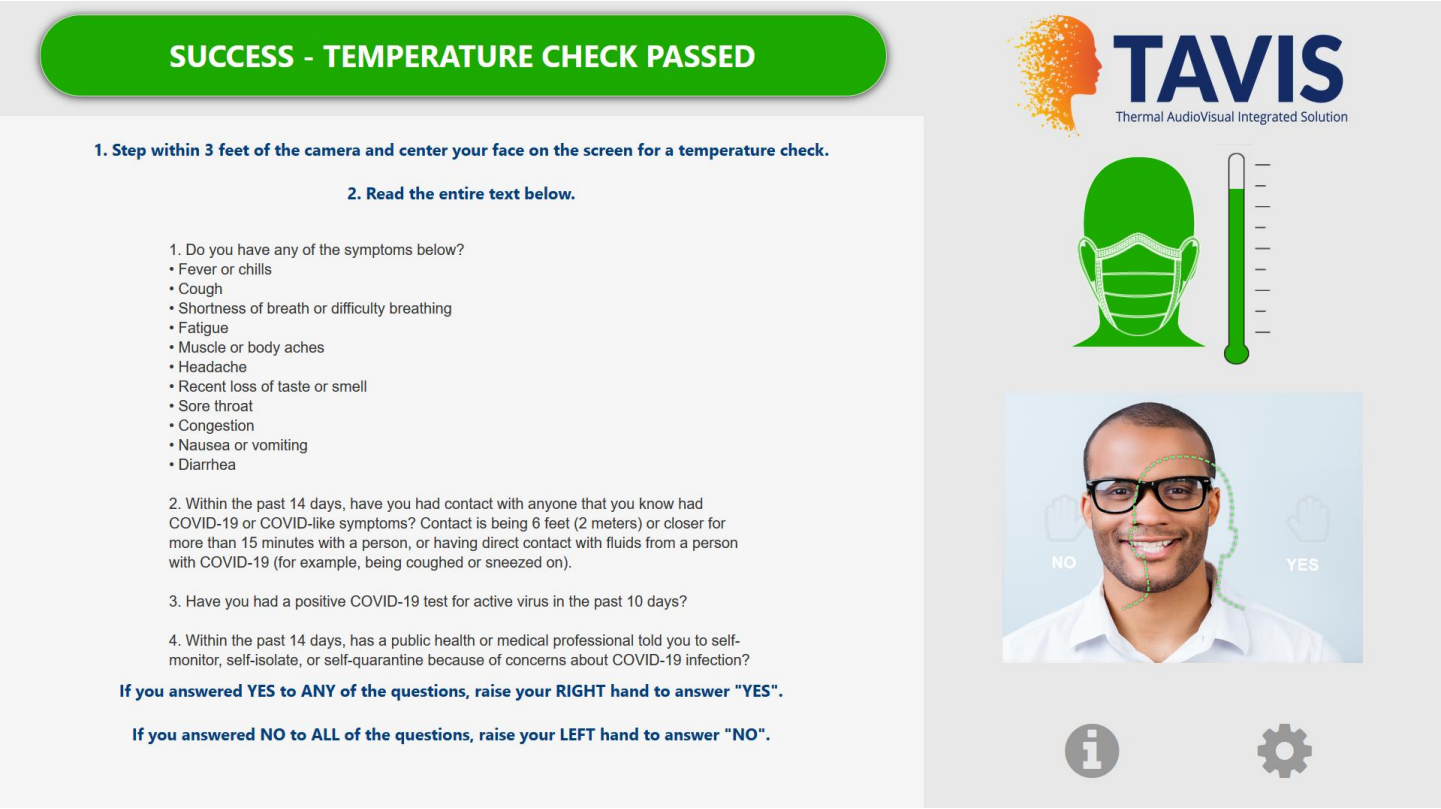
Simple Interface



By default, the simple interface hasless information than the detailed interface. Only the following is included:

- Color changing notification bar for scanning, pass, fail, and additional instructions.
- Directions for the user.
- Active video stream.
- Indicator as to whether or not a mask is required.
- Access to the information tab, by clicking the “i” icon.
- Access to the settings tab, by clicking the gear icon.

Questionnaire

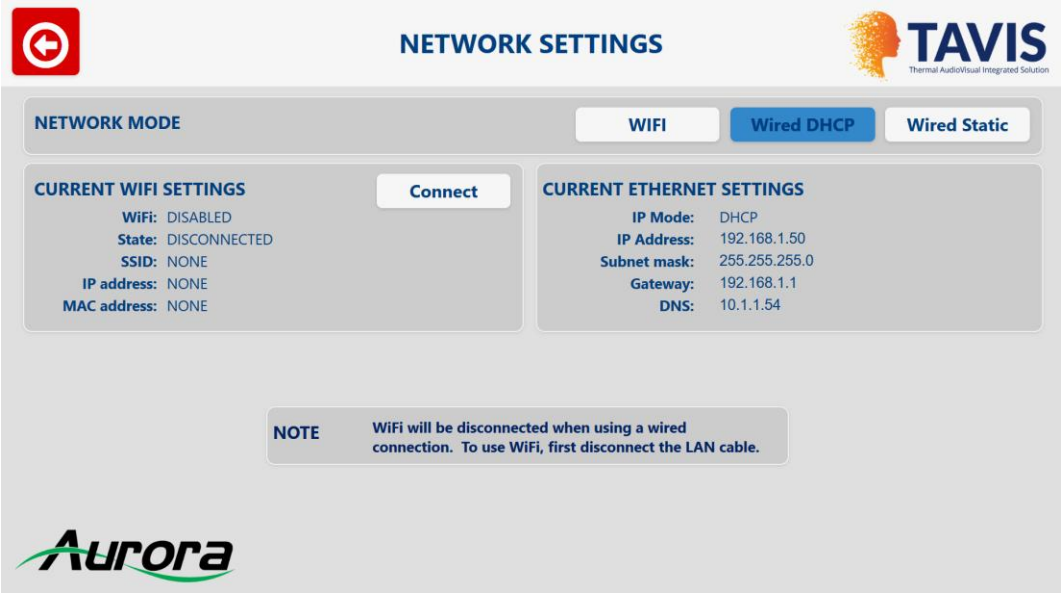


TAVIS is able to use its gesture recognition abilities to have the user participate in a questionnaire. The questionnaire provides another layer of confirmations to confirm whether or not the user has symptoms of COVID-19.

The instructions appear on the left side of the screen for the user to follow while he or she is being scanned. Please ensure that the user's hand is visible to the camera when answering the questions on screen.

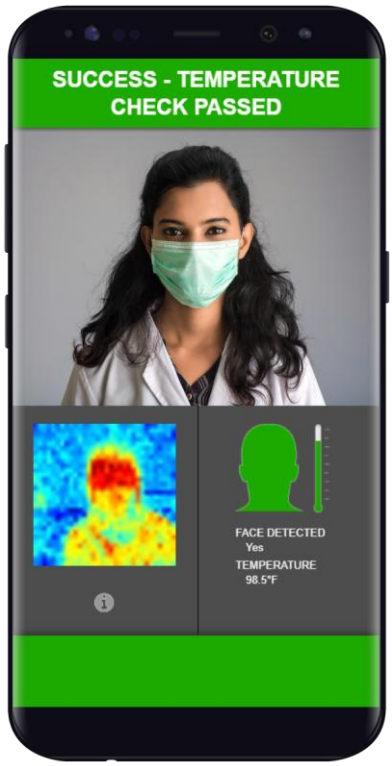
Remote Operation

TAVIS can be operated remotely when another device, such as a computer or smart phone, is connected to the same network. To operate TAVIS remotely, you will need to know its IP address. TAVIS's IP address may be found under the Network page in the settings.



Once you have acquired the IP address, begin by typinghttp://tavis-ip/ into your browser, where "tavis-ip" is replaced with the IP address displayed on screen. In this case, you would type in http://192.168.1.100/and then add the following suffixes for the appropriate view:

- **Detailed view**: http://192.168.1.100/admin/
- **Simple view**: http://192.168.1.100/user/
- **Questionnaire view**: http://192.168.1.100/questionnaire/
- **Mobile view** (portrait version optimized for phone or tablet): http://192.168.1.100/mobile/



Additional Capabilities

Aurora is always developing new capabilities. It is recommend to check time to time at www.auroramm.com for updates to see if new features are available.

All TAVIS units have a ReAX control engine which gives an impressive amount of flexibility and customization. With Core Studio, the experience of the interface and logic can be fully customized. The ReAX allows integration into just about any device that has an available protocol for communication.

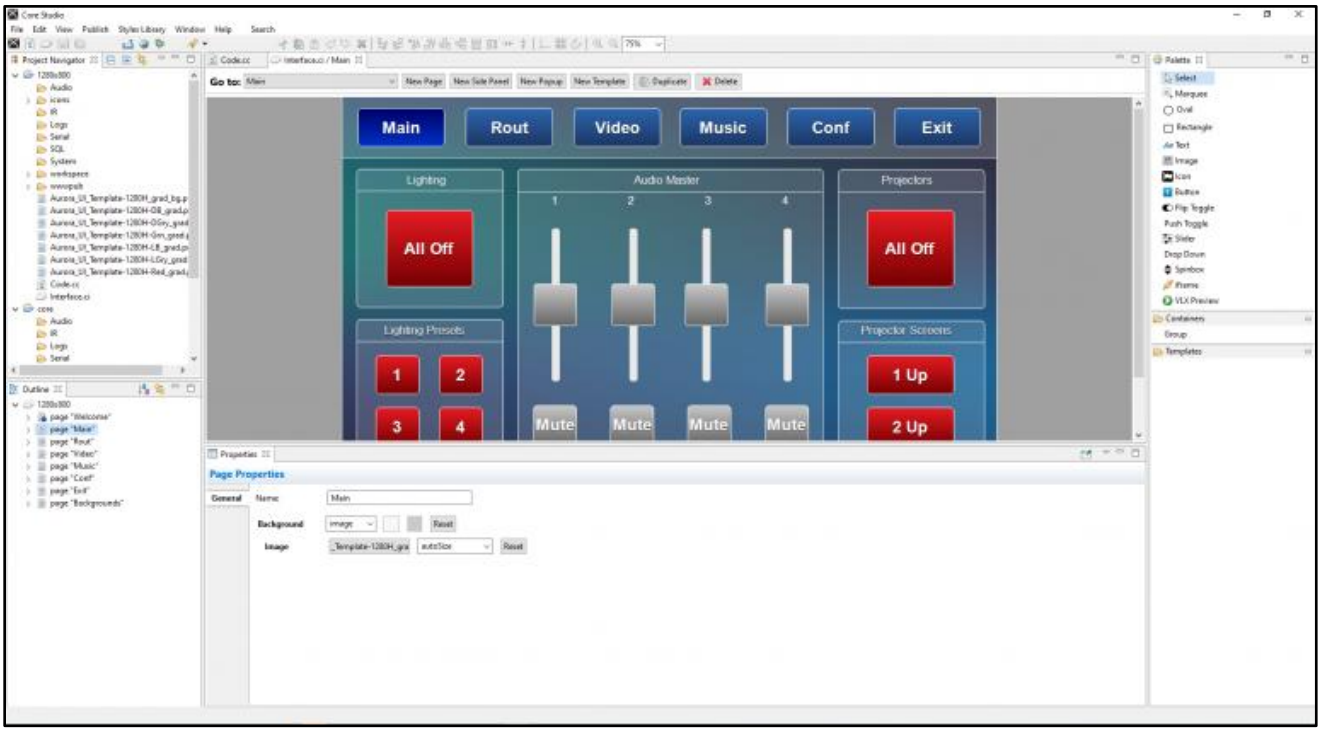
In order to include personalized digital signage and incorporate other features that require customization, please use *ReAX Core Studio* to integrate these options onto your tablet.

ReAX Core Studio may be downloaded from the Aurora Customer portal from the Aurora Multimedia website. For more information, visit: https://auroramultimedia.com/products/reax-core-studio/

ADDITIONAL SOFTWARE

ReAX™

ReAX™ Core Studio



A powerful control system needs powerful tools. Aurora's ReAX™ Core Studio is a professional grade software for creating graphical user interfaces (GUIs) and control logic code. The intuitive drag-and-drop interface allows for easy and flexible design, while enabling rapid duplication and reuse of code blocks.

Control programs are published to any ReAX capable control system as a web page. Once loaded on the controller, the control page can be accessed from virtually any device with a web browser. A few examples include Aurora's RXT touch panels, tablets such as an iPad, smart phones, a PC browser, and many other devices. Furthermore, most devices (including those running iOS, Android, and Chrome browser, and others) can launch the Core Studio control pages as a

full-screen web app, allowing for a seamless control experience without the need for a native app.

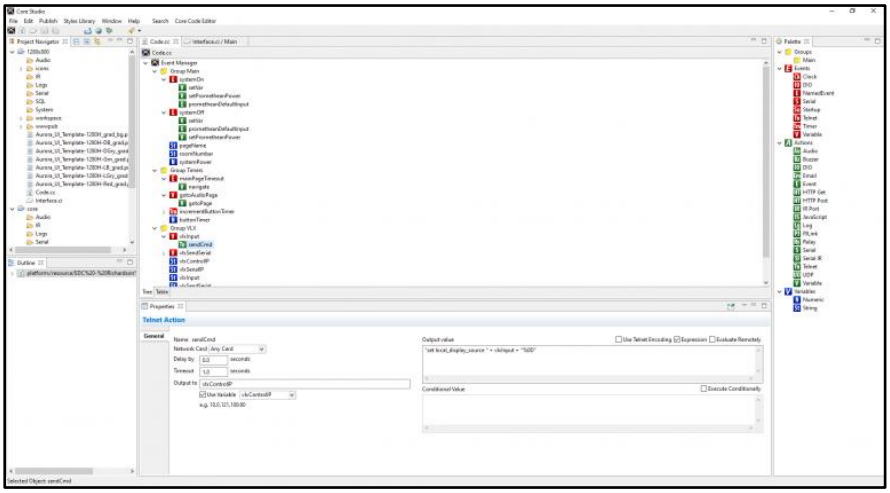
Core Studio integrates all of the common control elements, such as buttons, various toggle elements, sliders, drop down menus, spin boxes, icons, and other design and graphical elements. In addition, advanced features such as live streaming video preview windows for Aurora's AV over IP devices can be included within your control page. And HTML iframes allow you to include content from the web, such as weather feeds, news feeds, stock tickers, or any other local or internet-based website content.

Core Studio has a familiar interface that existing users will understand with little or no learning curve. The published code uses Node.js and other modern robust technologies for peak efficiency within the ReAX OS.

Best of all – ReAX Core Studio is available for free. There is no purchase fee, no registration fee, and no certification fee. We offer training videos to get you started and webinar training for introductory or advanced training.

Try out Core Studio with our RX and QX* series of controllers and touch panels today!

ReAX Core Studio is available for download from our Customer Portal – **https://portal.auroramultimedia.com/**



Note: QX controllers running the ReAX OS are compatible with Core Studio. QX controllers running legacy OS versions require an update to be compatible. YIPI 5 and WOWE can still be utilized with the legacy QX OS.

Using ReAX™ Core Studio

- Core Studio Help
  - What is Core Studio?
  - Quickstart Tutorial
  - Core Studio User Interface
  - Core Studio Project Structure
  - Creating User Interfaces
    - Creating Root Elements
      - Pages
      - Side Panels
      - Popups
      - Templates
    - Creating UI Elements
    - Background Options
    - Aligning Elements
    - Changing Element Order
    - CSS Classes
    - JavaScript override
    - Page Tracking
    - Linked Code (.cc) file
    - Styles Library
    - Themes
    - Anatomy of a Core Studio Application
    - API reference
    - Lock text properties for the Active/Down State
    - Implementing a Keypad
    - Escape Button
    - Tracking user inactivity
  - Creating Code Definitions
    - Actions
    - Events
    - Variables
    - Expressions
    - Functions
  - Selecting Elements
  - Working with Clipboard (Copy – Paste)
  - Undo/Redo
  - Publishing Finished Projects
  - Shortcuts
  - Report A Bug
  - Reference Material

Core Studio

File Edit View Publish Tools Window Help

Core Studio has an extensive Help guide which provides information on the events, actions, and variables that interact with the data being received, to perform real world tasks.

These tasks can be a matter of simply updating the user interface or upgrade TAVIS to provide on-screen instructions, adding digital signage to display advertisements, and just about anything else you can think of. All of this can be done with the tools readily available in Core Studio, or imported in blocks of your own JavaScript, HTML and CSS code.

By integrating ReAX with existing security systems, you could use the data being transmitted to unlock a door, clock in an employee for work, or send a notification for a variety of reasons. The number of real-world uses is limited only by your imagination.

These capabilities support several methods to keep the information secure. For example, it's possible to have employees scan a code on their ID after they've confirmed their thermal reading to obtain access to the next area. Or, you might require an employee to register their information with a 4 digit pin using the touch screen panel. You could even forgo both of those options and rely solely on facial recognition software. For software tutorials, please visit Aurora Multimedia's YouTube channel.

Using ACSD files

By swiping from the left edge of the screen to the right, you can access the Kiosk settings, where you can publish your CS (Core Studio) project. This will allow you to use your custom features and digital signage on your TAV-10, TAV-15, or TAV-21 device. Please note, that you will need to have a USB stick with the .ACSD files included to begin using the CS project on TAVIS.

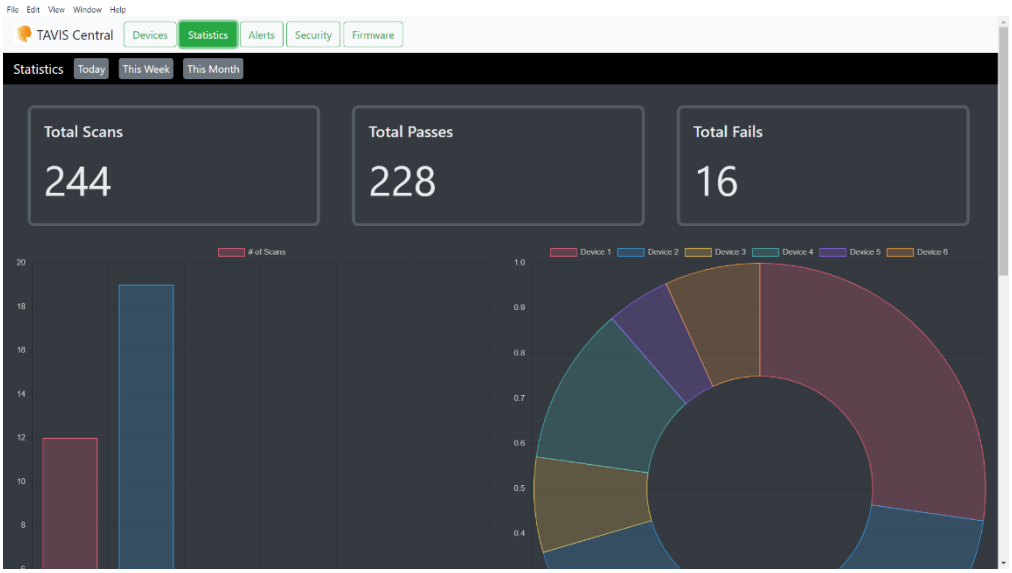
TAVIS Central

TAVIS Central is a record keeping system for TAVIS devices. It allows the user to see the overall statistics, setup, names of devices, user alerts for device connections / disconnections, temperature check failures, and firmware updates.

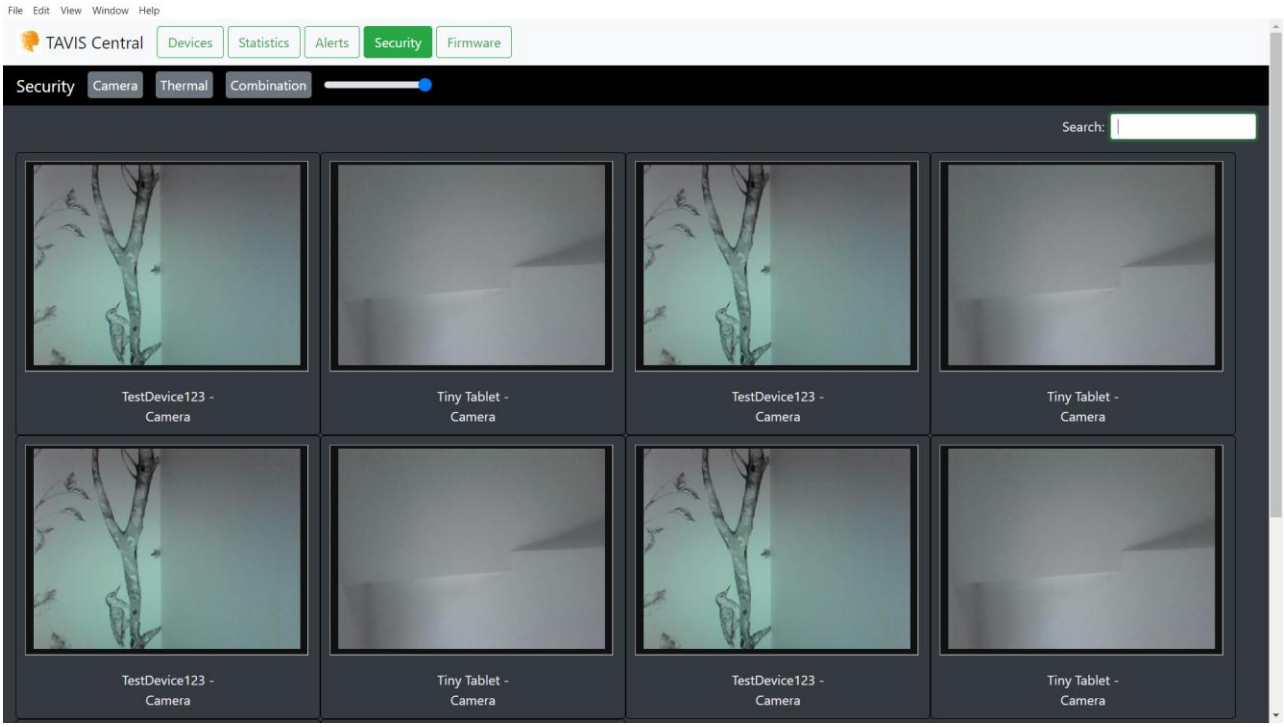
TAVIS Central requires a separate PC to run on the same network as the TAVIS devices.

Centralized Enterprise Class Management Server

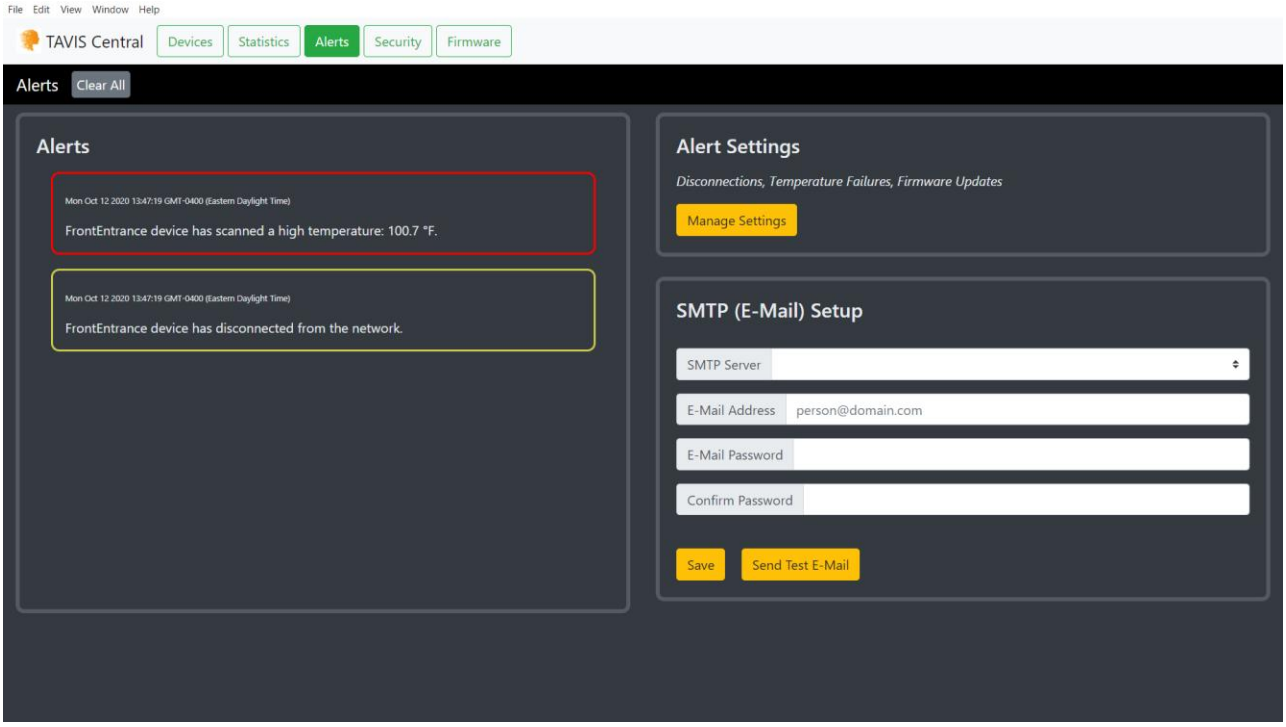
- Real-time Monitoring of all TAVIS Units on the Network
- Statistics, Alerts, and Reporting
- User Password and Profiles
- Camera Stream Recording
- QR Code Generation
- Firmware Updating of all Units
- Rapid Deployment Setup
- Works with Linux, Windows, or Apple



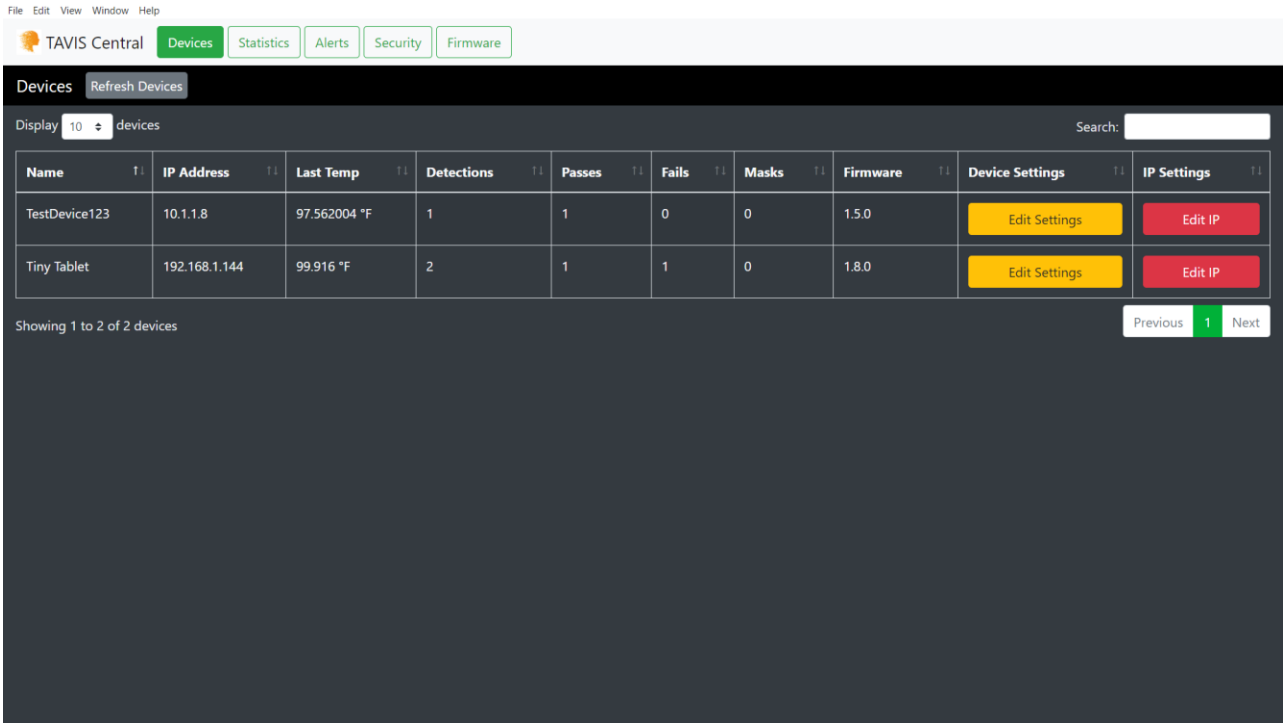
Security



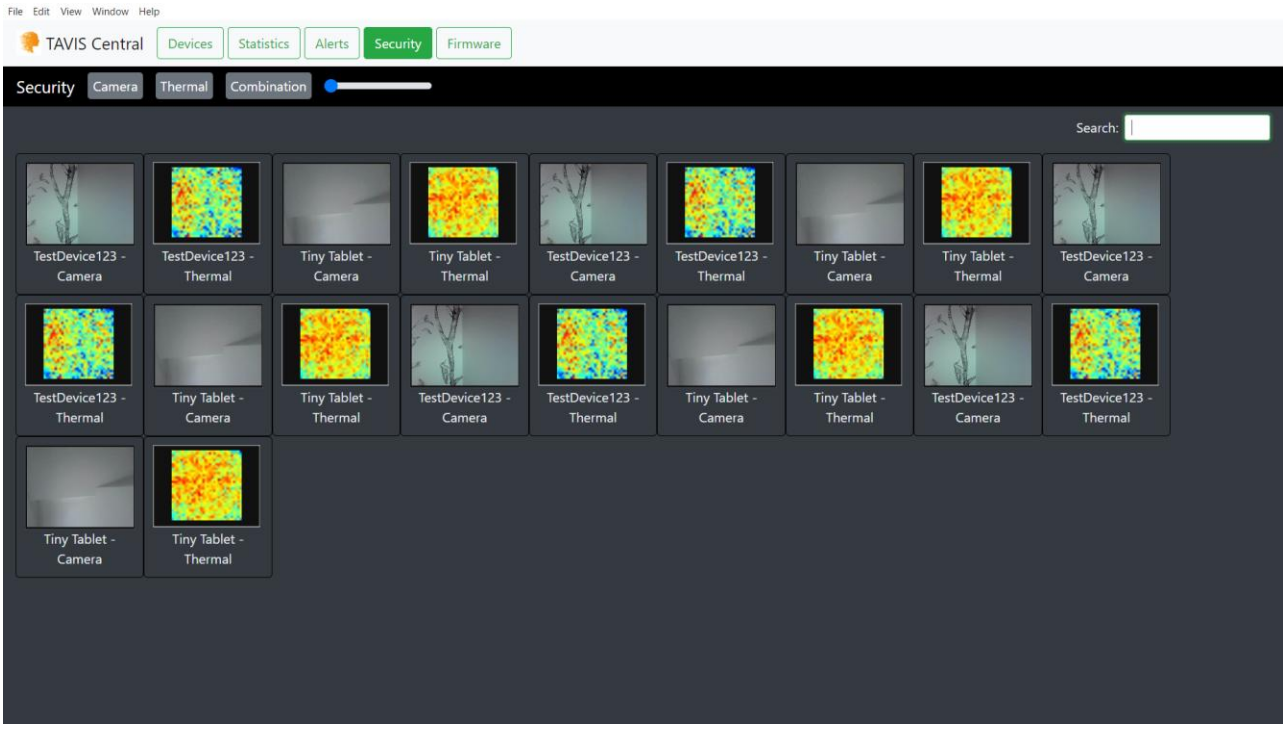
Alerts



Device Status

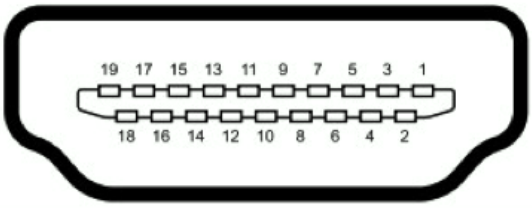


Thermal Feeds



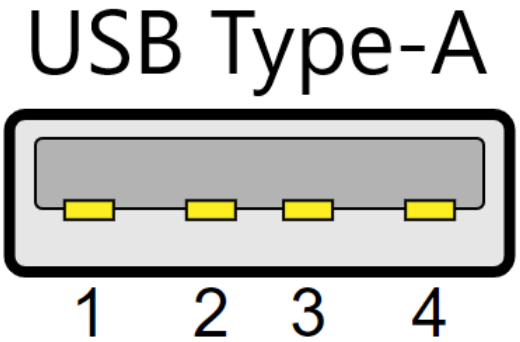
CONNECTOR PIN DEFINITION

HDMI



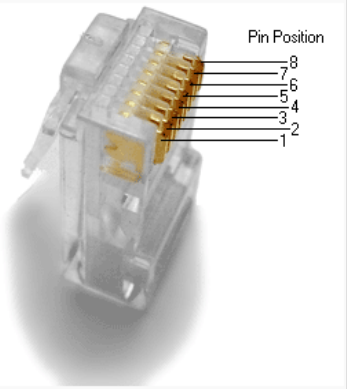
Type A (Receptacle) HDMI

USB



CAT5e/6/6A

T568A and T568B Wiring

Pin	T568A Pair	T568B Pair	Wire	T568A Color	T568B Color	Pins on plug face (socket is reversed)
1	3	2	tip	white/green stripe	white/orange stripe	
2	3	2	ring	green solid	orange solid	
3	2	3	tip	white/orange stripe	white/green stripe	
4	1	1	ring	blue solid	blue solid	
5	1	1	tip	white/blue stripe	white/blue stripe	
6	2	3	ring	orange solid	green solid	
7	4	4	tip	white/brown stripe	white/brown stripe	
8	4	4	ring	brown solid	brown solid	

APPENDIX 1

Frequently Asked Questions

Hardware Capabilities - Infrared Technology - Setup - Using the Software - Intended Use - Maximizing ThermalReading Accuracy - Control System Integration - Troubleshooting - Miscellaneous Questions

Hardware Capabilities

Q: What is the scan distance?

A: 12 in to 5 feet (0.3 to 1.5 meters).

Q: What is the temperature detection speed?

A: 1 second.

Q: Does the temperature sensor need to be calibrated?

A: Yes. You must confirm your skin temperature with another device for initial calibration.

Q: Is the connection from the sensor to the tablet USB?

A: Yes, it is a USB sensor module that connects to the tablet.

Infrared Technology

Q: What technology does TAVIS use to detect temperature?

A: TAVIS uses Long Wave Infrared Technology, a type of forward-looking infrared technology.

Q: How does Long Wave Infrared Technology compare to other Infrared Technology?

A: Long Wave Infrared Technology does not need to be cooled. As a result, it requires less maintenance than Medium Wave Infrared Technology and Short-Wave Infrared Technology. The length of the waves makes LWIR suitable for dusty or foggy environments as well, since it detects what temperature radiates from an object.

Q: How accurate is the infrared sensor?

A: +/- 0.5 degreeFahrenheit(+/- 0.3 degree Celsius).

Q: How is the temperature so accurate?

A: Extensive research and development was done by our German manufacturers to create a reliable long wave infrared sensor.

Setup

Q: Is the unit able to detect people of different heights (e.g. children, adults 3' to 6.5')?

A: There's a visible sensor and a camera that will show your face on the LCD screen. Within the effective scanning range, the sensor should pick up the face, though in extreme cases the tablet might need to be adjusted.

Q: What scanning range does TAVIS cover?

A: Please consider the following table, which was created in consideration of an individual being 3 feet away from the thermal camera. All measurements for height were taken directly from the height of the camera (not another part of the tablet). The actual vertical scan distances are 6 inches longer or more, but these measurements account for fitting an entire 10" head inside the field of view. The optical range increases by a directional tilt.

Pole Camera Height	Optical Range	Vertical Scan – (w/head)
65”	60” – 78”	18”
60”	54” – 72”	18”
Tilted Desktop Height	**Optical Range**	**Vertical Scan – (w/head)**
41”	46” – 72”+	26”+

Q: Is Plexiglass okay in front of the tablet?

A: Plexiglass alters the temperature of the reading. Please avoid reflective surfaces in TAVIS's field of vision.

Q: Can the sensor be affixed to a door, away from the tablet that collects data?

A: The sensor must be connected to the tablet at this time.

Using the Software

Q: How does the alert message work? Are there display and sound alerts?

A: On the display screen, it will show the person's face and current temperature. If it senses a temperature higher than what has been set as normal, the tablet will show red and emit an alert sound. The volume may be adjusted in TAVIS's settings.

Q: Does TAVIS detect facemasks?

A: Yes, TAVIS detects facemasks.

Q: How can I implement additional features with ReAX Core Studio?

A: Please refer to the "Help" section of ReAX Core Studio, or visit Aurora Multimedia's YouTube channel for tutorials on how to use the software.

Intended Use

Q: Is there an option to store the data of people checked?

A: Yes. This can be programmed using Core Studio or with TAVIS Central.

Q: Can TAVIS read the temperatures of people with hats on or other facial coverings?

A: TAVIS scans for the hottest temperature over the largest area of a person's face. If there is any trouble obtaining a reading, a person should stand 12 inches (0.3 meters) away from the tablet. Removing any facial coverings will yield the most accurate results.

Q: What is the detected temperature that will cause a person to fail his or her screening?

A: The default temperature is 100.4 degrees Fahrenheit, though this can be adjusted in the settings.

Q: What body temperature is considered a fever?

A: The Centers for Disease Control and Prevention (CDC) considers a fever to be a body temperature of 100.4 degrees Fahrenheit or higher. Please note that TAVIS detects skin temperature, and that a person may still be considered ill with a temperature below 100.4 degrees. Some medical institutions consider a temperature of over 99.5 degree Fahrenheit a fever, and a person may be at risk at as low as 99 degrees Fahrenheit.

Q: Does TAVIS detect elevated body temperature?

A: No, it detects elevated skin temperature. The body temperature should be confirmed by other means.

Q: What steps are recommended after a person's temperature is too high?

A: Generally, the person should proceed to a follow-up medical examination by a trained professional. However, you should consult the FDA and your local laws for best practices.

Q: Do employers require consent to screen their employees' temperatures?

A: According to the Enforcement Policy for Telethermographic Systems During the Coronavirus Disease 2019 (COVID-19)

Public Health Emergency (April 2020), employers do not require consent to screen their employees' temperatures with a device that is not invasive, such as TAVIS. For the most recent information on the topic, call 1-888-INFO-FDA or email CDRH-COVID19-Thermography@fda.hhs.gov .

Q: Does TAVIS meet FDA standards for non-invasive Telethermographic Systems?
A: Yes. As of June 2020, TAVIS is compliant with the FDA standards as detailed in the Enforcement Policy for Telethermographic Systems During the Coronavirus Disease 2019 (COVID-19) Public Health Emergency in conjunction with the Particular Requirements For The Basic Safety And Essential Performance Of Screening Thermographs For Human Febrile Screening.

Maximizing Thermal Reading Accuracy

Q: What factors may give an inaccurate temperature reading?
A: Placing TAVIS behind reflective surfaces, like plexiglass, will cause an inaccurate temperature reading. Additionally, sweat, or other liquids on the surface of the skin will skew the results. Biological factors which elevate an individual's skin temperature, such as sunburn, should also be considered when gauging the reading's accuracy.

Q: What other conditions may cause a person to come up with an abnormal temperature reading?
A: People with sunburn, sweat, or other biological factors may have elevated skin temperatures without a fever.

Q: What other elements can get in the way of an accurate reading?
A: Severe weather conditions, and any objects that come between the camera and the person.

Q: What should the person do if sweat is giving an inaccurate reading?
A: Wipe the sweat off and try again.

Miscellaneous Questions

Q: Will the system detect objects and/or animals?
A: The system is designed to only detect people.

Q: How much does exercise affect internal body temperature?
A: Rigorous exercise can cause the internal body temperature to exceed 100.4 degrees Fahrenheit, which is indicative of a fever. The body requires about 20 minutes of rest to reset to its normal body temperature, when exercise causes the body temperature to exceed 104 degrees.

Q: Is TAVIS FCC, NDAA, DSGVO and CE compliant?

A: Yes, TAVIS is FCC, NDAA, DSGVO and CE compliant.

Q: Does TAVIS need to be connected to Wi-Fi during operation?

A: No, TAVIS only needs to be connected to LAN, Wi-Fifor remote updates however, TAVIS can also be updated with a USB stick.

Q: Can I detach the sensor from the tablet?

A: The sensor canbe detached from the tabletso you can mount it to the tablet as a vertical or horizontal orientation.

Troubleshooting

It is advisable to make certain all units are using the latest firmware before troubleshooting.

Display will not show a picture

- Check to ensure that all devices are powered on.
- A picture is achieved when connecting the source directly to the display.
- Display is set to the correct signal source input mode using display's remote. Example, switching to HDMI 1 if HDMI 1 interface is connected to the RX via a HDMI cable.
- All the cables are qualified.

Audio not working

- Make certain correct audio path is selected.
- Check volume on display or amplifier.

Inaccurate temperature reading

- Move the sensor away from sunlight.
- Ensure that there is no glare or reflective surfaces.
- Reboot the device if it is overheating.
- Calibrate the device by entering the value obtained by a forehead thermometer.

Firmware Update

For the latest firmware updates please go to: www.auroramm.com. You must be signed up to the Customer Portal in order to download the firmware. Instructions on how to install the firmware are also available in the downloads section for your device.

Technical Specifications

Specifications subject to change without notice.

	TAV-10	TAV-15	TAV-21
Screen Size	10”	15.6”	21.5”
Resolution	1280 x 800	1920 x 1080	
Brightness	350 cd/m^2	350 cd/m^2	
Contrast Ratio	800:1	1000:1	
Aspect Ratio	16:10	16:9	
Active Display Area	136.8 x 219 mm	343.2 x 192.6mm	479 x 270.5mm
Viewing Angle	H:170º / V:170º	H:178º / V:178º	
Touch Tech	10-point cap touch (reflective glass)		
CPU	RK3399 Cortex Six core Processor 1.8GHz/1.4GHz		
RAM	4GB DDR3		
ROM	32GB eMMC Flash		
OS	Android 9/Linux Debian 9 (Coming Q1)		
Video Format	H.265, VP8, RV, WMV, AVS, H.263. MPEG4, HTML5, Flash 10	H.265, VP8, RV, WMV.AVS, H.263, MPEG4, up to 4K2K decoding, HTML5, Flash 10	
Auxiliary Video	HDMI output for remote monitoring of results		
Audio Format	MP3 / WMA / AAC etc.		
Image Format	JPEG, BMP, PNG		
Speaker	2W x 2	3W x 2	
Bluetooth	EDR 4.0LE 1M		
Wi-Fi	802.11 b/g/n/ac 2.4GHz and 5GHz		
Ethernet	10/100/1000 LAN		
Color	Black or White		

Specifications subject to change without notice.

TAVIS TAV Series Specifications (continued)

	TAV-10	TAV-15	TAV-21
Inputs / Outputs	● 12v DC Input ● USB Type C ● 3.5mm Audio Line L/R Out ● HDMI 2.0 Output ● SD Card Slot ● SIM Card Slot (4G Option) ● USB 3.0 ● USB 2.0 ● 1G LAN PoE		
AV Capability	Front Facing Binocular Camera 2 MP fixed focus		
Included in Box	Tablet, Power Adapter(optional), Power Cable		
Sensors	G-sensor		
Consumption	11W	15W	32W
PoE	PoE	PoE+	PoE++
Power Input	12V 2A	12V 2A	12V 3A
Temperature	Operating: 32º F to 100º F (0 ºC to 50 ºC); Storage: -4º F to 122º F (-20º C to 50º C)		
Humidity	Operating: 20% - 80%; Storage; 10% - 95%		
Certification	CE, FCC, ROHS		
Language	Multi-language		
VESA	VESA 75	VESA 75	VESA 100
Warranty	3 Years		
Thermal Camera Sensor Size (L x H x D)	125mm x 36.44mm x 27.20mm (39.67mm deep including lens)		
Temperature Check Distance	12in – 5ft (0.3m – 1.5m)		
Temperature Check Range	30ºC - 45ºC		
Temperature Check Error	+/- 0.5ºF @ 1Hz		
Size (W x D x H)	258 x 27 x 175mm	392 x 241.6 x 29.6mm	597 x 321.2 x 35.5mm
Product Weight	700g	1.4Kg	3.8Kg
Box Size	378 x 62 x 278mm	442 x 388 x 78mm	593 x 465 x 98mm

Specifications subject to change without notice.

Warranty

Limited 3Year Warranty

Aurora Multimedia Corp. (“Manufacturer”) warrants that this product is free of defects in both materials and workmanship for a period of 3 years as defined herein for parts and labor from date of purchase. This Limited Warranty covers products purchased in the year of 2020 and after. Motorized mechanical parts (Hard Drives, DVD, etc.), mechanical parts (buttons, doors, etc.), remotes and cables are covered for a period of 1 year. Touch screen displays are covered for 1 year; touch screen overlay components are covered for 90 days. Supplied batteries are not covered by this warranty. During the warranty period, and upon proof of purchase, the product will be repaired or replaced (with same or similar model) at our option without charge for parts or labor for the specified product lifetime warranty period.

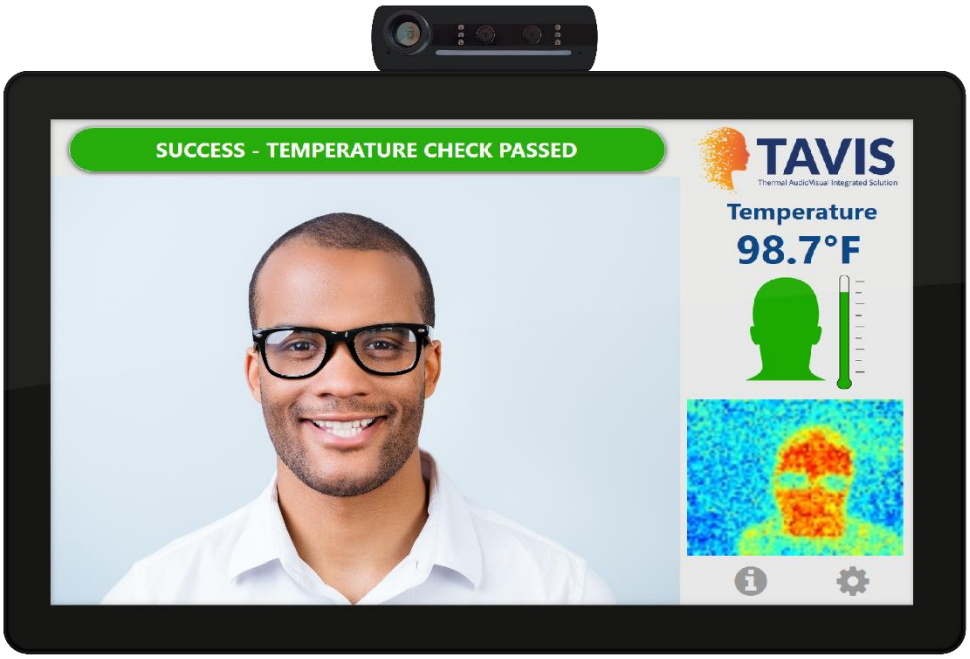
This warranty shall not apply if any of the following:

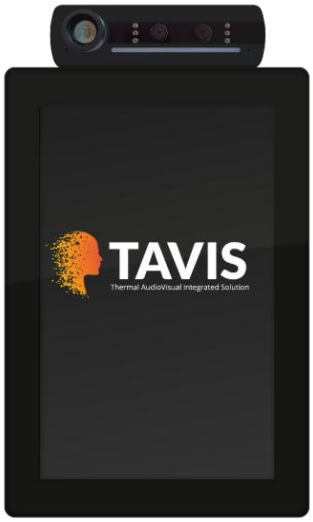
1. The product has been damaged by negligence, accident, lightning, water, act-of-God or mishandling; or,
2. The product has not been operated in accordance with procedures specified in operating instructions: or,
3. The product has been repaired and or altered by other than manufacturer or authorized service center; or,
4. The product's original serial number has been modified or removed: or,
5. External equipment other than supplied by manufacturer, in determination of manufacturer, shall have affected the performance, safety or reliability of the product.
6. Part(s) are no longer available for product.

In the event that the product needs repair or replacement during the specified warranty period, product should be shipped back to Manufacturer at Purchaser's expense. Repaired or replaced product shall be returned to Purchaser by standard shipping methods at Manufacturer's discretion. Express shipping will be at the expense of the Purchaser. If Purchaser resides outside the contiguous US, return shipping shall be at Purchaser's expense.

No other warranty, express or implied other than Manufacturer's shall apply.

Manufacturer does not assume any responsibility for consequential damages, expenses or loss of revenue or property, inconvenience or interruption in operation experienced by the customer due to a malfunction of the purchased equipment. No warranty service performed on any product shall extend the applicable warranty period. This warranty does not cover damage to the equipment during shipping and Manufacturer assumes no responsibility for such damage. This product warranty extends to the original purchaser only and will be null and void upon any assignment or transfer.





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