



CreativeRealities □

Safe Space Solutions

ANSWER GUIDE | FAQs

Temperature Inspection Device and Platform

Creative Realities | proprietary and confidential November 16, 2020
Please contact us at support@cri.com or 1-888-369-3629 at any time.

Table of Contents

1 Thermal Imaging – Technology Overview	6
1.1 What is thermal imaging infrared camera technology?.....	6
1.2 How does thermal imaging work?	6
1.3 What is the history of thermal imaging?	6
2 Thermal Device – Hardware Overview	7
2.1 What is a Thermal Mirror?	7
2.2 What do I clean the device with, and how often?.....	7
2.3 Can you explain how the Thermal Mirror works?.....	8
2.4 What applications is this good for?.....	8
2.5 How does it recognize employee faces if they have a mask on?	8
2.6 Can it be used in a location without entering any people to the database for recognition?	9
2.7 Is this product a medical-grade product?	9
2.8 How long has this solution been in use? What type of companies have been using them?	9
2.9 Is it possible to use the system without video or photographs being exposed?	9
2.10 What happens to the photographs?	10
2.11 If someone has a hat on and their forehead is covered will it still work?.....	10
2.12 What happens when a fever is detected?	10
2.13 Can you tag it to an employee badge or entry process?	10
2.14 How does it support throughput of scanning visitors more quickly?.....	10
2.15 What is the average throughput traffic per hour?.....	11
2.16 If someone came in directly after exercising (running, cycling, hot summer day), would this device detect a high-temperature value?.....	11
2.17 Just to clarify how many feet does the person being screened need to be from the mirror for a good reading?	11
2.18 Is the system rated to lower light levels?	11
2.19 Is this product suited for outdoors?.....	11
2.20 Does it have any waterproofing?.....	11
2.21 What is the ADA’s stance on temperature scanning?.....	12
2.22 Operationally, how do I manage scanning children and disabled visitors or employees?	12
2.23 Does the thermal mirror solution have the ability to retake a person’s temperature a second time if they fail?	12
3 Metrics and Reporting Dashboards	13
3.1 Are the reports local to each device or can they be aggregated?	13

- 3.2 Can I customize reports?..... 13
- 3.3 Can you export reports? 13
- 3.4 Can I easily document the temperature result for every recognized person/employee’s record?
13
- 3.5 How quickly are the dashboards refreshed? 13
- 4 Network, Connectivity and Operations..... 14**
 - 4.1 Can I tandem this to an existing front of the store screen? 14
 - 4.2 Is there a non-networked version? 14
 - 4.3 How long does it take to reset to another person? 14
 - 4.4 What is the lifespan of the camera? 14
 - 4.5 What is the warranty?..... 14
 - 4.6 What are the power and connectivity requirements?..... 14
 - 4.7 What is the level of Wi-Fi that is required, is 2.4 the minimum? 14
 - 4.8 Does it have an ethernet connection? 14
 - 4.9 Is there a way to Accept Terms and Conditions when connecting to Wi-Fi?..... 15
 - 4.10 Is it secure? 15
 - 4.11 How do I integrate the system with an employee facial database? 15
 - 4.12 What are the maintenance requirements? 16
 - 4.13 Can it run on battery or does it need to be connected to AC power to operate?..... 16
 - 4.14 What are the mounting options, and what mountings are included with the camera? 16
 - 4.15 Can the Thermal Mirror easily be removed from pole mount when not in use?..... 16
 - 4.16 Can it run offline, or does it always need to be connected to the internet? 16
 - 4.17 How is data captured, stored and sent, and where is it sent? 16
 - 4.18 Can updates be scheduled for off-hours? 16
 - 4.19 Can you connect it to a laptop and share the Wi-Fi connection if the laptop is connected? 17
 - 4.20 Can you link into the device?..... 17
 - 4.21 What are the local requirements for connecting to a local, wired network connection? 17
 - 4.22 Is it locked down by a password setting? 17
 - 4.23 What are the cost and timing requirements to integrate it with existing building clearance and security devices or software? 17
 - 4.24 Does the Thermal Mirror device communicate directly to a companion digital screen? 17
 - 4.25 What do I clean them with, and how often? 17
- 5 Software and Customization 18**
 - 5.1 With which OS/system is the device compatible? 18

- 5.2 Does it support an Android APK that enables the integration of alerts and images into other devices, like smart glasses and smart watches?..... 18
- 5.3 Can this be used as signage as well? 18
- 5.4 Is the device compatible with other CMS products?..... 18
- 5.5 Is the Dashboard the only software on the device? 18
- 5.6 Can you control the device from the “software”? Reboot, push updates to kiosks, etc.? 18
- 5.7 Can we set the temperature threshold? CDC says anything above 100.4, what is the range and what are the increments? 18
- 5.8 When an employee comes up and is scanned, can we display their temp or just red light if over the threshold?..... 19
- 5.9 Can you use contactless smart cards and proximity cards? Which types? (HID, Mifare, etc.) or other RIFD for information can it work this? Can we see a software compatibility list for the cards? 19
- 5.10 How does the thermal device calibrate to insure appropriate temperature checking? 19
- 5.11 What are the CSV file requirements for Employee Registration? 19
- 5.12 Does this device have integration with other platforms? 19
- 5.13 What are the requirements for the Edge Application hardware requirements for use with the Creative Realities Message Broker to allow real-time, rules-based alerts? 20
- 6 Data Aggregation, Security and Privacy 21**
 - 6.1 Are there privacy or legal concerns? 21
 - 6.2 What about HIPAA concerns? 21
 - 6.3 What type of data is collected (“Collected Data”) at the test station?..... 21
 - 6.4 How long is data kept on the device and what is sent to the client’s cloud account?..... 22
 - 6.5 Can you expand on data security? 22
 - 6.6 From an application security perspective, what level of rigor is the application is security tested to? What tools are used and how often is the application updated and re-tested?..... 23
 - 6.7 Do you have legally reasonable cybersecurity standards and practices in place to protect the capture and storage environment from alteration, unauthorized access and unauthorized use? *On the standards side, this includes, for example, ISO 27001 series, or similar certification. Is that certification current? 23
 - 6.8 What security logging and monitoring controls are in place? How can it be assured that the hosting platform and application remain secure and has not been exploited/compromised?..... 23
 - 6.9 Based on this, does the cloud instance adhere to recommended best practices, such as the NIST Cybersecurity Framework? 23
 - 6.10 Is this documented? 24
 - 6.11 How do you protect/segment our data from your other client’s data stored on the same cloud SaaS infrastructure? 24
 - 6.12 Could customers use existing endpoint protections, like Symantec, etc.?..... 24
 - 6.13 Can they be modified to protect against physical tampering so viruses cannot be installed?... 24

6.14 Do you have a current information security policy in place, and when was it last updated? 24

6.15 Are you using encryption; if so, how? (Data at-rest, in-transit or both) 24

6.16 Are the cybersecurity standards and practices noted above driven by Creative Realities' policies and procedures? 25

6.17 Does AWS offer Compliance and Certifications? 25

7 Contact Support 26

7.1 By Email 26

7.2 By Phone 26



1 Thermal Imaging – Technology Overview

1.1 What is thermal imaging infrared camera technology?

It is essentially a heat sensor that detects temperature by recognizing and capturing different levels of infrared light. This light is invisible to the naked eye but can be felt as heat if the intensity is high enough. All objects emit some level of infrared radiation, and it is one of the ways that heat is transferred. Here is a great overview:

<https://www.biometricupdate.com/201308/explainer-facial-thermography>

1.2 How does thermal imaging work?

Most thermal cameras capture/collect the infrared radiation from objects in the scene and create an electronic image based on information about the temperature differences.

1.3 What is the history of thermal imaging?

Thermal camera technology came into widespread use in airports in Asia after the SARS epidemic in 2003. Fever-detection requirements around the world have renewed interest in the technology, with systems that include the cameras, displays and other needed hardware costing about \$5,000 to \$10,000.

During the 2002 SARS epidemic, FLIR began to sell thermal cameras to South Korea and other Asian countries to screen passengers at airports. The software to detect fevers has advanced considerably since then, and the physical hardware is also much smaller, making it an ideal solution for the COVID-19 pandemic.

Both tech startups and surveillance companies that were selling thermal imaging for years have started marketing fever detection solutions to address the post-pandemic realities, and ours is one of them.

2 Thermal Device – Hardware Overview

2.1 What is a Thermal Mirror?

It seems that thermal camera solutions that look just like ours appear every day, and that's okay. Think of it this way – the competition has a hardware device for the problem; we have a solution built for business.

Powered by the *InReality* Platform, our customers get a simple, standalone non-contact fever detection solution PLUS:

- KPIs metrics and all desired data synchronized in one platform
- Responsive, real-time alerts they can customize
- Remote management monitoring and updates
- The ability to configure for specific data policies (keep the face data, purge the data, intervals)

This is critically important, as there are no industry safety guidelines to follow, and Legal and HR are in the hot seat to create systems and processes to ensure human safety. Flexibility and simple oversight will be key, as will compliance and audit trails. We assume IT and operations will be on point to manage these solutions across the Enterprise, and our solution is uniquely qualified to help them.

Most prospects will be interested in a two-step approach regarding their business use case for the Thermal Mirror:

1. Get it installed as a measure for making people comfortable
2. Design a plan to support CX, HR, IT and Legal requirements, which will likely entail custom integration to support automation needs, workflows, and data requirements

With our solution, we'll be ready to support both.

2.2 What do I clean the device with, and how often?

You can clean them similarly to any other tablet. Use only a soft, lint-free cloth. Avoid abrasive cloths, towels, paper towels, or similar items to avoid scratching the screen. Avoid excessive wiping, which might cause damage. Do not get moisture into any openings. Do not spray cleaners directly onto the item, but spray on a soft cloth first. Using a 70 percent isopropyl alcohol wipe or Clorox Disinfecting Wipes, you may gently wipe the hard, non-porous surfaces and dry with a soft cloth.

2.3 Can you explain how the Thermal Mirror works?

The Thermal Mirror is designed to provide non-contact forehead temperature inspection. The system is optimized to work with a margin of error within 0.5°C / 0.9°F, even when people are wearing masks – provided they are standing within 3 feet of the camera range. Audio feature instructs an individual to approach more closely if not within inspection range

This system is perfect for populated locations where rapid temperature inspection is needed, especially in the situation of containing the COVID-19 pandemic where people need to wear masks while measuring the temperature.

Key Features

- Non-contact, remote forehead temperature inspection
- Multi-point temperature data collection to ensure accuracy, even if face or head is covered
- Face detection to collect temperature data **on faces and forehead only**, avoiding interference from surrounding environments (others do not offer this, which alters accuracy)
- Accurate temperature inspection, even with masks on
- Plug & Play – works right after the device is connected to power
- Configure temperature threshold for alerts – which can then help escalate a “fail” for secondary screening
- Remote management for troubleshooting, configuring, maintenance and software updates
- Supports networking of multiple devices on site, simplifying management
- Remotely access, aggregate, and view test results including number of tests, number exceeded threshold, all segmented by date, day of week, and time of day
 - Also includes average pass temperature and average fail temperature
- Advanced features include an Employee Compliance Module to confirm and track individual tests, important to show compliance to mandated rules
- Option for controlling gate or door access - unlocking door when employee is recognized without a temperature
- Supports requiring visitor be wearing a mask to pass test

2.4 What applications is this good for?

It can be widely used in locations such as stores, hospitals, airports, subway stations, train stations, exits and entrances of industrial parks and shopping malls, offices, and schools, etc.

2.5 How does it recognize employee faces if they have a mask on?

It looks for a forehead, but it uses all available facial features to recognize the registered employee and has been built for extreme accuracy, even with a mask on.

2.6 Can it be used in a location without entering any people to the database for recognition?

Yes, as above, that person will be scanned anonymously as a visitor.

2.7 Is this product a medical-grade product?

No, it is not a medical-grade product. **It is a high-end, non-medical temperature inspection product for non-contact temperature screening in public areas.**

To note, if your country's customs or authorities believe this is somehow a medical device, there may be issues. For example, COVID-19 testing devices were imported to the US, but the FDA did not allow doctors to use them since they were not approved. So, please refer to the **Thermal Mirror as a temperature inspection device, not a medical diagnostic device.**

2.8 How long has this solution been in use? What type of companies have been using them?

Temperature Sensing has been around for the last 15+ years. The key technology elements [IR thermal sensors, the camera] in our current unit have been successfully utilized in other hardware form factors since the SARS epidemic.

This is the first time we are bringing together Facial Detection [Optical Camera] and Thermal Inspection [Thermal IR] married to AI / Analytics, which makes our solution ENTERPRISE and different. There are four manufacturers producing this today, available in the US.

2.9 Is it possible to use the system without video or photographs being exposed?

No, this is not possible. To explain, there are two cameras at play for it to work – one optical to get people into the optimal spot (inside the body outline), the other to capture, eyes, nose and other facial areas. The system homes in on the face and forehead (the most accurate spot for results) and takes a thumbnail photo to scan for results. If we had no photograph, the device could not locate the “target”, and the results would not be accurate.

2.10 What happens to the photographs?

This is up to you – for anonymous visitors, they should be deleted. For employees, our integrated platform lets you design the data storage for compliance and audits, or otherwise simply delete.

2.11 If someone has a hat on and their forehead is covered will it still work?

Yes, the most accurate spot for accuracy is on forehead/between eyes, but temperature from face can be detected if it is covered (mask, hat, head covering, etc.).

2.12 What happens when a fever is detected?

All off-the-shelf industry options have built-in audio alerts, a light indicator or both. Our system does too, but powered by our platform, we can customize other responses based on company policy and experiential expectations, so it set up the process positively. Our goal is to ensure that any “fails” are handled with discretion and care, without causing alarm to the individual or those in the queue.

2.13 Can you tag it to an employee badge or entry process?

Yes, you can tie it to a security camera, to open gates, create a sticker, etc.

2.14 How does it support throughput of scanning visitors more quickly?

Scanning is instant, but this may be a broader issue while others are maintaining social distancing.

2.15 What is the average throughput traffic per hour?

The test itself takes about 1 second to get into position, but to do so while keeping social distancing may take another 3 seconds. To back out may add another 2 seconds. If there is a long queue, a fair estimate per Thermal Mirror could be 10 per minute, or 600 per hour.

Here is a quick demo to show speed of read:

<https://cri.com/wp-content/uploads/SafeSpace/demo.mp4>

2.16 If someone came in directly after exercising (running, cycling, hot summer day), would this device detect a high-temperature value?

Yes, it will lead to a high-temperature value. We would offer a suggestion to take a rest and wait for the temperature to drop back to normal – then take the temperature inspection once again.

2.17 Just to clarify how many feet does the person being screened need to be from the mirror for a good reading?

We have found 18”-24” seems to be optimal for facial detection (of employees). You can get closer for the temperature check if you are doing visitor only.

2.18 Is the system rated to lower light levels?

The device uses infrared illumination so that it can detect faces in a dark room, then turns on the front facing white light to provide adequate lighting for face detection. We do not have a rating of lower light levels, but it works in a room with no additional lighting.

2.19 Is this product suited for outdoors?

No, it is not.

2.20 Does it have any waterproofing?

No, the device does not have any waterproofing.

2.21 What is the ADA's stance on temperature scanning?

Title III of the ADA does not allow public accommodations to impose or apply eligibility criteria that screen out or tend to screen out an individual with a disability or any class of individuals with disabilities from fully and equally enjoying any goods, services, facilities, privileges, advantages, or accommodations. However, it also has a specific provision that allows public accommodations to “impose legitimate safety requirements that are necessary for safe operation. Safety requirements must be based on actual risks and not on mere speculation, stereotypes, or generalizations about individuals with disabilities.” Thus, businesses that plan on screening customers for fever need to carefully document the case for the eligibility criteria and be prepared to defend them.

Here is a great reference from Chain Store Age that digs into this topic further:
<https://chainstoreage.com/expert-analysis-reopening-businesses-face-thorny-customer-facing-ada-issues>

2.22 Operationally, how do I manage scanning children and disabled visitors or employees?

Customers should set up an operational process for scanning children and disabled visitors or employees. Some may choose to have a stool for children to stand on or have the parent pick them up. Others may choose to have children and disabled visitors scanned via a handheld, contactless Infrared thermometer. If the traffic volume justifies it, a second device can be positioned to address smaller or disabled individuals – for a “seated” inspection.

2.23 Does the thermal mirror solution have the ability to retake a person's temperature a second time if they fail?

Yes, you can retake a temperature as often as desired. You may want to have a secondary process for rescreening for any failed tests.

3 Metrics and Reporting Dashboards

3.1 Are the reports local to each device or can they be aggregated?

Data is collected locally, and the desired data (combinations of counts, results, photos) is sent to the *InReality* Cloud, but local data is purged regularly.

3.2 Can I customize reports?

Yes, but some very specific customization may require additional development. This is something we can collaborate on to determine requirements and possibilities.

3.3 Can you export reports?

Yes, reports can be exported in .csv format, which can be opened as a spreadsheet in Microsoft Excel.

3.4 Can I easily document the temperature result for every recognized person/employee's record?

The Employee Compliance module provides access to all historic employee compliance and audit records, either as a PDF report or to be ingested into the client HR system. Integrating to an external database may require supplement development/programming costs, or additional charges in SaaS – depending upon utilization.

3.5 How quickly are the dashboards refreshed?

Dashboards are refreshed approximately every 2 hours. Data is uploaded multiple times per hour and a standard data processing job is completed regularly for display to the dashboard. Real-time alerts are available via an API.

4 Network, Connectivity and Operations

4.1 Can I tandem this to an existing front of the store screen?

Yes, and the competition cannot.

4.2 Is there a non-networked version?

This solution is built for Enterprise needs, which is often networked for multiple locations.

4.3 How long does it take to reset to another person?

It is instant – less than 1 second. Here is a quick demo to show speed of read:

<https://cri.com/wp-content/uploads/SafeSpace/demo.mp4>

4.4 What is the lifespan of the camera?

Typical life span expectations are 3 years.

4.5 What is the warranty?

1 year.

4.6 What are the power and connectivity requirements?

The Thermal Mirror supports LAN and Wi-Fi network connectivity and can use local network or Cellular networks. It comes with a power adapter, needs a 120VAC connection or POE+.

4.7 What is the level of Wi-Fi that is required, is 2.4 the minimum?

It operates on 2.4GHz.

4.8 Does it have an ethernet connection?

Yes, it has an RJ45 connector.

4.9 Is there a way to Accept Terms and Conditions when connecting to Wi-Fi?

Currently, there is no way to allow an end user to connect to a Wi-Fi network where authentication is required.

4.10 Is it secure?

Yes, here are the specific details below:

Device

- Supports the ability to capture, store, and forward face images and temperature or dispose of all data on the fly (we are not storing or sharing any PII)
- Our custom launcher or Home screen only allows whitelisted apps to be shown on the Home screen
- Users will not be able to access any other apps or files on the device
 - This provides a level of security from users sideloading other apps or accessing the files on the device

Communication

- All communication between the Device and the SaaS cloud is through an HTTPS – SSL Secure tunnel with authentication. The devices utilize a Transport Layer Security (TLS) Version 1.2

Cloud

- The SaaS Cloud Platform is deployed on Amazon's Web Services platform and leverages its built-in security features
- AWS uses AES 256 Bit encryption for all applications, data storage and communication for distributing resources like Applications and Over-the-Air (OTA) Firmware updates
- All data exchanges are via SSL endpoints using HTTPS
 - Once data is received by the Platform from our sensors, it is our policy to encrypt it as it passes between our internal services, and to encrypt it when it is at rest

Physical

- It is recommended to deploy the Thermal Mirror with mounting appropriate to the environment and safety/security needs
- We suggest collaborating with your Loss Prevention team for the measures required to affix and bolt hardware and mounting devices to the physical space/surface

4.11 How do I integrate the system with an employee facial database?

As noted, we support the ability to import employee details, including their file photos.

4.12 What are the maintenance requirements?

There are no special maintenance requirements or calibration. It is like any other electronic customer facing device.

4.13 Can it run on battery or does it need to be connected to AC power to operate?

It can run on a UPS (Battery Power Supply, as long it supplies 12V, 2A of power).

4.14 What are the mounting options, and what mountings are included with the camera?

Included is a tabletop/counter mount, which requires an approximate 1-inch hole. The pole mounts on the surface and is secured via the provided mounting nut. Other solutions, including a wall mount and floor mount are available.

4.15 Can the Thermal Mirror easily be removed from pole mount when not in use?

Not at this time, but it is not difficult to move – simply requires unplugging a power and (if networked) a network cable. We are looking at having an option with castors on the stand in the future.

4.16 Can it run offline, or does it always need to be connected to the internet?

Yes, it can run offline with full functionality; however, report generation and support require internet access (ethernet or Wi-Fi). If Wi-Fi is NOT available, we have sourced a small device that can bring in a cellular data signal for connectivity.

4.17 How is data captured, stored, and sent, and where is it sent?

The data is stored locally on the device for a predetermined time frame. Updates to the cloud are sent every 15 minutes approximately from the device to the SaaS Cloud platform. Certain information can be stored locally for longer for reference purposes.

4.18 Can updates be scheduled for off-hours?

Updates, reboots, etc., can be scheduled for off-hours. Updates can be scheduled for dates based upon customer feedback.

4.19 Can you connect it to a laptop and share the Wi-Fi connection if the laptop is connected?

This has not been tested; however, it can share a broadcast Wi-Fi connection from a laptop or cell phone hotspot.

4.20 Can you link into the device?

The device can be reached remotely and is secure. The device can also be accessed locally via a mouse/keyboard and a local password for the device.

4.21 What are the local requirements for connecting to a local, wired network connection?

A port will need to be opened on the local network to allow for remote support.

4.22 Is it locked down by a password setting?

Yes, and this can be changed to customer requirements.

4.23 What are the cost and timing requirements to integrate it with existing building clearance and security devices or software?

Cost and timing depend on the type of interfaces and protocol used by the third-party systems.

4.24 Does the Thermal Mirror device communicate directly to a companion digital screen?

It does not communicate directly to a screen. We have a Linux-based solution that will allow us to have an event triggered so that the adjacent screen will display content. This is done through message broker functionality. There will be a cloud-based solution to come, which will provide additional options.

4.25 What do I clean them with, and how often?

You can clean them similarly to any other tablet. Use only a soft, lint-free cloth. Avoid abrasive cloths, towels, paper towels, or similar items to avoid scratching the screen. Avoid excessive wiping, which might cause damage. Do not get moisture into any openings. Do not spray cleaners directly onto the item, but spray on a soft cloth first. Using a 70% isopropyl alcohol wipe or Clorox Disinfecting Wipes, you may gently wipe the hard, non-porous surfaces and dry with a soft cloth.

5 Software and Customization

5.1 With which OS/system is the device compatible?

This is a purpose-built, customized platform based on Android OS (7.1).

5.2 Does it support an Android APK that enables the integration of alerts and images into other devices, like smart glasses and smart watches?

Custom applications are vetted on a case-by-case basis – please contact us for further discussions.

5.3 Can this be used as signage as well?

No, not on the device screen itself. The device itself is purpose built. However, it can be used in conjunction with external Digital Signage playback platforms. This is a key differentiator, and why we have paired a Samsung commercial grade screen, as messaging communications key confidence generating component.

5.4 Is the device compatible with other CMS products?

Yes, APIs are available for integration with other CMS products.

5.5 Is the Dashboard the only software on the device?

Yes, the software package on the device is solely for the purpose of the required functions of the Thermal Mirror (Temperature, Reporting, Monitoring).

5.6 Can you control the device from the “software”? Reboot, push updates to kiosks, etc.?

Yes, there is mobile device management (MDM) software on the device which allows for remote monitoring, troubleshooting, and updates. The MDM can be accessed by a website URL on most browsers. We recommend Chrome due to performance consistency.

5.7 Can we set the temperature threshold? CDC says anything above 100.4, what is the range and what are the increments?

Yes, the temperature alarm threshold is configurable and can be set by each customer as a means to identify persons for additional screening. It is available in increments of 0.2 degrees Fahrenheit.

5.8 When an employee comes up and is scanned, can we display their temp or just red light if over the threshold?

Yes, the temperature of any person being screened is shown on the display, as well as their name (if available on the platform). There are visual (lights) and audio (sounds/statements) that is triggered when an alarm (above temperature threshold) is triggered.

5.9 Can you use contactless smart cards and proximity cards? Which types? (HID, Mifare, etc.) or other RIFD for information can it work this? Can we see a software compatibility list for the cards?

The current version is not configured to support smart or proximity cards. The Platform is designed such that this functionality can be added. For custom applications, our partner software team will advise.

5.10 How does the thermal device calibrate to insure appropriate temperature checking?

The sensor is factory calibrated to operate indoors in an environment with temperatures ranging from 68°F to 77°F. This calibration should be checked every three months using the following calibration procedure:

To calibrate, use a medical grade infrared thermometer to compare to the Thermal Mirror reading. Use the app settings to adjust calibration by up to +/- 1.5F to match results. This calibration process can also be used when operating the Thermal Mirror outside of the normal operating conditions.

5.11 What are the CSV file requirements for Employee Registration?

For the face photo / image public URL, it needs to be publicly accessible programmatically without any authentication or captcha validation. And this URL cannot be a redirect URL like the Google drive URLs.

The maximum number of rows in a CSV file can be only 5,000 rows for each import, and a maximum file size of 5MB.

5.12 Does this device have integration with other platforms?

At this time, no. However, we have significant experience with system integrations and our open source Message Broker and other available APIs would allow for quick integration with several endpoints, such as other platforms required, with a defined use case.

5.13 What are the requirements for the Edge Application hardware requirements for use with the Creative Realities Message Broker to allow real-time, rules-based alerts?

- CPU - Intel Atom / Celeron Dual Core
- RAM - 2GB or above
- Storage - 32GB or above
- Operating System - Ubuntu 16.04 / Ubuntu 18.04
- Static IP required for Edge Application Device
- Message Broker Application Name: RabbitMQ

6 Data Aggregation, Security and Privacy

6.1 Are there privacy or legal concerns?

General privacy or legal policies are flexing given the COVID-19 pandemic, and are often subject to Federal, State, and Local jurisdictional rules. For temperature screening employees, customers, or visitors, we advise Companies establish a public-facing privacy policy and notification to those entering for screening. For employees, they should work with both Legal and HR teams to establish a disclosure document with transparency regarding image and data use, as well as agreement to terms.

6.2 What about HIPAA concerns?

HIPAA's Privacy Rule does not apply to the collection, use, or disclosures of individually identifiable health information made by an employing entity in the context of worksite COVID-19 screening activities. As our system is detecting visitors as anonymous, HIPAA does not apply. In May of 2020, the FDA has approved Thermal Temperature Inspection devices for use in corporate and public venues as part of Safe Space Policy procedures, in the USA.

6.3 What type of data is collected ("Collected Data") at the test station?

- Individual's time and date of test
- Individual's temperature
- Individual's photo at time of test
- Individual's name and employee ID (if it is a registered individual)
- If an individual is wearing a mask or not

6.4 How long is data kept on the device and what is sent to the client's cloud account?

The Collected Data, unless specified by client's policy, is purged on the device at a predefined, user configurable interval (i.e. every hour, day, never).

The Collected Data, based upon the client's policy, can be uploaded to the Client's cloud account, and include:

- Nothing
- Time date stamp with result and temperature
- Time date stamp with result and temperature, employee name and ID
- Time date stamp with result and temperature, employee name and ID, and photo thumbnail

The uploaded data is aggregated and made visible on a dashboard and accessible via API as follows:

- Test counts are aggregated by hour
- Temperature values are averaged and aggregated by "Pass/Fail", for each day
- Results can be summarized by date range, day-of-week, and hour-of-day
- Results can be summarized by individual station, by location, or groups of locations

6.5 Can you expand on data security?

All communication between the test station and the SaaS cloud is through an SSL Secure tunnel with single-sign-on authentication. Thermal Mirror devices use Transport Layer Security (TLS) to provide additional communications privacy and data integrity between applications over the network. The TCP port used is 443 and Protocols are HTTP and HTTPS.

The SaaS Platform is deployed on Amazon's Web Services platform and leverages its built-in security features. AWS uses AES 256 Bit encryption for all applications, data storage and communication for distributing resources like Applications. All data exchanges are via SSL endpoints using HTTPS.

6.6 From an application security perspective, what level of rigor is the application is security tested to? What tools are used and how often is the application updated and re-tested?

- a. Creative Realities employs Agile development methodology and new feature releases monthly. Unit testing and code review is performed as a normal course of the release.
- b. The level of testing is appropriate for an application that does not process payment transactions (PCI) or store any personally identifiable information (PII).
- c. The following tools are used:
 1. Unit testing - Mocha
 2. Penetration testing tools - OWASP Zed Attack Proxy and Abbey - Misterscanner

6.7 Do you have legally reasonable cybersecurity standards and practices in place to protect the capture and storage environment from alteration, unauthorized access, and unauthorized use? *On the standards side, this includes, for example, ISO 27001 series, or similar certification. Is that certification current?

We have reasonable industry standards in place, but they are not fully documented and certified.

6.8 What security logging and monitoring controls are in place? How can it be assured that the hosting platform and application remain secure and has not been exploited/compromised?

- a. Single-Sign-On authentication which keeps all the event logs
 1. Web App user login, Edge device authentication
 2. Application tokens
 3. Two-factor authentication
- b. Web application
 1. Audit trail for user action
- c. Amazon AWS
 1. Infrastructure protection
 2. Data protection – encryption for data at rest

6.9 Based on this, does the cloud instance adhere to recommended best practices, such as the NIST Cybersecurity Framework?

Yes, we use AWS managed services and, as they set the standards, we feel secure that we are following best practices for storage and transmission of application data.

6.10 Is this documented?

Yes.

6.11 How do you protect/segment our data from your other client's data stored on the same cloud SaaS infrastructure?

The Creative Realities SaaS application is built with an industry standard multi-tenant architecture. Each Customer's information and data is partitioned into individual accounts in the Data lake. All data at rest is encrypted and protected. To access data associated with a specific partition of the data lake, the application must authenticate and validate the customer account information and permissions.

6.12 Could customers use existing endpoint protections, like Symantec, etc.?

The device is a locked down device (both physical and software) but is not currently compatible with third party endpoint protections.

6.13 Can they be modified to protect against physical tampering so viruses cannot be installed?

The device is non-touch and physical connections are not available directly on the device and hidden when properly installed. In addition, the device is locked down to only allow whitelisted applications to be installed on the device.

6.14 Do you have a current information security policy in place, and when was it last updated?

No formal information security policy is in place, but one is current in development. We operate at industry standards or better.

6.15 Are you using encryption; if so, how? (Data at-rest, in-transit, or both)

All data-at-rest is managed through Amazon S3-managed keys (SSE-S3). Data-at-rest is encrypted, while data in-transit is not encrypted, but it is through SSL/TLS tunnel with authentication.

6.16 Are the cybersecurity standards and practices noted above driven by Creative Realities' policies and procedures?

Creative Realities maintains control over the standards and practices. For the application of the Thermal Mirror, Creative Realities has the ability to request or influence updates to support specific standard policy and procedures. This may require additional development fees.

6.17 Does AWS offer Compliance and Certifications?

AWS is certified as ISO 27001. For more information, see the following link:

<https://aws.amazon.com/compliance/iso-27001-faqs/>

7 Contact Support

The Creative Realities team is always available and ready to help you return to the workplace with confidence. If you have any questions or concerns, please contact us.

7.1 By Email

- a. support@cri.com

7.2 By Phone

- a. Toll-free: 1-888-369-3629