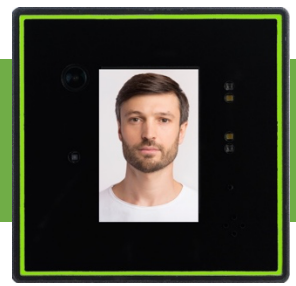


Quick Start Guide



Introduction

SAFR SCAN is a revolutionary touchless access control device that uses your face to verify your identity. The incredibly fast and accurate SAFR lightweight algorithm runs directly on the SAFR SCAN hardware for the utmost in reliability and security for your enterprise needs. This device comes fully featured to allow you to connect directly to any access control system via a Wiegand or OSDP (Open Supervised Device Protocol) interface. Simply plug in the PoE (Power over Ethernet) network connection and you are on your way to experiencing what SAFR SCAN offers.

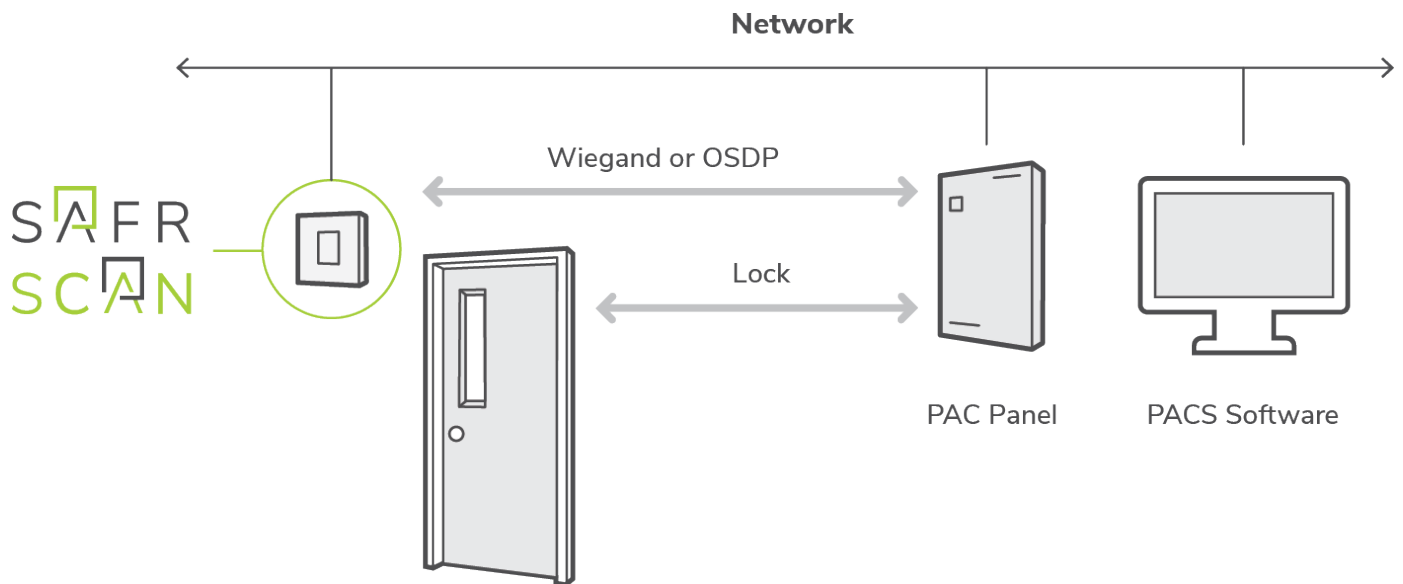


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How it works

SAFR SCAN integrates into your existing Physical Access Control System (PAC). SAFR SCAN is mounted next to the door and connected to the PAC Panel via Wiegand or OSDP as shown in the graphic below.



SAFR SCAN sends the user credentials to the PACS Panel when a valid user appears at the door. The PACS Panel then evaluates if the user should be granted access based on their access clearances and if so, unlocks the door. For situations where a PACS Panel is not practical, SAFR SCAN can also unlock a door directly via the door latch Relay.

Users and their credentials are added to SAFR SCAN via the PACS software. As users and credentials are added or updated in the PACS software, SAFR automatically updates the local database on each SAFR SCAN reader with the latest user records to maintain synchronization with the PACS software.

In addition to the basic PACS integration, SAFR SCAN also supports the following:

- Enrollment from device, from an image file or webcam
- BLE reader to support Mobile Credentials and Universal RF Card Reader
- IR and white light projectors for low light environments
- Direct camera control for extreme back light environments
- RTSP Output for integration to VMS
- Tailgating detection, person counting and more

SAFR SCAN First Run

This section describes powering up and testing your SAFR SCAN reader.

Power up SAFR SCAN

1. Plug in PoE (IP Address will be displayed on screen as device boots).
2. Open SAFR SCAN Console at http://IP_ADDRESS (where IP_ADDRESS is obtained from Step 1).
3. Click “Set Up System Login” when prompted and complete form. Then log in.

Enrollment

This section covers enrolling a person and have SAFR SCAN authenticate them as authorized for entry.

Enroll a person into SAFR SCAN

You can either enroll people by using an uploaded image of their faces or by using the camera on the SAFR SCAN device. See the SAFR SCAN Console’s People tab documentation for details on how to use an uploaded facial image to enroll a person.

Upload Face Image

1. Open SAFR SCAN Web Console as described above.
2. Navigate to the People screen
3. Click “Add” button in upper right
4. In the dialog provided, chose image file and enter user information as shown below.

The screenshot shows a 'Person profile' dialog box with the following fields and values:

| Field | Value |
|-------------------------|------------|
| First name | Diana |
| Last name | Cooper |
| ID Class | No-Concern |
| Person Type | Staff |
| Gender | Female |
| Age | |
| Access Control | |
| Access Clearance | User |
| Access Level | 50 |
| Access Expiration | Indefinite |
| Access Card Format | Wiegand-26 |
| Access Card Facility ID | |
| Access Card ID | |
| Mobile Credential ID | |

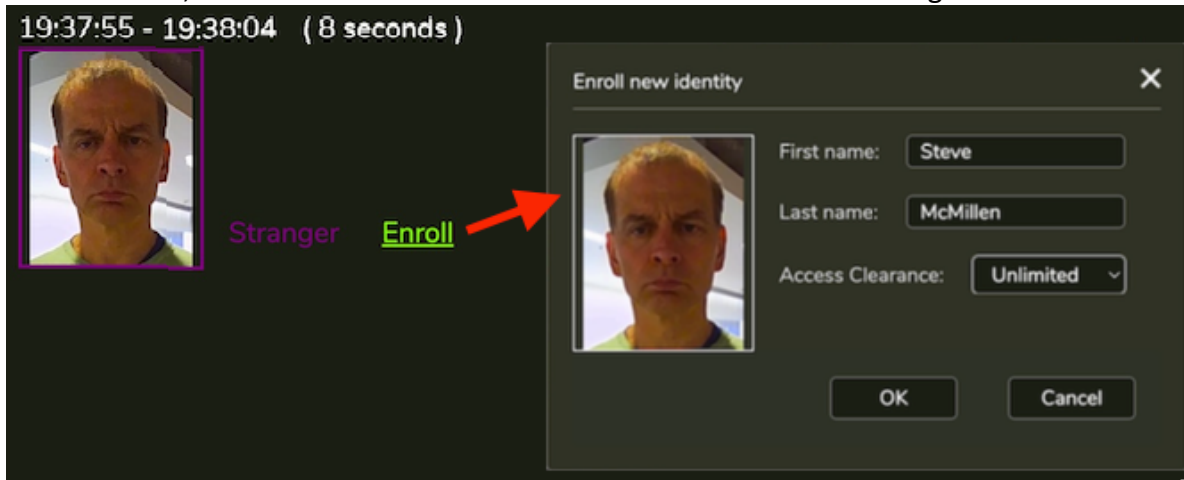
At a minimum, set first or last name and Access Clearance. Optionally provide Facility ID and Card ID.

5. Click Save Changes and the new person record will be added.

Enroll at the Reader

1. Open SAFR SCAN Web Console as described above.
2. Navigate to the Live tab

3. Have a person stand 1 to 3 feet in front of the SAFR SCAN device, and have them look directly at the reader's camera.
4. In the live tab, click "Enroll" and enter the user information in the dialog shown.



Access Clearance must be set or SAFR SCAN will not grant access.

5. Click OK to add the new person record.

Test Face Matching

1. Have the enrolled person stand 1 to 3 feet in front of the SAFR SCAN device, and have them look directly at the device's camera.
2. The LED ring should light up green indicating that SAFR SCAN has seen an authorized person.
3. The Live tab of the SAFR SCAN's Console should show that the enrolled person has been granted access.

Did it work?

Check troubleshooting section below if not.

At this point your SAFR SCAN device is functioning and ready to be installed.

Hardware Setup

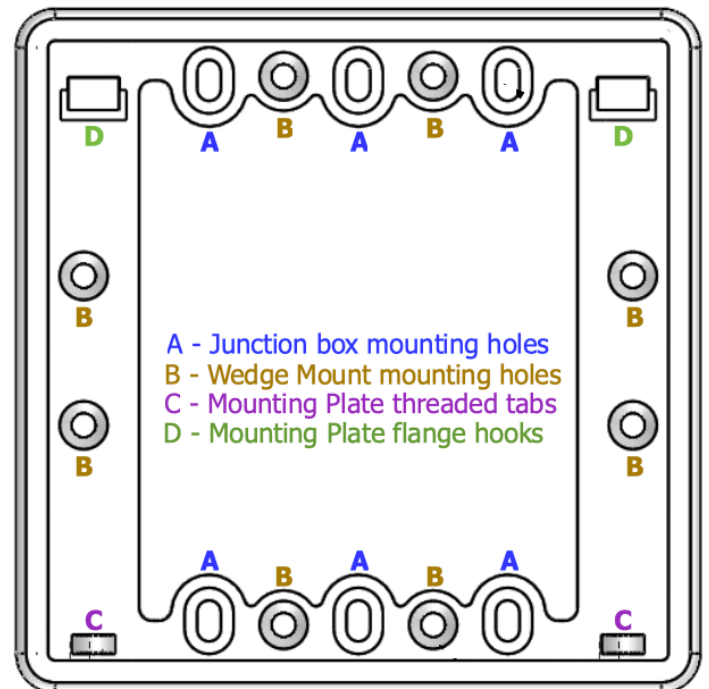
Mounting SAFR SCAN

SAFR SCAN can be mounted to the wall in one of two ways. Flat mount is for situations where the SAFR SCAN reader is mounted to a wall that is parallel to the plane of the door. Wedge mount is useful when the SAFR SCAN reader is mounted to a wall that is perpendicular to the plane of the door. Each method is described below.

Flat Mount Instructions

For Flat Mount, the SAFR SCAN reader is mounted to a standard 4" junction box. The Junction box is first secured to the wall following whatever method is suitable for the type of junction box in use. With junction box mounted, follow instructions below to mount SAFR SCAN to the junction box.

1. Remove the two screws (C) at the bottom of SAFR SCAN reader.
2. Separate the SAFR SCAN mounting plate from the SAFR SCAN reader.
3. Use junction box mounting holes (B) to fasten SAFR SCAN Mounting Plate to junction box (screws not included). Mounting Plate flange hooks (D) should be at top.
4. Align SAFR SCAN reader onto Mounting Bracket (see documentation for details)
5. Hold SAFR SCAN in place while fastening to Mounting Plate threaded tabs (C) with included screws.



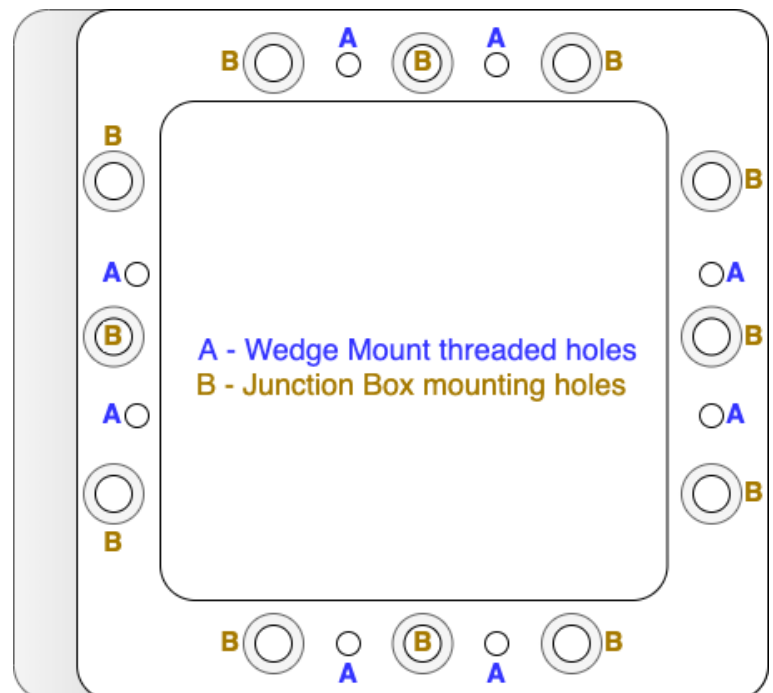
For outdoor environments, a weatherproof junction box should be used.

Wedge Mount Instructions

For Wedge Mount, the SAFR SCAN Wedge Mount is mounted to a standard 4" junction box. The Junction box is first secured to the wall following whatever method is suitable for the type of junction box in use. With junction box mounted, follow instructions below to mount SAFR SCAN to the junction box.

1. Mount Wedge Mount to junction box with recessed Junction Box mounting holes (B) (screws not included). Wedge may be mounted with angle left, right, up, or down depending on need.
2. Follow instructions for Flat Mount to mount the SAFR SCAN reader to the wedge mount using the Wedge Mount threaded holes (A)

Note that only four of the Wedge Mount threaded screws are required to secure the SAFR SCAN Mounting bracket to the Wedge Mount.



Connecting SAFR SCAN to a PAC Panel

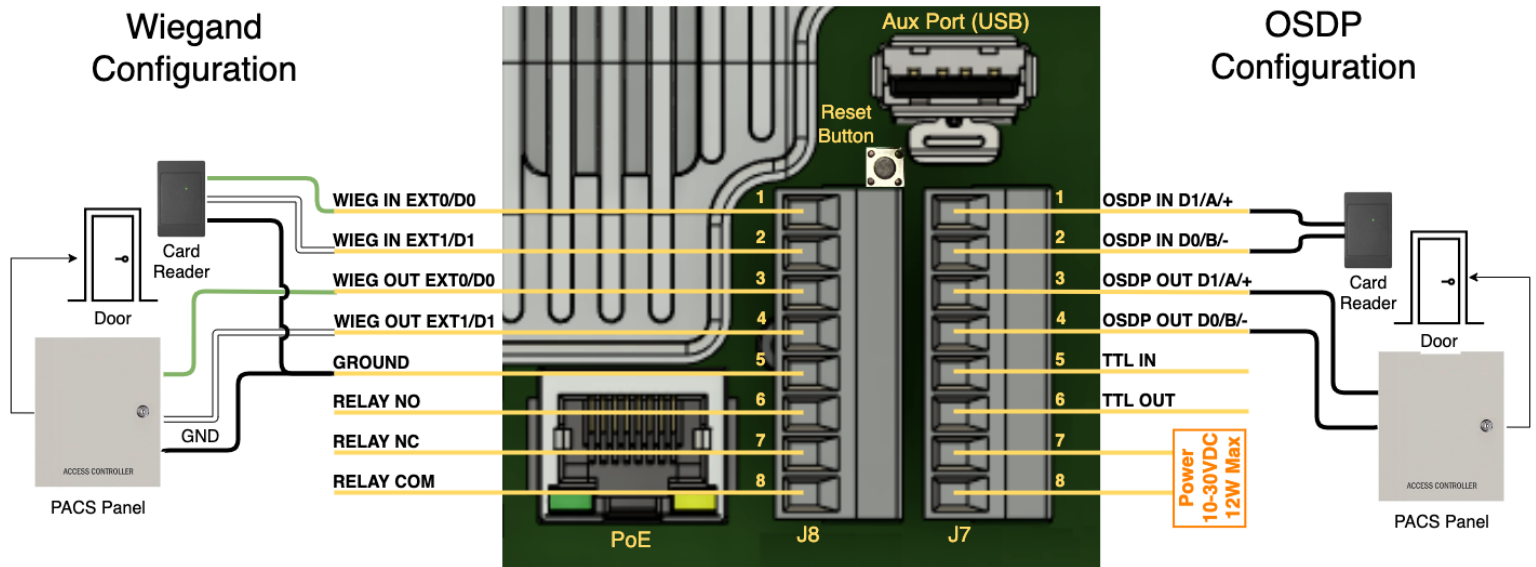
In order to open a door, you need to connect SAFR SCAN to a PAC panel or use the Relay to release a door latch. This requires both physically connecting the SAFR SCAN device to a PAC panel as well as configuring the SAFR SCAN software to take advantage of the new connection.

Note that SAFR SCAN supports both Wiegand and OSDP connection types. SAFR SCAN also includes a low voltage relay to operate door hardware directly.

Wiring Diagram

Figure below shows the J7 and J8 terminal blocks on the rear of the SAFR SCAN reader. The J8 terminal block includes Wiegand in and Wiegand out terminals as well as a Normal Open and Normally Closed relay. The J7 terminal block (Right) includes OSDP in and OSDP out terminals as well as TTL connections.

The diagram depicts either a Wiegand configuration (left) or an OSDP configuration (right) with SAFR SCAN taking input from an external card reader and providing output to the PAC Panel.



- **Reset Button:** Hold button for 10 seconds with power to reset device to factory defaults.
- **Relay:** NC/NO 120 VAC / 24 VDC max, 1 Amp max. 1 stranded twisted pair, 18 AWG.
- **OSDP/Wiegand/TTL:** 24 AWG stranded twisted pair(s) with shield, 4000 feet (1200 m) maximum.
- **Aux Power:** 12 VDC @1 Amp / 24 VDC @ 0.5 Amp (13W). Polarity reversible. 1 stranded twisted pair, 18 AWG.
- **PoE:** PoE 802.3af, Class 3; 14 watts.

Tools Needed

- 2mm flathead screwdriver (for terminal block screws).
- 2mm hex wrench (for SAFR SCAN device two Mounting Plate screws).

Wiring

For all connections, do the following:

1. Pull the appropriate 8-pin connector (i.e. J7 or J8) from its slot to expose the screws that secure the wires.
2. Strip wire ends about 1/8" and insert the connecting wires into the specified pins.
3. Tighten the screws to secure the wires in place.
4. Verify the wires are securely fastened.

Wire SAFR SCAN to PAC Panel as follows:

| Wiegand Connections | OSDP Connections |
|--|---|
| <ol style="list-style-type: none">1. Connect Wiegand Out Ext1 on SAFR SCAN to the corresponding input on the PAC Panel.2. Connect Wiegand Out Ext0 on SAFR SCAN to the corresponding input on the PAC Panel.3. Connect Ground on SAFR SCAN to the corresponding input on the PAC Panel | <ol style="list-style-type: none">1. Connect OSDP Out D0/B/- on SAFR SCAN to the corresponding input on the PAC Panel.2. Connect OSDP Out D1/A/+ on SAFR SCAN to the corresponding input on the PAC Panel. |

- Terminal labels on PAC Panel may vary but generally described as either D0 and D1, A and B or + and -

Enable SAFR SCAN Device for the appropriate connection type

To configure the SAFR SCAN reader for Wiegand, OSDP, or Relay do the following:

1. Enable Wiegand, OSDP, or Relay outputs as needed (see wiring diagram on flip side).
 - a. Wiegand: System > Wiegand > Wiegand connection to Control Panel = Enabled.
 - b. OSDP: System > OSDP > OSDP connection to Control Panel = Enabled.
 - c. Relay: System > Door Strike Relay > Electric door strike relay = Enabled (adjust duration if needed).
2. Add credentials to person record.
 - a. Go to People > Edit Person and set the following:
 - Access Clearance = Unlimited (to use access clearance settings on your access control panel).
 - Access Card Format = Select applicable format.
 - Access Card Facility ID and Access Card ID = Set to facility ID and user ID, respectively.

Now SAFR SCAN should be sending signal to panel to unlock door or close relay.

SAFR Account Setup

This section describes how to create your SAFR Reseller Account. SAFR Reseller accounts give the reseller access to demo software free of charge and ability to create Customer Accounts. Customer Accounts allow your end users to download and activate the software.

Create your Reseller Account

If you already have a Reseller Account, skip ahead to next section. If someone else in your organization has a SAFR Reseller Account already, please request they add you to that account. If you are a reseller and require a separate account for internal use, follow the process for creating Customer Accounts but use your organizations name and website.

If your organization does not already have one, take following actions to request a new Reseller Account:

1. Go to <http://safr.com/resellers>
2. Click on Sign up to request a new Reseller Account
3. Complete the form to request a license.
 - Reseller name, website, and country for your company
 - Enter your corporate email address
4. Shortly after you will receive an email to confirm your email address. Click the link to verify your email address.
5. Your request is then sent to our sales operations team for processing. You can expect a response typically within 24 hours. Feel free to contact us at support@safr.com if you have any questions.
6. Once approved, you will receive an email with instructions on how to activate your account.

Create a Customer Account for each deployment

Use SAFR Cloud or SAFR On-Premises Server to manage multiple devices centrally and synchronize people from your access control software.

If using SAFR Cloud, SAFR SCAN can connect to a single SAFR Cloud Customer Account from multiple independent local area networks (LANs) if network firewalls allow for outbound HTTPS.

If using SAFR Server, one SAFR On-Premises Customer Account is required for each LAN where SAFR will be installed, assuming routing is not available between each LAN. A single customer of SAFR SCAN may have multiple accounts if needed.

To create a SAFR Cloud or SAFR On-Premises Server perform following steps:

1. Go to <http://safr.com/resellers>
2. Sign in with your SAFR Reseller Account credentials.
3. Choose "Request customer account" in account menu in upper right.
4. Choose the SAFR SCAN license type.
License defaults to On-Premises. If you need a SAFR Cloud hosted license, contact support@safr.com.
5. Complete the form to request a license.
 - Enterprise name, website, and country should be the organization where SAFR SCAN is deployed.
 - Email should be the user that will manage the license.
 - Obtain MAC Address from sticker on SAFR SCAN device or the box.
6. An email will be sent to the email address indicated above to activate the license and set a password.

Software Setup

Downloading and activating SAFR Software requires a SAFR Account. In the instructions below, use the account suitable for the entity you are installing the software for. For example, a reseller installing a demo account should use the Reseller Account credentials. A Reseller installing for a customer should use the Customer's SAFR Account credentials created as described above.

Connect SAFR SCAN SAFR On-Premises Server

Use SAFR On-Premises Server to manage multiple devices centrally and synchronize people from your access control software.

Install SAFR Platform application

1. Go to <http://safr.com/resellers>.
2. Click on Product Downloads
3. Sign in with your SAFR Account
4. Select the desired operation system (SAFR SCAN supports Windows or Linux versions)
5. Download and install the SAFR Platform CUDA 10 Edition.
6. When installation is complete, sign into the Desktop Client using your SAFR Account credentials.

NOTE: You can install the software on only one machine. Once installed the software will bind to that machine. If you need to migrate to a new machine, contact support@safr.com to reset the hardware binding on your license.

Connect SAFR SCAN to SAFR On-Premises Server

1. Open the SAFR SCAN Web Console as described in First Run above
2. Navigate to System > SAFR Server.
3. Choose "SAFR Server".
4. Enter the IP Address of SAFR Server and your SAFR Account credentials.

Connect SAFR SCAN to SAFR Cloud

Use SAFR Cloud to manage multiple devices centrally.

Note: SAFR Cloud does not support connection to an On-Premises access control software. Used SAFR On-Premises if this is required.

Connect SAFR SCAN to SAFR Cloud

1. Open the SAFR SCAN Web Console as described in First Run above
2. Navigate to System > SAFR Server.
3. Choose "SAFR Server".
4. Enter the IP Address of SAFR Server and your SAFR Account credentials.

Sign into SAFR Cloud

- Go to <http://safr.com> > Customer Portal > SAFR Cloud Web Console
- Sign in with your SAFR Account

See SAFR SCAN Documentation at go to <http://safr.com> > Customer Portal > Documentation for information about SAFR Desktop and SAFR Mobile clients.

Troubleshooting

This section describes some of the common issues and how to resolve them.

Liveness verification does not work when SAFR SCAN is behind glass

3D face verification will fail if the reader is placed behind glass. This results in blocking the infrared signal preventing proper operation for liveness verification.

Strong backlight preventing matching

If there is strong backlight, SAFR SCAN may not match the face and thus prevent access granted.

Symptom: Faces are not being matched (appear as “Stranger” or “Unrecognizable” on event in Live View) or are matched but not authorized preventing access granted.

Resolution: Switch to manual mode for backlight compensation as follows:

1. Open SAFR SCAN Settings Operation Page.
2. Change “Backlight Compensation” from “Auto” to one of the manual options.
3. Check if authorization improves and try other settings if not.

For product downloads, go to <http://safr.real.com/products>.

For more information, go to <http://support.safr.com> or email us at support@safr.com.

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Product Login



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