

1 Check Contents

Make sure all of the items above are included in the radar kit.

2 Select a Location

Select a suitable location to mount the radar. Teledyne FLIR recommends mounting the Elara R-Series Radar at a height of approximately 4 m (13 ft) and so that the radar assembly is horizontally level. For more advice on positioning and orienting the radar, see the *Elara R-Series Radar Installation and User Guide*.

Verify that the operating temperature range is between $-40^{\circ}\text{C} \sim 70^{\circ}\text{C}$ ($-40^{\circ} \sim 158^{\circ}\text{F}$), 10-90% relative humidity (non-condensing).

Supplying Power to the Radar

The radar can be powered by 12 VDC; 24 VAC; or PoE IEEE 802.3af—for example, Teledyne FLIR part number #T911183 16W Gigabit multi-plug PoE injector. Power consumption is $<13\text{W}$.

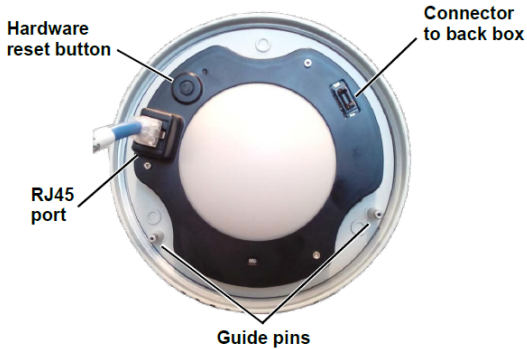
3 Connect the Radar

To install the radar, Teledyne FLIR recommends connecting it on a bench or in a lab and configuring it for networking before mounting and aiming it. However, circumstances can dictate adjusting the sequence of the steps. For example, you can mount the radar before configuring it for networking, or connect the radar before mounting it.



Warning

The radar itself does not have a power on/off switch. Do not supply power to the radar until you have completely finished connecting it.



| Connector | Connection |
|-----------------|---|
| RJ45 port | Attach a Cat5e or Cat6 cable from the network switch to the RJ45 port for 100/1000 Mbps Ethernet and PoE. Ethernet is required for configuring the radar and for streaming IP video from it. |
| 10-pin terminal | If you are using a 12 VDC or 24 VAC external power supply, connect the wires to the appropriate pins on the 10-pin connector supplied with the radar kit. Then, plug the connector into the terminal. |

| Pin | Connection | Future release support | | | |
|------|-------------|------------------------|---------|----------|----------|
| VIN+ | VAC / VDC + | A/O+ | A/O- | A/I+ | A/I- |
| VIN- | VAC / VDC - | AUD IN+ | AUD IN- | AUD OUT+ | AUD OUT- |

4 Configure for Networking

To discover the radar on the network, Teledyne FLIR recommends using the FLIR Discovery Network Assistant (DNA) tool. Version 2.3.0.20 or higher supports Elara R-Series, does not require a license to use, and is a free download from [the product's web page on the Teledyne FLIR website](#). You can also configure the radar for networking using the radar's web page, or a supported VMS. Using the DNA tool or the radar's web page for initial configuration requires using the default admin user or any user assigned the admin or expert role.

| Task | DNA tool | Radar's web page |
|--|----------|------------------|
| Discover radar IP address | • | |
| Configure IP address, mask, and gateway | • | • |
| Configure IP address, mask, and gateway for more than one radar at the same time | • | |
| Configure DNS settings and MTU | | • |




Notes

- For information about using the supported VMS to configure the radar, see the VMS documentation.
- For information about accessing the radar's web page, see the radar's installation and user guide.

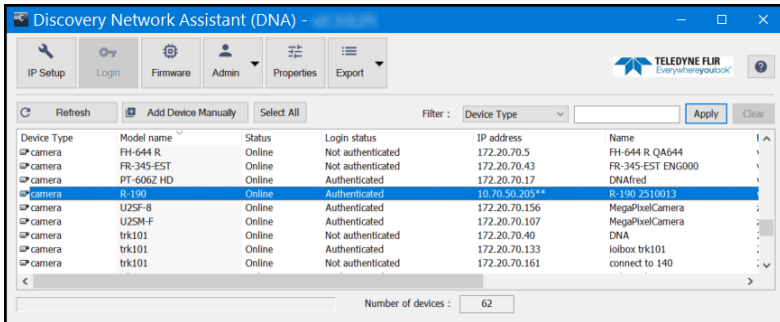
By default, DHCP is enabled on the radar and a DHCP server on the network assigns the radar an IP address. For example, if the radar is managed by a FLIR Horizon or Meridian VMS and the VMS is configured as a DHCP server, the VMS automatically assigns the radar an IP address.

If the radar is managed by a FLIR Latitude VMS or is on a network with static IP addressing, you can manually specify the radar's IP address using the DNA tool or the radar's web page. The radar's default IP address is 192.168.0.250.

To configure the radar for networking using the DNA tool:

- Make sure the radar and the PC are on the same LAN segment.
- Run the DNA tool (DNA.exe) by double-clicking .

The Discover List appears, showing compatible devices on the VLAN and their current IP addresses.



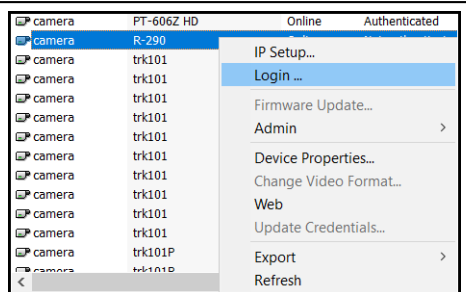
*DNA Discover List
R-190 Authenticated and Manually Added ***


In the DNA Discover List, verify that the radar's status is *Online*.

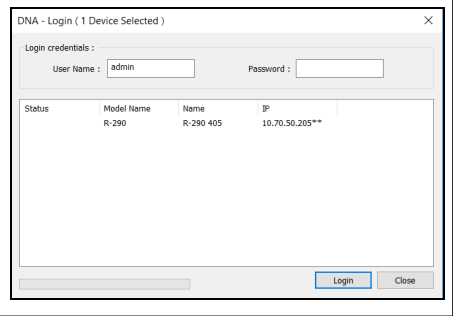
If this is the first time you are configuring the radar or if it is the first time after resetting the radar to its factory defaults, DNA automatically authenticates the radar with the default password for the radar's admin user (*admin*).

If the admin user password has been changed, authenticate the radar.

In the DNA Discover List, right-click the radar and select **Login**. In the **DNA - Login** window, type the password for the admin user. If you do not know the admin user password, contact the person who configured the radar's users and passwords.




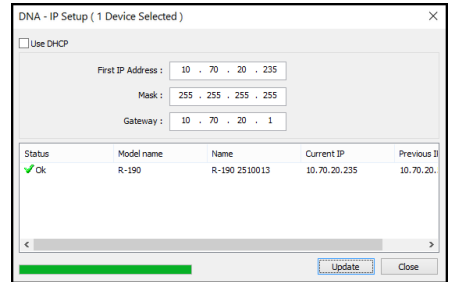
Click **Login**, wait for  Ok status to appear, and then click **Close**. In the DNA Discover List, verify that the radar's status is *Authenticated*.



- c. Change the radar's IP address.

Right-click the radar and select **IP Setup**.

In the **DNA - IP Setup** window, clear *Use DHCP* and specify the radar's *IP address*. You can also specify the *Mask* (default: 255.255.255.0) and *Gateway*. Then, click **Update**, wait for  Ok status to appear, and then click **Close**.



5 Fit Mounting Hardware

You can attach the radar's mounting bracket to standard electrical boxes; directly to a secure, flush, and vibration-free surface; or to appropriate mounting hardware. For information about accessories Teledyne FLIR offers to mount the radar in a corner, on a pole, or on a wall, see the FLIR Security Fixed Mount Solutions Accessory Guide.

Be sure to have the required accessories and tools available.

If required, install the mounting hardware for the radar according to the instructions for the hardware. Route the power and network cables so that they are accessible when mounting the radar.

6 Attach the Mounting Bracket

 **Warning!** Ensure the power supply or circuit breaker is off.



Twist-lock screws in back box



Mounting Bracket
Detached from Back Box

- Remove the back box cover by unscrewing it from the back box.
- The mounting bracket is shipped attached to the back box. Using the screwdriver, unscrew the three quarter-turn twist-lock screws to release the bracket.

To attach the mounting bracket to a standard electrical box:

Use the holes in the mounting bracket and the corresponding holes in the electrical box, according to the box labels engraved on the bracket; and suitable bolts, washers, and nuts (not included in the radar kit).

To attach the mounting bracket directly to a surface:

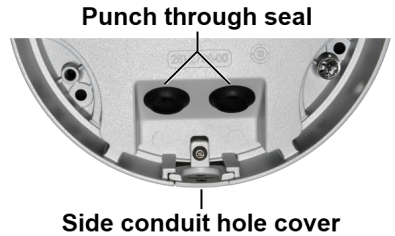
- Choose four widely spaced mounting holes on the bracket for optimum flat surface mounting.
- Using the bracket as a template to mark the surface, drill four anchor holes.
- (Optional) If necessary, drill a hole wide enough for routing cables.
- Hammer the four plastic screw anchors into the drilled holes.
- Insert the anchors and then attach the bracket to the surface using the four M4 25mm self-tapping screws included in the radar kit.

When tightening the screws, the holes in the mounting plate allow for making small adjustments to the bracket's position.

- (Optional) If you are routing cables to the radar using a conduit, route the conduit to the bottom edge of the mounting bracket, so that you can attach the conduit to the conduit entry hole on the back box. Use the Torx wrench to remove the conduit hole cover.

7 Route the Cables

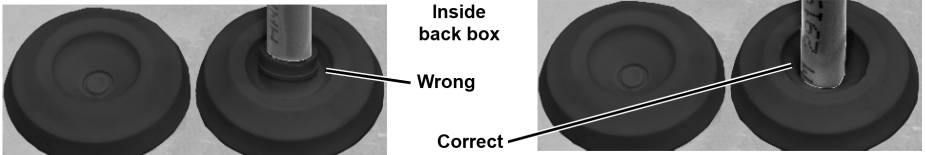
- Route cables through the hole in the mounting bracket or through the cable conduit.
- For each cable into the back box, use the Torx wrench to punch a hole in the center of a cable gland seal from the underside.
- Insert the cable through gland seals, before terminating or connecting it.



Important

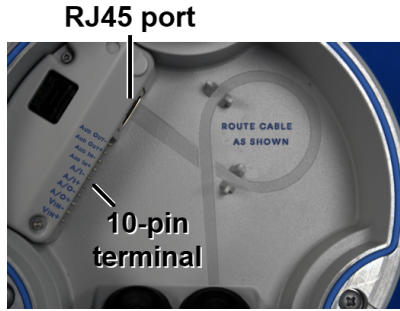
Inserting a terminated cable through a gland seal compromises the cable gland's waterproof integrity.

- Push the cable back through the seal so that the seal points out from the back box.



- Seal all exposed connections. Cable connections are not waterproof.
- Route the Ethernet cable inside the back box as shown.

- g. Terminate the cables and then connect them to the radar according to the information in [Connect the Radar](#).



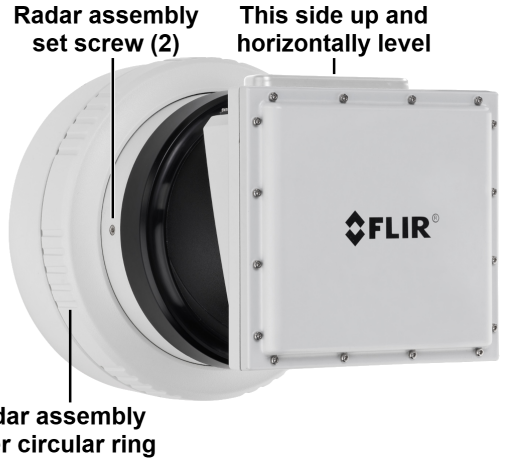
8 Assemble the Radar

- a. Using the screwdriver, secure the back box onto the mounting bracket to tighten the three quarter-turn, twist-lock assemblies.
- b. Secure the radar assembly onto the back box using the guide pins on the radar assembly and the guide holes on the back box.

Make sure the THIS SIDE UP marking on the radar assembly faces up, the FLIR logo on the flat front panel is upright, and that

the top of the radar assembly is horizontally level, unless there is a slope or you are mounting it at a height greater than 8 m (26 ft).

- c. Securely tighten the radar assembly's outer circular ring. Then, use the Torx wrench to securely tighten the set screw on the outer circular ring.
- d. Make sure the radar assembly is pointed at the area under surveillance, but do not tighten the set screws.



Important

Do not point the radar at metallic surfaces that are closer than one meter away.

- e. Provide power to the radar. Wait one minute to allow the radar to fully power up, and then proceed.



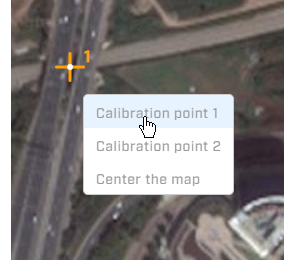
Caution

When removing the radar assembly from the back box, make sure it does not become a drop hazard for persons or property.

9 Upload Map Image

Using the radar's web page, you can [Upload Map Image](#), [Aim the Radar and Test Target Detection](#), and [Define Alarm and Exclusion Regions](#). For instructions on logging in to the camera's web page, see the *Elara R-Series Radar Installation and User Guide*.

- From an online map or GPS service, download a map image of the area under surveillance in PNG or JPG format. For two calibration points in opposite corners of the map image, make note of their latitude and longitude coordinates.
- On the View Settings Home Page, click **System Settings** and then open the Map page.
- Under Map Display, click **Find file**, and then click **Upload**.
- For each calibration point, right-click on the map, and select **Calibration point 1 / 2**. Enter the latitude (**Lat**) and longitude (**Lon**) coordinates for each calibration point (**P1** and **P2**).
- Click **Save**.



Right-click on map

- For each calibration point, right-click on the map, and select **Calibration point 1 / 2**. Enter the latitude (**Lat**) and longitude (**Lon**) coordinates for each calibration point (**P1** and **P2**).

10 Configure Georeference Settings

- Open the Georeference page.
- Specify the radar's installation height, in meters above the surrounding ground level; it must be greater than zero.
- Specify the radar's orientation in degrees from North.
- Scroll down to GPS Coordinates and click **Apply**. The radar's onboard GPS provides latitude, longitude, and ground altitude information.

11 Aim the Radar and Test Target Detection

- While viewing the radar's display in View Settings, aim the radar by manipulating the assembly to provide the desired field of view.
- Have a person walk in a straight line directly away from and the back towards the radar, at or near a landmark identifiable on the map. Verify the detection track appears in the radar display and accurately appears on the map.

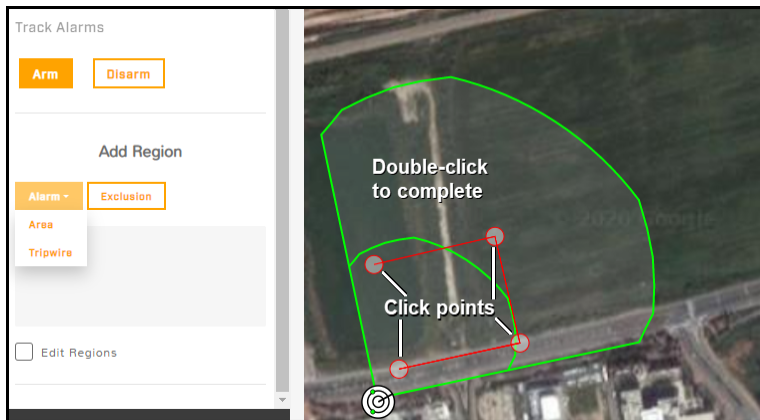


Target detected

- Tighten the two set screws and verify the radar's orientation setting.

12 Define Alarm and Exclusion Regions

- In View Settings, open the Radar page, scroll down to **Add Region**, and click a type of region.
- Define the first point of the region by clicking on the radar display.
- Continue defining the region (up to 25 points).
- Complete the region by double-clicking on the radar display.



Tips

- Exclusion regions can help eliminate alarms from leaves, trees or bushes moving in the wind, for example.
- For more information about installing, configuring, and operating the radar, including detection distances and pairing with a FLIR PTZ camera, see the *Elara R-Series Radar Installation and User Guide*.

13 Attach the Radar to a Supported VMS

After mounting the radar and discovering or defining its IP address, use VMS Discovery/Attach procedures to attach the radar to a supported VMS.

14 Radar Dimensions

The Elara R-Series Radar's dimensions are \varnothing 161 x 195 mm (6.34 x 7.68 in).

15 Register the Product

Register the product at <https://customer.flir.com>.

For warranty information, see <https://www.flir.com/support-center/warranty/security/flir-security-product-warranties/>.

16 Contact Information

Americas

6769 Hollister Avenue
Goleta, CA 93117

Support: <https://support.flir.com/>

27700 SW Parkway Ave.
Wilsonville, OR 97070