BOSCH

Dinion Infrared Imager FAQ

How do I adjust the photocell sensitivity?
- Photocell sensitivity is factory preset to Auto and adjustment should generally not be required. In cases such as where a nearby object is reflecting a large amount of IR light, the photocell switch point may need to be adjusted.

- For the analog version, you can access the menu option via the On-Screen Display (OSD) pad located on the back panel of the imager, via the Bilinx (CFTID) interface.   From the Main Menu screen scroll down and select 'Day/Night'. Once in the 'Day/Night Menu' ensure the Day/Night setting is set to Auto Photocell. Scroll down and select 'SW Level', and toggle to the desired level from -15 to +15. A low (negative) value means that the camera switches to monochrome at a lower light level. A high (positive) value means that the camera switches to monochrome at a higher light level.

- For the IP version, you can access web browser user interface for the camera from the Configuration Manager. From Configuration Manager find the camera from the Network tab.   Right click on the camera's IP address and select 'Show Settings in Web Browser".   Once the web browser is on you screen, follow the below steps:

    Advanced Mode → Camera → Picture Settings → Day/Night → Adjust the switch level slider

    A low (negative) value means that the camera switches to monochrome at a lower light level. A high (positive) value means that the camera switches to monochrome at a higher light level.

    Note: Please make sure that 'Auto Photocell' is selected from the Day/Night setting.

How do I adjust the IR intensity?
- IR intensity adjustments allow you to compensate for variation in IR reflectivity of objects in the scene for each camera on site.

- For the analog version, you can access the menu option via the On-Screen Display (OSD) pad located in the back panel of the imager, via the Bilinx (CFTID) interface. From the Main Menu screen scroll down and select 'Illuminator'. Once in the 'Illuminator Menu' ensure the Illuminator setting is set to ON.   Scroll down and select 'Intensity', and toggle to the desired level from 0 to 30.

- For the IP version, you can access web browser user interface for the camera from the Configuration Manager. From Configuration Manager find the camera from the Network tab.   Right click on the camera's IP address and select 'Show Settings in Web Browser".   Once the web browser is on you screen, follow the below steps:

    Advanced Mode → Camera → Picture Settings → Illuminator →   Adjust the switch level slider

    Note: Please make sure that the IR function is set to 'On' in the Illuminator Menu.

How do I know if the IR is working?

- 850nm IR will produce a slight red glow at the source which can be observed with the naked eye. 940nm is completely invisible to the human eye. Digital cameras and digital video cameras are sensitive enough to IR light to detect it when aimed at the IR light source.

How will 3D Diffuser[1] help me?

- 3D Diffuser technology[2] bends and shapes light to reduce hot spots and dark edges typically created by conventional IR illuminators.

How do I select the infrared beam angle?

- For best performance the Infrared field-of-illumination (FOI) should match the camera field-of-view (FOV). The IR beam width determines how wide across an area the fixed amount of infrared power is spread. For maximum range, the narrowest possible beam-width should be used. You can adjust the infrared beam width by inserting or removing the 3D Diffuser. The 3D Diffuser is recommended for wider field application. With the 3D Diffuser, a focal length of 6mm provides a horizontal field of view of 43° to match the illumination pattern; the resulting beam angle is 43° (H) x 10° (V). Without the 3D Diffuser, a focal length of 27mm (or greater) provides a horizontal field of view of 10° (or less) to match the illumination pattern; the resulting beam angle is 10° (H) x 10° (V).

What PSU do I need for these cameras?

- The power draw is 35W; however, we recommend a power supply with 60W capability. We recommend 12 VDC or 24 VAC CSA Certified/UL Listed Class 2 power supply. For the IP PoE, we recommend a certified PoE+ rated 42.5 VDC to 57 VDC, 600mA, 34.20 W as the maximum power adaptor that should be used. Available Bosch power supplies include UPA-2450-50 and UPA-2450-60.

What kind of cable can I use for power?

- We recommend AWG 16 to 22 stranded wire or AWG 16 to 26 solid wire for power.

Does the camera include a bracket and mounting hardware?

- Yes, all Dinion Infrared Imager include a wall mounting bracket for immediate installation. Optional pole [VG4-A-9541 Pole Mount Adapter] and corner mount [VG4-A-9542] accessories are available to order.

What is the recommended setup or installation configuration?

- The cameras are commonly installed at heights of roughly 15-20ft (4-5m) or higher. This works best with the 3D Diffuser illuminator to provide the most even illumination of both near and far objects. It is important to take into account local environmental considerations, such as localized lighting, or surfaces nearby that could potentially reflect infrared light back into the camera.

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[1] 3D Diffuser is a patented technology exclusively from Bosch Security Systems.
[2] The International publication number for the 3D Diffuser patent is WO 2008/037049 and the international application number is PCT/CA2006/001570.

How far can I see with the camera?
- Extreme series camera performance capabilities are typically specified in terms of four different levels of imaging objectives: Detection, Classification, Recognition, and Identification imaging objectives. A white paper on DCRI definitions is available from Bosch Security Systems website. Note that illuminator wavelength (850nm or 940nm) affects the maximum obtainable range.

- Here are the specific DCRI ranges for the Dinion Infrared Imager (VEI-30/NEI-30) in the context of 850nm IR:
  - Detection: up to 160m (525 ft)
  - Classification: up to 120m (390 ft)
  - Recognition: up to 90m (295 ft)
  - Identification: up to 50m (165 ft)

- Here are the specific DCRI ranges for the Dinion Infrared Imager (VEI-30/NEI-30) in the context of 940nm IR:
  - Detection: up to 80m (260 ft)
  - Classification: up to 60m (195 ft)
  - Recognition: up to 45m (150 ft)
  - Identification: up to 25m (80 ft)

What applications are these cameras best suited for?
- Dinion Infrared Imager (VEI-30/NEI-30) with its 5-50mm IR-corrected varifocal lens is best suited for long range viewing, often for perimeter surveillance, monitoring access points or critical assets at distance.

What is the difference between 850nm and 940nm?
- 850nm is "semi-covert", and will provide the "best of both worlds" performance. It is slightly visible at the source with a red glow and provides the maximum illumination range.

- 940nm is "covert", and is completely invisible to the human eye at the source. However, it will provide roughly half the range as compared to 850nm.

Can the Dinion Infrared Imager (NEI-30) be Powered over Ethernet POE?
- Power may be supplied via a Power over Ethernet Plus (PoE+, IEEE 802.3at, class 4) compliant network cable connection.   With this configuration, only a single cable connection is required to power and to control the camera while also viewing images from the camera. Note: PoE+ power limitations reduce IR and temperature ranges.   Please refer to the datasheet for details.

Do I need any special accessories or software for IP/network setup?
- No. A simple web browser with MPEG ActiveX plug-in (supplied on the Product CD) can fully configure and monitor the Extreme Series IP cameras when pointed at the camera's IP address. Simply type in the IP address that is assigned to the camera to the web browser's address bar.   In addition, the Bosch Configuration Manager (supplied on Product CD) can be used to configure and monitor the cameras. The Configuration Manager is a useful tool for detecting connected cameras and determining the IP address.

What software is the IP unit supported by?
- The Dinion Infrared Imager IP cameras are supported by a wide range of Bosch and 3rd party VMS and NVR providers. Bosch software options include Bosch Video Client (BVC), Bosch Recording Station (BRS), VIDOS Video Management System, Video Recording Manager (VRM), and Bosch Video Management Systems (BVMS).

Do the Dinion Infrared Imager IP Cameras Support Intelligent Video Analysis [IVA]?
- Yes, the Dinion Infrared Imager IP cameras support Bosch IVA 4.5 and beyond. There is no need to purchase additional IVA licenses.

How can I set up the IP version of the Dinion Infrared Imager using the Configuration Manager?
- We recommend using the Configuration Wizard tool that comes with the Configuration Manager software. Once the Configuration Manager software is on you screen, follow the below steps:

    Tools → Configuration Wizard

What considerations should be made when using the Dinion Infrared Imager with IVA?
- The following are considerations which should be taken into account when using IVA with the Dinion Infrared Imager (NEI-30):

    - Mounting stability: shaking cameras produce shaking images which will reduce the performance of IVA. Selecting a mounting location which is solid will avoid camera movement from wind, passing trucks, etc…

    - Image quality is the #1 determinant of IVA performance. There are any numbers of factors that can reduce image quality including camera focus, dirty lenses, lens flare, and so on.