



BOSCH
Invented for life

Introducing the first X series

FLEXIDOME IP starlight 8000i X series



FLEXIDOME IP starlight 8000i X series

Highest level of detail

Rely on the highest levels of security for mission critical applications thanks to high quality imaging capabilities, combined with built-in Artificial Intelligence and a robust housing.

A portfolio overview

NEW



HD 1080p | 4MP
starlight X and HDR X

FLEXIDOME IP starlight 8000i X series

Excellent imaging – starlight X technology

starlight X technology

FLEXIDOME IP starlight 8000i (X series)

- ▶ Maximum sensitivity to ensure best possible picture quality 24/7
- ▶ Available in HD 1080p and 4MP resolution, these cameras capture maximum detail in challenging scenes to enable Intelligent Video Analytics to provide even more relevant data.

HD starlight



HD starlight X



Competition 1/1.8" 4MP Low light



4MP starlight X



FLEXIDOME IP starlight 8000i X series

Excellent imaging – starlight X technology

starlight X technology – maximum performance, 24/7

- ▶ starlight X technology combines the latest high performance, large pixel sensors, custom optics, improved image processing and noise suppression
 - ▶ Up-to 5.5x improved color sensitivity compared to the regular starlight camera
 - ▶ Reduced motion blur due to faster shutter speeds
 - ▶ More detail due to lower noise
 - ▶ Much better color reproduction at lower light levels
- ▶ New technology boosts monochrome sensitivity to the next level
 - ▶ Highly improved performance in extreme low-light scenes
 - ▶ Significantly increases the range of external IR illuminators

FLEXIDOME IP starlight 8000i X series

Excellent imaging – starlight X technology

starlight X



HD



Competitor A



Competitor B



WATCH VIDEO

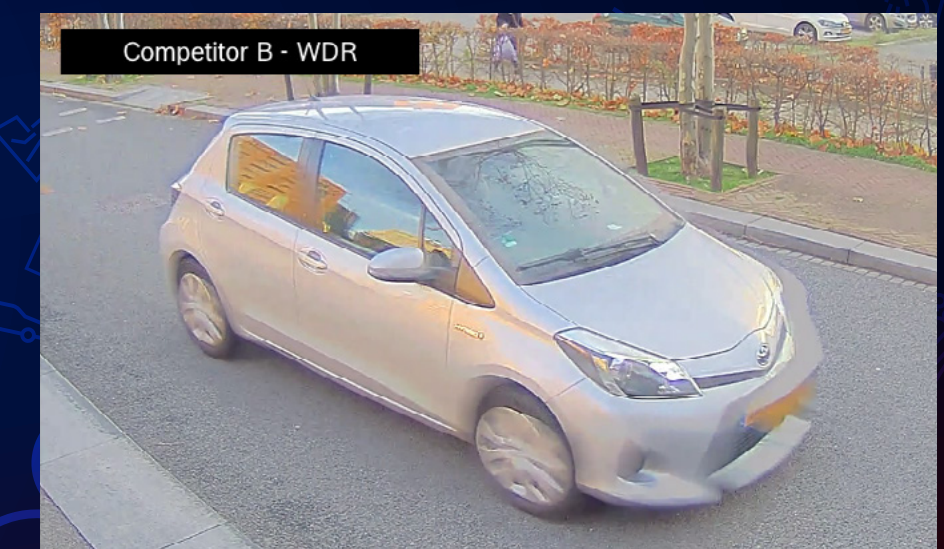
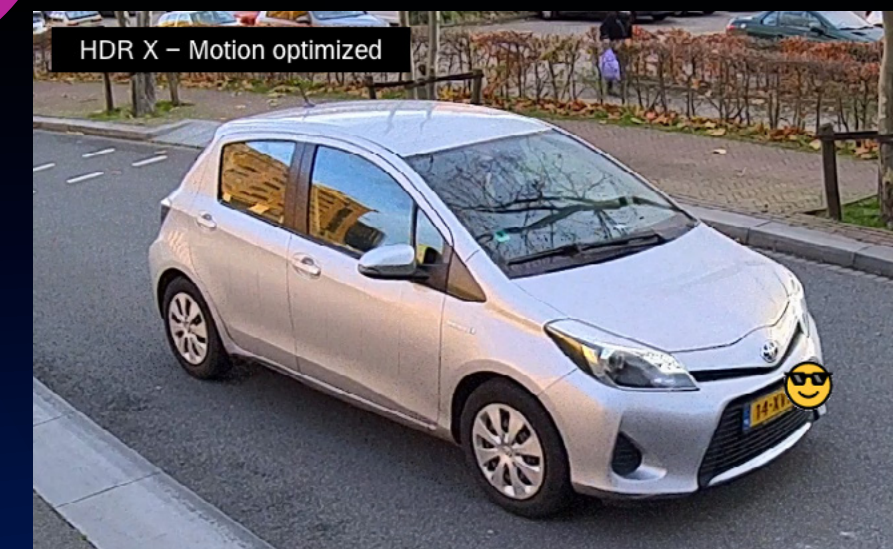
FLEXIDOME IP starlight 8000i X series

HDR X – High Dynamic Range

HDR X – High Dynamic Range

NEW

- ▶ HDR X is a new technology that combines unique sensor functionality and advanced algorithms. It is a huge leap forward in capturing high quality video of moving objects in scenes with a large dynamic range.
- ▶ HDR X provides motion optimized images without blur and motion artefacts
- ▶ HDR X allows HDR imaging at lower light levels in which traditional HDR technologies are non-functional
- ▶ Up-to 144dB in HDR X – Extreme DR mode



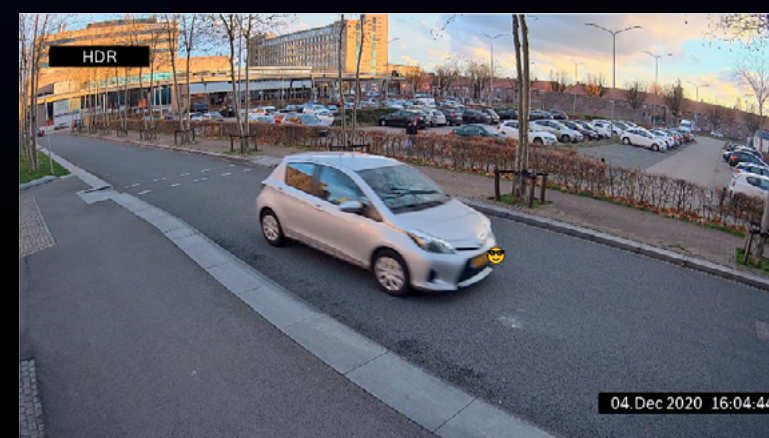
FLEXIDOME IP starlight 8000i X series

HDR vs HDR X

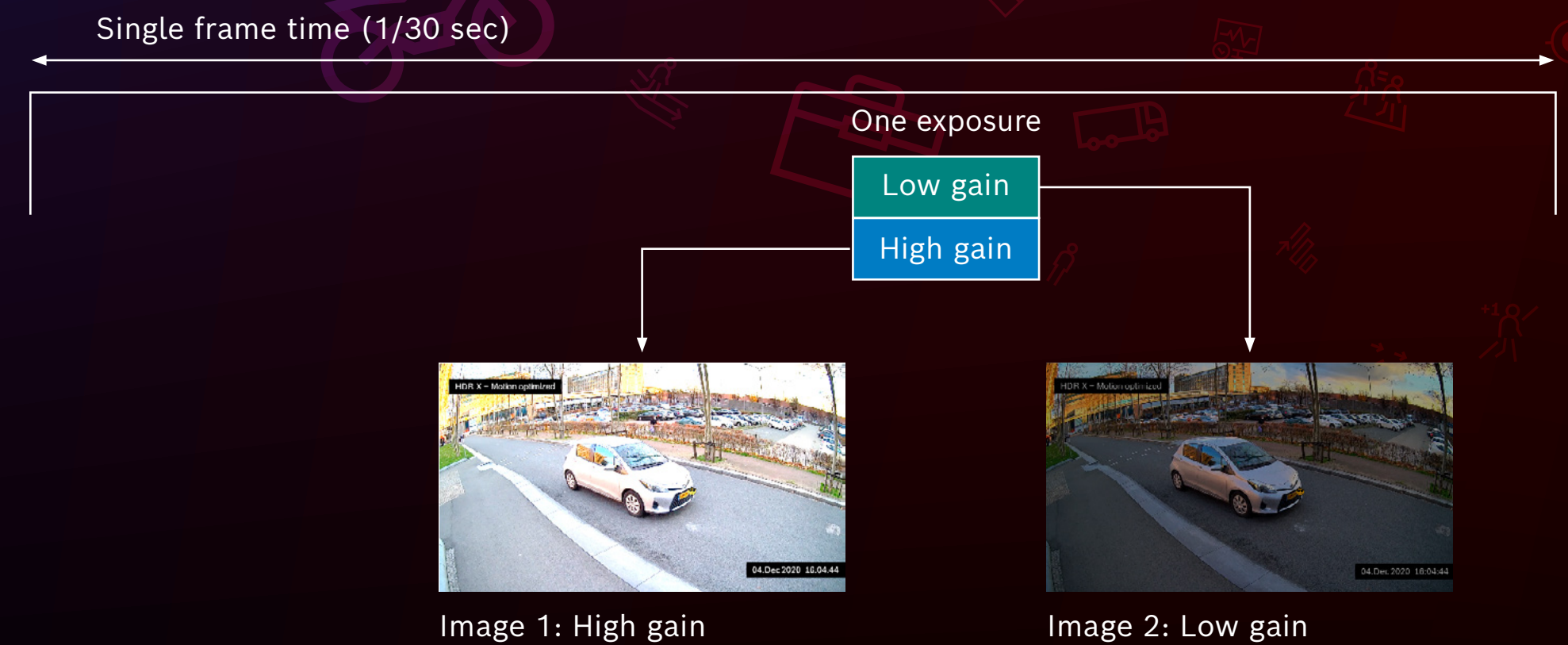
HDR



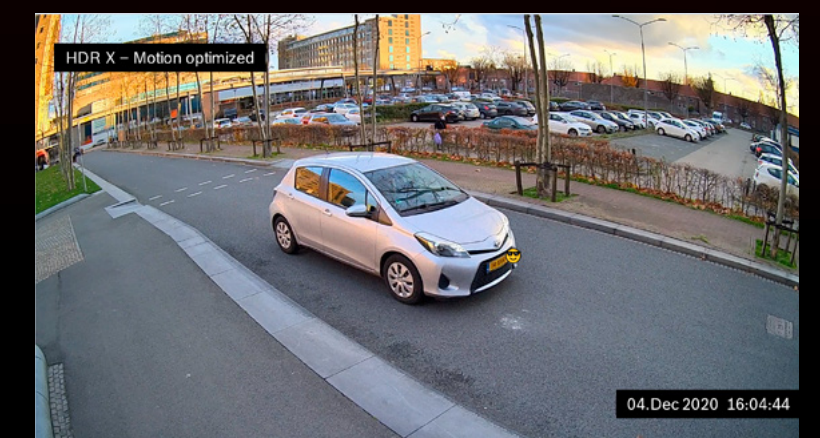
HDR combines multiple images with different exposure times to create a High Dynamic Range frame. The time difference between exposures and the overall time of the long exposure result in HDR blur and artefacts



HDR X



HDR X technology, a combination of hardware and software, generates two readouts from one short exposure with different gain levels. Combined, this generates a High Dynamic Range frame without any HDR blur and artefacts.

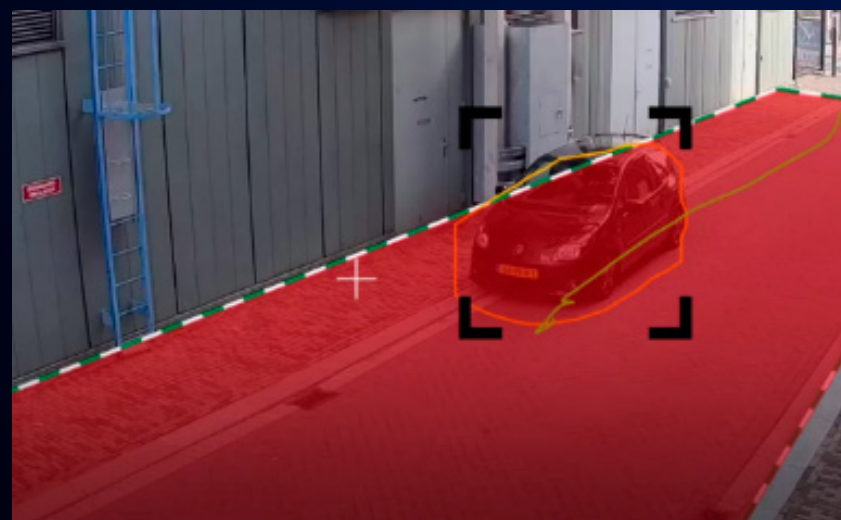


AIoT Video Systems from Bosch

Evolution of Artificial Intelligence (AI)

The development of intelligence towards predictive solutions

Predictive



Essential Video Analytics

- ▶ First step in object detection
- ▶ Generic security applications and beyond

IP 3000i – IP 6000



Intelligent Video Analytics and Camera Trainer

- ▶ Reliably detect any moving objects
- ▶ Machine learning
- ▶ Mission critical or tailored security applications

IP 7000 – IP 8000



From scene to screen: New powerful and flexible platforms

- ▶ Supports latest technologies
- ▶ Add third-party software solutions

INTEOX



Deep Neural Network based applications

- ▶ Traffic Detector
- ▶ Rich metadata with vehicle sub class., geolocation and speed
- ▶ For busy and complex traffic scenes

INTEOX OC models



Actionable insights

- ▶ Data consolidation and augmentation of multiple sensors
- ▶ General security applications and beyond

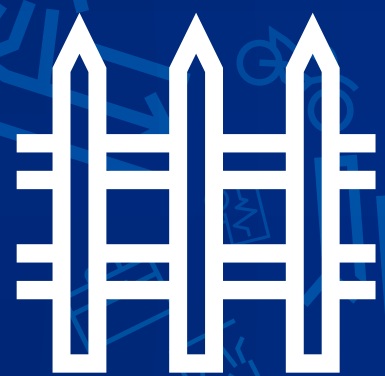
Intelligent Insights

FLEXIDOME IP starlight 8000i X series

Ideal for mission critical security applications

Perimeter protection

- ▶ Large distances
- ▶ Resistant against shaking
- ▶ Reliable in challenging weather



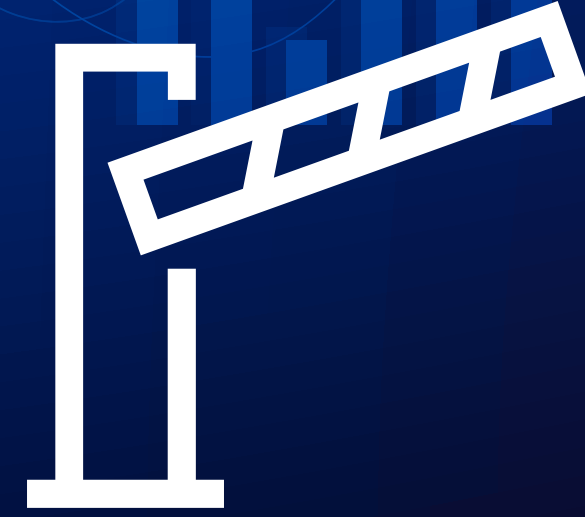
The next step in Video Analytics

Cameras with built-in machine learning capabilities

With the **Camera Trainer** you can teach your camera to:



**Detect
user-defined objects**



**Recognize
user-defined situations**



**Find
stationary objects**



**Separate objects
clustered together**

Enable cameras to detect objects or situations that matter most to you.

FLEXIDOME IP starlight 8000i X series

A capable solution

The **new** FLEXIDOME IP starlight 8000i – X series cameras are introduced to offer the ideal solution for applications with extremely challenging lighting situations

HD 1080p	4MP
Outdoor	Outdoor
1/1.8" sensor	1/1.8" sensor
Custom wide angle and tele focal motorized zoom/focus lens (4.4 - 10mm; 110° - 48° / 12 – 40mm; 36.8° - 12.8°)	Custom wide angle and tele focal motorized zoom/focus lens (4.4 - 10mm; 110° - 48° / 12 – 40mm; 36.8° - 12.8°)
HD 1080p (2.1MP) resolution	4.1MP resolution
HDR X (144 dB)	HDR X (141 dB)
starlight X (Color: 0.0061lux. Mono: 0.0007lux)	starlight X (Color: 0.0078ux. Mono: 0.0008lux)
High frame rate: 50/60 fps (HDR X: 25/30)	High frame rate: 50/60 fps (HDR X: 25/30)
Result: optimized data capture (Intelligent Video Analytics) thanks to increased image quality	Result: optimized data capture (Intelligent Video Analytics) thanks to increased image quality

NEW



NEW: FLEXIDOME IP starlight 8000i - X series with further enhanced image quality capabilities.

FLEXIDOME IP starlight 8000i X series

Applications



Industrial

- ▶ Utilities & energy
 - ▶ Harbors
 - ▶ Manufacturing
-
- ▶ Robust housing
 - ▶ Hard to reach installations



Public authorities

- ▶ Governmental buildings
 - ▶ City surveillance
-
- ▶ High resolution in low light
 - ▶ Advanced bitrate management



Transportation

- ▶ Traffic (e.g. tunnels)
 - ▶ Airports
 - ▶ Train stations
-
- ▶ High frame rates
 - ▶ Challenging lighting scenes
 - ▶ Best in class Video Analytics

FLEXIDOME IP starlight 8000i X series

A comprehensive design

FLEXIDOME IP starlight 8000i X series



Protection against water and dust ingress

IP66

IP6K9K

NEMA 4X

Vandal resistant

IK10+



Withstands challenging environmental conditions

EN 50130-5 (Class IV)

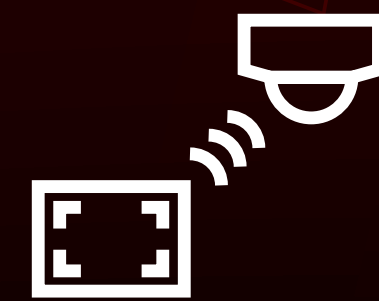
NEMA TS-2



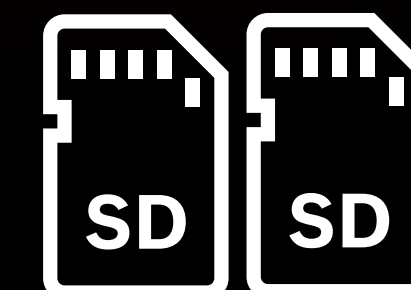
High quality, dual layer coating for protection against corrosion even in coastal areas (1344h)

IEC 60068-2-52

Wireless commissioning and motorized lens positioning (PTRZ)

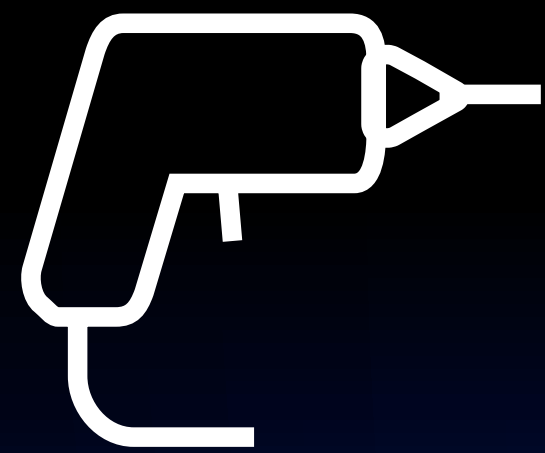


Industrial dual SD card support

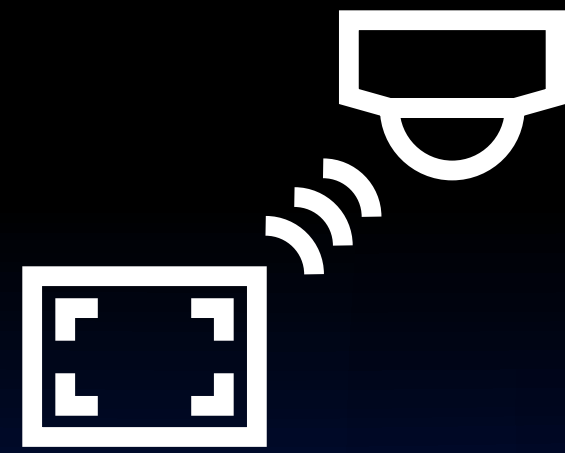


FLEXIDOME IP starlight 8000i X series

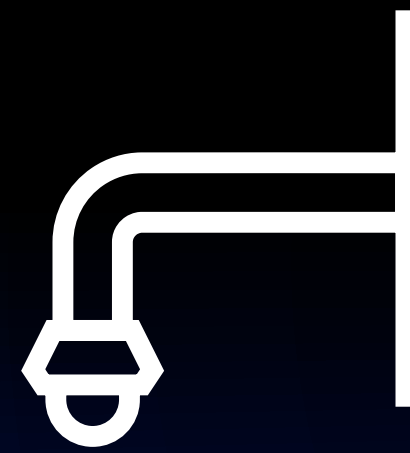
Game-changing installation concept



Reduced installation and commissioning time



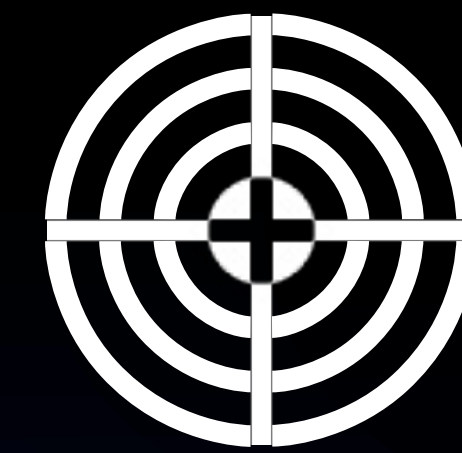
Wireless remote commissioning



Unified set of accessories



Project Assistant (app)
Wireless configure and commission multiple cameras, by connecting to the cameras' built-in wireless module.

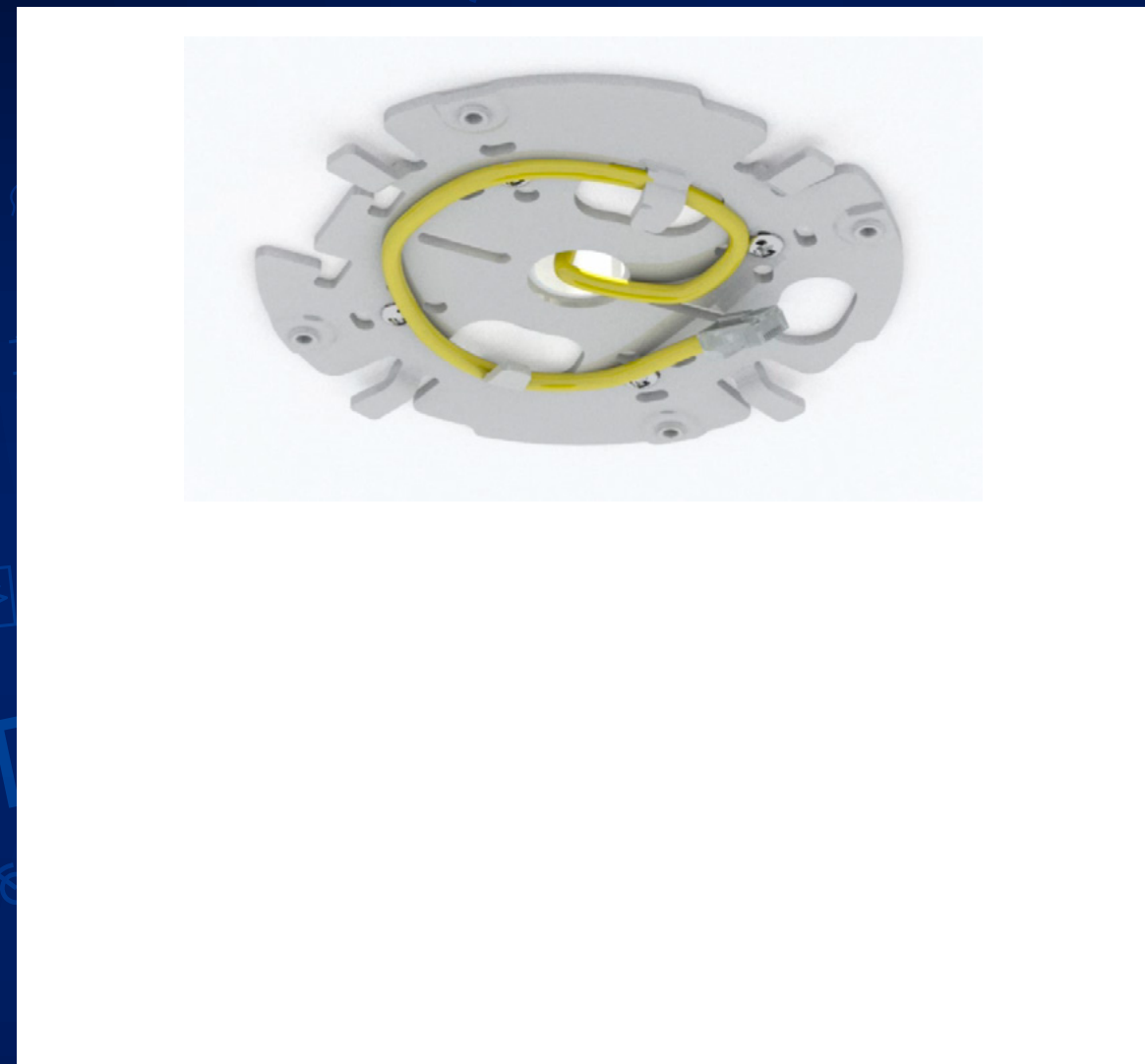


Calibration
Video analytics is easy to setup. Simply enter the height of your camera and the rest of the calibration is carried out by the video analytics itself.

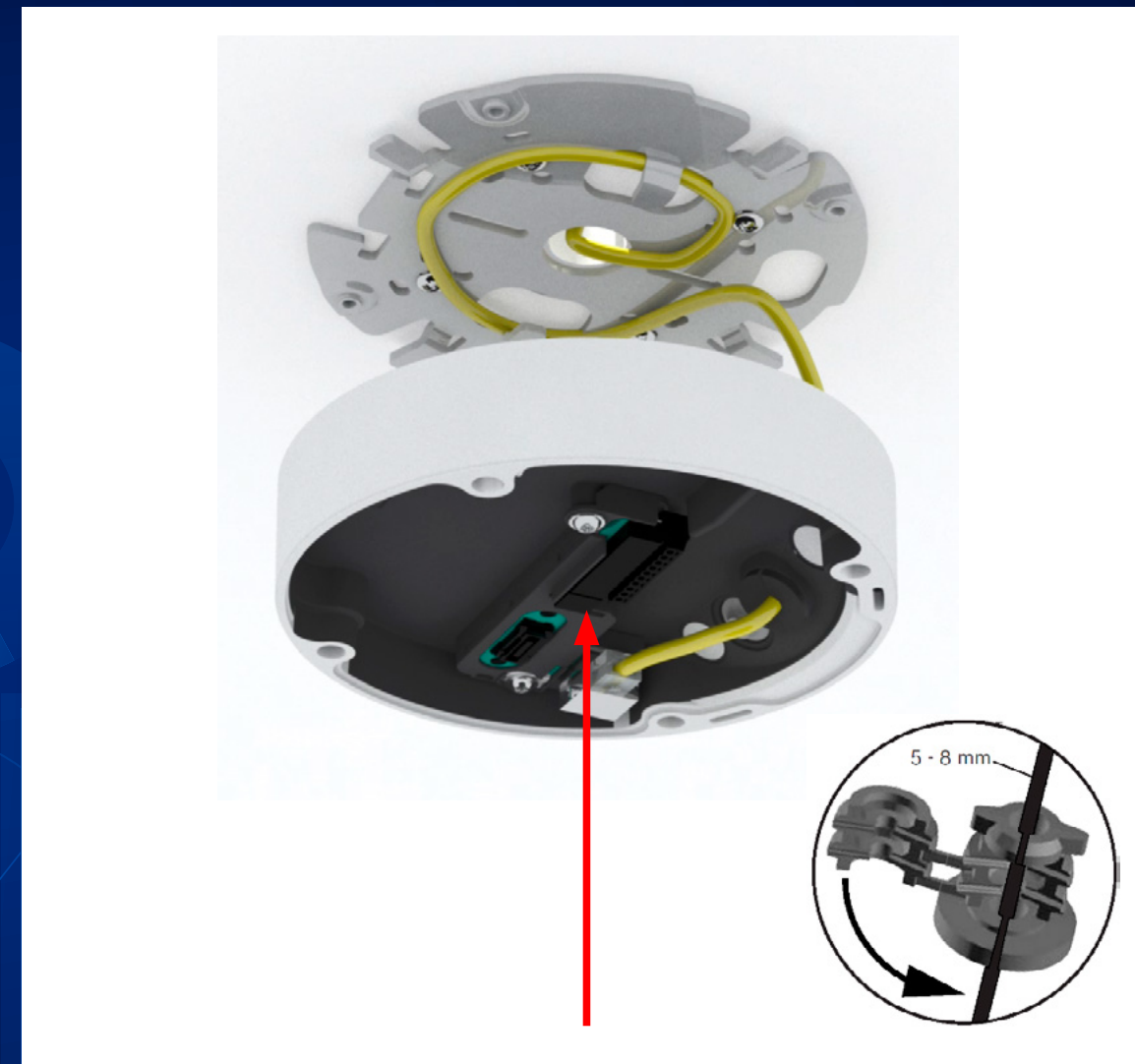
FLEXIDOME IP starlight 8000i X series

Simplified installation process

1



2



3



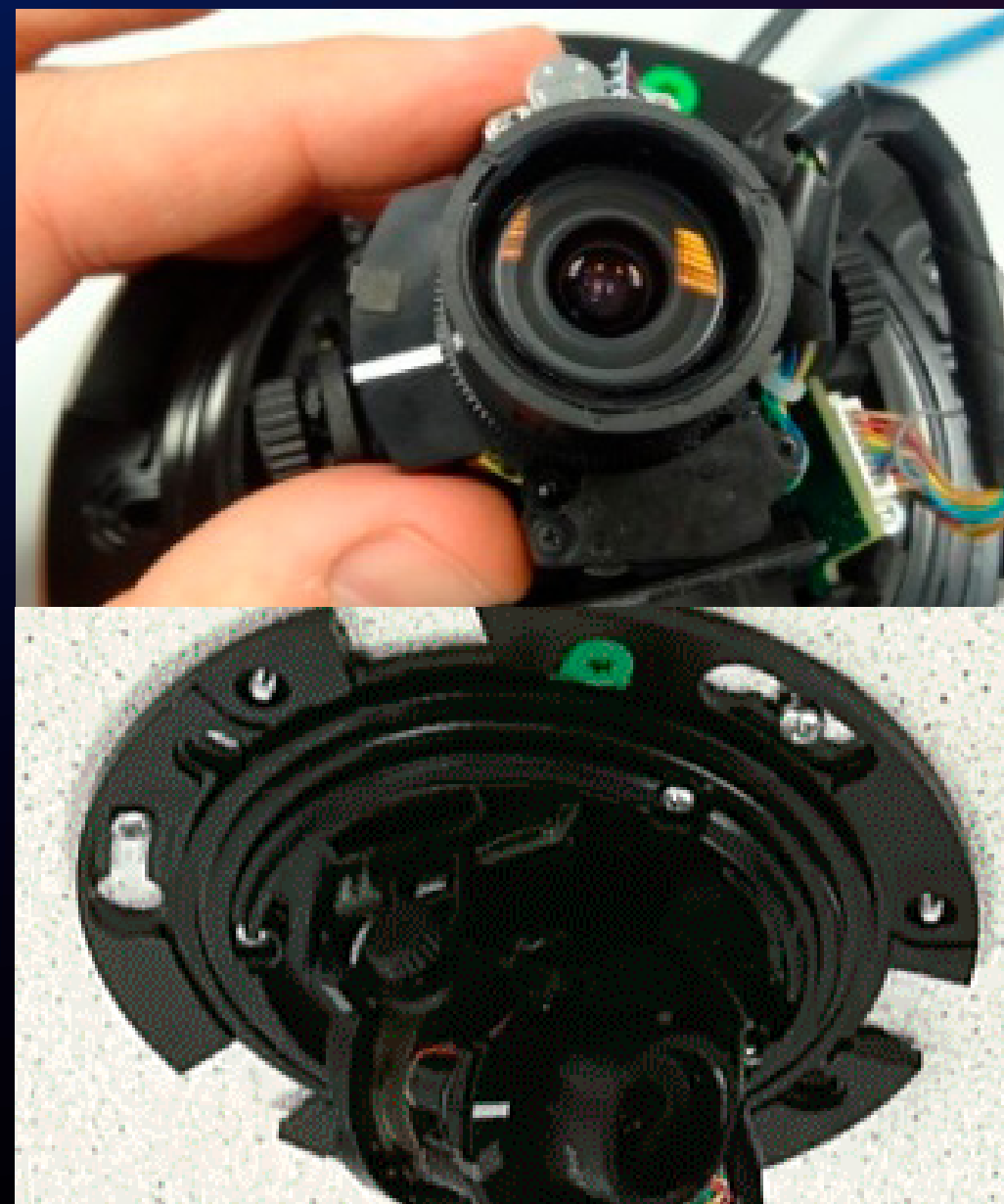
FLEXIDOME IP starlight 8000i X series

Evolution in commissioning

Manual focus lenses



AVF lenses



Remote commissioning



FLEXIDOME IP starlight 8000i X series

Game-changing commissioning concept

Traditional commissioning



Analog monitor output or instructions from control room

Game-changing commissioning



Direct or remote connection to FLEXIDOME IP starlight 8000i

Up to
75%
time saving

X series

FLEXIDOME IP starlight 8000i X series

Game-changing commissioning concept



Installation



Commissioning



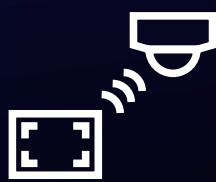
FLEXIDOME IP starlight 8000i X series

Project Assistant

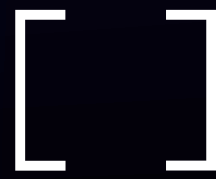
Pre-configuration



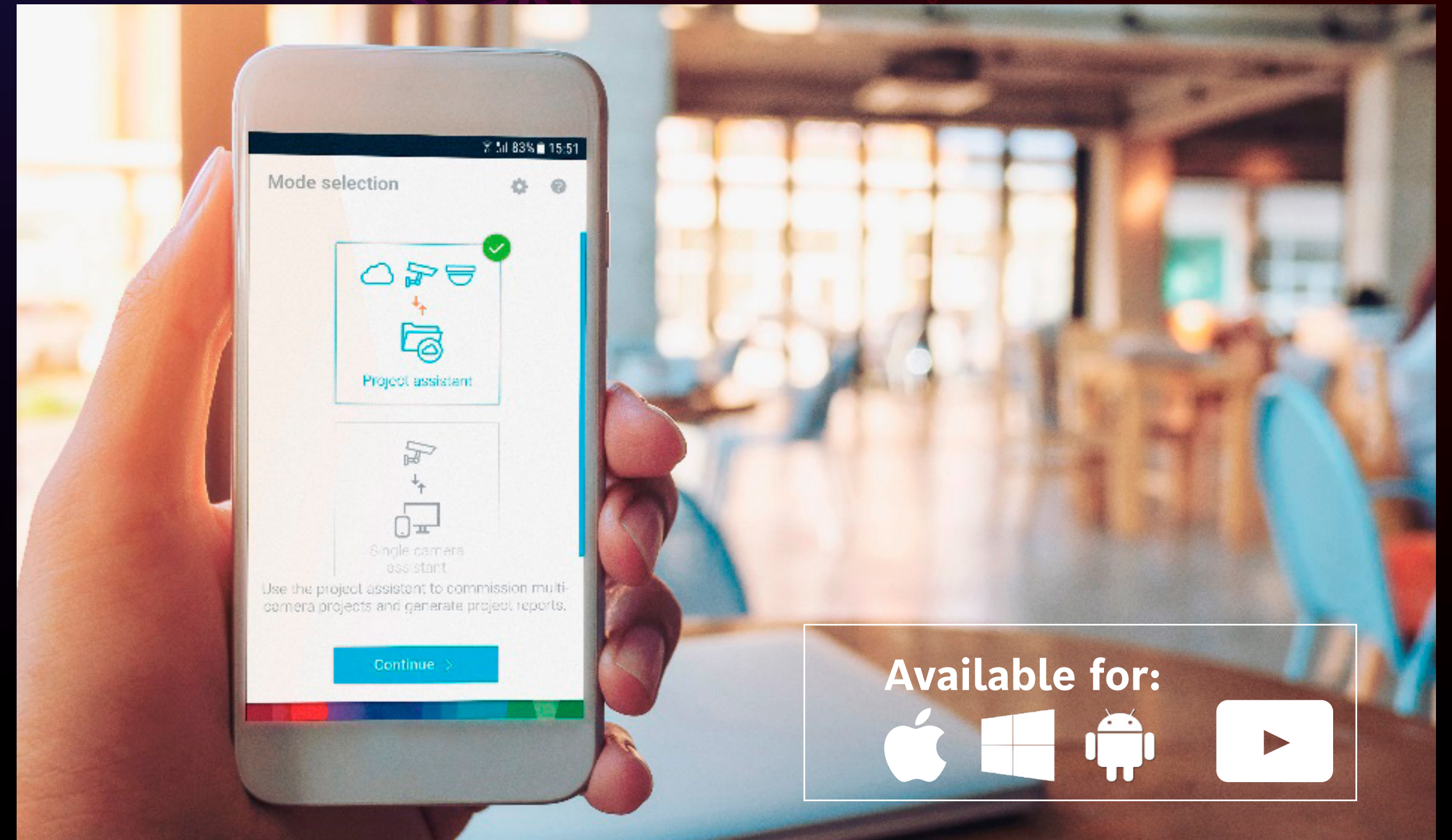
Direct connect



Set Field of View



Project reports



Available for:



FLEXIDOME IP starlight 8000i X series Project Assistant

Remote commissioning and reporting

TEST

Find... A > Z

In Progress:

- 1 South-East [no identifier]
- 2 South-East [no identifier]
- 3 South-East [no identifier]
- 4 South-East** 00-07-5F-90-B3-8F

Camera configuration is complete
You can now finish the setup of this camera. Coming back later is still possible.

Camera identification

Name: 4 South-East

MAC address: 00-07-5F-90-B3-8F **Discover**

Comment: e.g. room number

Serial number: 044727061908224120

Passwords

'service': Password does not fulfill policy

'user': valid password is set ✓

'live': valid password is set ✓

Network

DHCP

Need to change image settings? **Open image settings**

Finish camera setup

Image settings

Image Alignment Focus

Tools

Grid Off

Commissioning controls

Click into the video image to move the camera view to that point. Drag a rectangle to zoom.

Zoom [-] [•] [+]

Manual controls

Positioning

Height above ground Not set x meter

Click within the video window to move the camera's field of view or draw a rectangle to move and zoom.

Project report BOSCH

2/28/2018 15:29:32

Demo Project

empty

Finished cameras: 0 / 1

Main View 1

Commercial type number	NBN-80052-BA	Password set for	service user live
MAC address	DC-4A-3E-45-6D-E7	IP address	160.10.122.3
Serial number	00000000000000000000	Subnet	255.255.0.0
Firmware version	99.15.025	Gateway	0.0.0.0
State	In progress		
Comment			

FLEXIDOME IP starlight 8000i; complete portfolio

Highest level of detail



The FLEXIDOME IP starlight 8000i series of fixed dome cameras allows users to rely on the highest levels of security for mission critical applications thanks to its high resolution imaging with starlight technology and excellent High Dynamic Range capabilities, combined with built-in Artificial Intelligence and a robust housing.



FLEXIDOME IP starlight 8000i X series

Specifications

FLEXIDOME IP starlight 8000i	Resolution / Sensor	Lens	Fps	HDR	starlight
NDE-8502-R(T)	HD 1080p / 1/2.8" sensor	3-9 mm / 10-23mm (T)	60fps	HDR	starlight
NDE-8503-R(T)	6MP / 1/1.8" sensor	3.9-10mm / 12-40mm (T)	30fps	HDR	starlight
NDE-8504-R(T)	4K UHD 1/1.8" sensor	3.9-10mm / 12-40mm (T)	30fps	HDR	starlight
FLEXIDOME IP starlight 8000i - X series					
NDE-8502-RX(T)	HD 1080p / 1/1.8" sensor	4.4 - 10mm / 12-40mm (T)	60fps	HDR	starlight
NDE-8503-RX(T)	4.1MP / 1/1.8" sensor	4.4 - 10mm / 12-40mm (T)	60fps	HDR	starlight

Time saving installation

- Unified set of accessories
- Remote commissioning with the camera's built-in wireless
- Reduced installation time -75%

Built-in Artificial Intelligence

with Intelligent Video Analytics and Camera Trainer

- Perimeter protection
- Reliable alerts, even in extreme weather conditions
- Video Analytics extremely resistant against shaking
- Camera Trainer functionality
- Video content analysis over large distances

Housing

- High impacts
- Certified to ensure robustness
- Withstands challenging weather conditions

IP6K9K NEMA-4X
 IK10+ NEMA TS2
 IEC 60068-2-52
 Corrosion 56 days
 Surge Protection
 -50 / +60°C (-58 / +140°F)

• Ease of installation • Data security • Bitrate reduction ≤80%

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news page >



FLEXIDOME IP starlight 8000i X series datasheet



FLEXIDOME IP starlight 8000i X series
2MP

[!\[\]\(3d8c13c92b853674f749aac6fa869926_img.jpg\) **DOWNLOAD**
Datasheet](#)




FLEXIDOME IP starlight 8000i X series
4MP

[!\[\]\(fa6f3af6bfa46c5d4a2d362681095beb_img.jpg\) **DOWNLOAD**
Datasheet](#)


Sales tools

 **VISIT**

Video product selector

 **VISIT**

Video Analytics and Lens Calculator

 **VISIT**

BIM (Building Information Modelling) files

 **DOWNLOAD**

Video product overview

 **DOWNLOAD**

Video accessory quick selection

 **DOWNLOAD**

Video analytics example tool

 **DOWNLOAD**

Bosch IP Video System Design Tool