

# IP Video product overview

Our focus is your IP video solution

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**BOSCH**

Invented for life



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# Added value for you

## intelligent Dynamic Noise Reduction (iDNR)

Quiet scenes with little or no movement require a lower bitrate. By intelligently distinguishing between noise and relevant information, such as movement, intelligent Dynamic Noise Reduction (iDNR) reduces bitrate by up to 50%. And because noise is reduced at the source during image capture, the lower bitrate does not compromise video quality. With iDNR, our focus is to significantly reduce storage costs, and lessen network strain by only using bandwidth when needed.

## intelligent Auto Exposure (iAE)

Fluctuations in backlight and front light can ruin your images. To achieve the perfect picture in every situation, intelligent Auto Exposure (iAE) automatically adjusts the exposure of the camera. It offers superb front light compensation and incredible backlight compensation by automatically adapting to changing light conditions. With iAE, our focus is to provide you with perfect exposure every time.

## intelligent Tracking

In video surveillance, moving objects are usually the most significant objects of interest. Intelligent Tracking (iTracking) automatically tracks moving objects based on predefined alarm rules or a simple click. By intelligently distinguishing between single and multiple reference points, iTracking will provide uninterrupted tracking. Optimal capture of the object of interest is assured by dynamically adjusting the field of view. With iTracking, our focus is never to lose track of objects of interest.

## Intelligent Video Analysis (IVA)

After only 20 minutes you can miss 90% of the activity on a screen. Intelligent Video Analysis (IVA) assists by alerting you when predefined alarms are triggered. By smartly combining up to 8 IVA rules, complex tasks are made easy and false alarms are reduced to a minimum. IVA also adds sense and structure to your video by adding metadata. This enables you to quickly retrieve the relevant images from hours of stored video. Metadata can also be used to deliver irrefutable forensic evidence or to optimize business processes based on, for example, people counting or crowd density information. With IVA, our focus is to alert you when needed and help you quickly retrieve the correct data.

## starlight

All starlight cameras offer best in class light sensitivity, excellent wide dynamic range, and superb front and backlight compensation. The starlight cameras capture images up to 5 megapixel resolution even under extreme low-light conditions. They offer amazing images in fine detail. The latest sensor technology, combined with the sophisticated noise suppression, results in an amazing sensitivity. With an incredibly high frame rate of up to 60 frames per second, you can capture fast moving objects in high resolutions. With their impressive technical specifications, they could be the ultimate 24/7 cameras. With the starlight family, our focus is to make darkness totally visible.

## ultra HD

Covering a large area and identifying objects at a great distance is challenging. That's why the 4K ultra HD technology in our DINION IP ultra 8000 MP offers 12 megapixel resolution to deliver amazing detail even when zoomed-in. With an incredibly high frame rate of 20 frames per second for a 12 megapixel camera, you can capture fast moving objects in high resolutions. This speed and these resolutions provide the level of detail that makes the difference when collecting evidence. The images produced are perfect for a detailed and effective retrospective analysis. The camera's ability to give a wide-angle overview and multiple focus points on a single screen helps you focus on details without losing the bigger picture. With the DINION IP ultra 8000 MP, our focus is to enable you to see every detail, everywhere.

### Check out our movies

iDNR



iAE



iTracking



IVA



## IP Video

### Dome Cameras

► FLEXIDOME IP micro 2000

► FLEXIDOME IP micro 5000



■ Available – Not available

Commercial Type Number		NUC-21002-F2	NUC-21012-F2	NUC-51022-Fxx	NUC-51051-Fxx
Bosch USPs	intelligent Dynamic Noise Reduction (iDNR)	■	■	■	■
	intelligent Auto Exposure (iAE)	-	-	-	-
	starlight (extreme low-light sensitivity)	-	-	-	-
	ultra HD	-	-	-	-
	Built-in Intelligent Video Analysis (IVA)	-	-	-	-
Basic features	Maximum resolution	VGA	HD 720p	HD 1080p	5 MP
	Image sensor type	1/4"	1/4"	1/2.7"	1/3.2"
	Max. frames per second (fps)	30 fps@480p	30 fps@720p	30 fps@1080p	12 fps@5MP
	Indoor / outdoor / in-vehicle	■/-/-	■/-/-	■/■/■	■/■/■
	Day/night	■ (Electronic)	■ (Electronic)	■ (Electronic)	■ (Electronic)
	Wide Dynamic Range (WDR)	76dB	76dB	76dB	65dB
	ONVIF conformant	■	■	■	■
	Built-in microphone	■	■	-	-
	Power over Ethernet (PoE)	■	■	■	■
	Advanced features	Compression (H.264 & MJPEG) / multi-streaming	■/4 streams	■/4 streams	■/4 streams
Privacy masking		■	■	■	■
Region Of Interest tracking		-	-	-	-
Alarm triggering	Tamper detection	■	■	■	■
	Video motion detection	■	■	■	■
	Intelligent Video Analysis (IVA)	-	-	-	-
	Audio detection	■	■	-	-
Sensitivity	Minimum illumination day mode (color)	1 lux	1 lux	0.4 lux (F4) 1 lux (F2/F2M)	0.8 lux (F4) 2 lux (F2/F2M)
	Minimum illumination night mode (black / white)	-	-	0.4 lux (F4) 1 lux (F2/F2M)	0.8 lux (F4) 2 lux (F2/F2M)
	Night vision	-	-	-	-
	Max. range at night	-	-	-	-
Lens	Automatic Back Focus (ABF)	-	-	-	-
	Automatic varifocal	-	-	-	-
	Focal length	2.5 mm	2.5 mm	3.6 mm (F4) 2.5 mm (F2/F2M)	3.6 mm (F4) 2.5 mm (F2/F2M)
	Horizontal Angle of View (HAoV)	66.7°	89°	97° (F4) 135°(F2/F2M)	74° (F4) 105° (F2/F2M)
DCRI distances	Detection / Classification / Recognition / Identification (Distances in m with 100 lux illumination)	24 / 12 / 8 / 3	32 / 16 / 11 / 5	42 / 21 / 14 / 6 (F4) 19 / 10 / 7 / 3 (F2)	85/42/29/12 (F4) 48/25/17/7 (F2)
Storage	Memory card slot	■ (up to 2 TB)	■ (up to 2 TB)	■ (up to 2 TB)	■ (up to 2 TB)
	Cloud application storage	Auto or Alarm JPEG Posting, Video Clips or JPEG Exporting	Auto or Alarm JPEG Posting, Video Clips or JPEG Exporting	Auto or Alarm JPEG Posting, Video Clips or JPEG Exporting	Auto or Alarm JPEG Posting, Video Clips or JPEG Exporting
Connections	Alarm input / output	-/-	-/-	-/-	-/-
	Audio in/out	-	-	-	-
	Hybrid* / confrontation monitor	-/-	-/-	-/-	-/-
Housing	Weather rating	-	-	IP66	IP66
	Vandal resistant	-	-	IK8	IK8
	Operating temperature	-20° to 50° C (-4° to 122° F)	-20° to 50° C (-4° to 122° F)	-30° to 50° C (-22° to 122° F)	-30° to 50° C (-22° to 122° F)

\* The hybrid functionality offers an easy migration path from legacy CCTV to a modern IP-based system

## IP Video

### Dome Cameras

#### ► FLEXIDOME IP indoor 4000



■ Available – Not available

Commercial Type Number		NIN-40012-V3	NII-40012-V3
Bosch USPs	intelligent Dynamic Noise Reduction (iDNR)	■	■
	intelligent Auto Exposure (iAE)	-	-
	starlight (extreme low-light sensitivity)	-	-
	ultra HD	-	-
	Built-in Intelligent Video Analysis (IVA)	-	-
Basic features	Maximum resolution	HD 720p	HD 720p
	Image sensor type	1/2.7"	1/2.7"
	Max. frames per second (fps)	30 fps@720p	30 fps@720p
	Indoor / outdoor / in-vehicle	■/-/-	■/-/-
	Day/night	■	■
	Wide Dynamic Range (WDR)	76dB	76dB
	ONVIF conformant	■	■
	Built-in microphone	■	■
	Power over Ethernet (PoE)	■	■
Advanced features	Compression (H.264 & MJPEG) / multi-streaming	■/4 streams	■/4 streams
	Privacy masking	■	■
	Region Of Interest tracking	-	-
Alarm triggering	Tamper detection	■	■
	Video motion detection	■	■
	Intelligent Video Analysis (IVA)	-	-
	Audio detection	■	■
Sensitivity	Minimum illumination day mode (color)	0.24 lux	0.24 lux
	Minimum illumination night mode (black / white)	0.05 lux	0 lux
	Night vision	-	■ (infrared)
	Max. range at night	-	15 m (50 ft)
Lens	Automatic Back Focus (ABF)	-	-
	Automatic varifocal	-	-
	Focal length	3-10 mm	3-10 mm
	Horizontal Angle of View (HAoV)	36°-117°	36°-117°
DCRI distances	Detection / Classification / Recognition / Identification (Distances in m with 100 lux illumination)	19-94/10-49/7-33/3-13	19-94/10-49/7-33/3-13
Storage	Memory card slot	■ (up to 2 TB)	■ (up to 2 TB)
	Cloud application storage	Auto or Alarm JPEG Posting, Video Clips or JPEG Exporting	Auto or Alarm JPEG Posting, Video Clips or JPEG Exporting
Connections	Alarm input / output	1/1	1/1
	Audio in/out	■	■
	Hybrid* / confrontation monitor	-/-	-/-
Housing	Weather rating	-	-
	Vandal resistant	-	-
	Operating temperature	-20° to 50° C (-4° to 122° F)	-20° to 50° C (-4° to 122° F)

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## IP Video

### Dome Cameras

#### ► FLEXIDOME IP indoor 5000



■ Available – Not available

Commercial Type Number		NIN-50022-V3	NIN-50051-V3	NII-50022-V3
Bosch USPs	intelligent Dynamic Noise Reduction (iDNR)	■	■	■
	intelligent Auto Exposure (iAE)	-	-	-
	starlight (extreme low-light sensitivity)	-	-	-
	ultra HD	-	-	-
	Built-in Intelligent Video Analysis (IVA)	-	-	-
Basic features	Maximum resolution	HD 1080p	5 MP	HD 1080p
	Image sensor type	1/2.7"	1/3.2"	1/2.7"
	Max. frames per second (fps)	30 fps@1080p	12 fps@5MP	30 fps@1080p
	Indoor / outdoor / in-vehicle	■/-/-	■/-/-	■/-/-
	Day/night	■	■	■
	Wide Dynamic Range (WDR)	76dB	65dB	76dB
	ONVIF conformant	■	■	■
	Built-in microphone	■	■	■
	Power over Ethernet (PoE)	■	■	■
	Advanced features	Compression (H.264 & MJPEG) / multi-streaming	■/4 streams	■/4 streams
Privacy masking		■	■	■
Region Of Interest tracking		-	-	-
Alarm triggering	Tamper detection	■	■	■
	Video motion detection	■	■	■
	Intelligent Video Analysis (IVA)	-	-	-
	Audio detection	■	■	■
Sensitivity	Minimum illumination day mode (color)	0.24 lux	0.5 lux	0.24 lux
	Minimum illumination night mode (black / white)	0.05 lux	0.075 lux	0 lux
	Night vision	-	-	■ (infrared)
	Max. range at night	-	-	15 m (50 ft)
	Lens	Automatic Back Focus (ABF)	-	-
	Automatic varifocal	-	-	-
	Focal length	3-10 mm	3-10 mm	3-10 mm
	Horizontal Angle of View (HAoV)	36°-117°	28°-87°	36°-117°
DCRI distances	Detection / Classification / Recognition / Identification (Distances in m with 100 lux illumination)	29-140 / 15-73 / 10-49 / 4-20	66-250 / 34-128 / 23-86 / 9-35	29-140 / 15-73 / 10-49 / 4-20
Storage	Memory card slot	■ (up to 2 TB)	■ (up to 2 TB)	■ (up to 2 TB)
	Cloud application storage	Auto or Alarm JPEG Posting, Video Clips or JPEG Exporting	Auto or Alarm JPEG Posting, Video Clips or JPEG Exporting	Auto or Alarm JPEG Posting, Video Clips or JPEG Exporting
Connections	Alarm input / output	1/1	1/1	1/1
	Audio in/out	■	■	■
	Hybrid* / confrontation monitor	-/-	-/-	-/-
Housing	Weather rating	-	-	-
	Vandal resistant	-	-	-
	Operating temperature	-20° to 50° C (-4° to 122° F)	-20° to 50° C (-4° to 122° F)	-20° to 50° C (-4° to 122° F)

\* The hybrid functionality offers an easy migration path from legacy CCTV to a modern IP-based system

## IP Video

### Dome Cameras

#### ► FLEXIDOME IP outdoor 4000



■ Available – Not available

Commercial Type Number		NDN-40012-V3	NDI-40012-V3
Bosch USPs	intelligent Dynamic Noise Reduction (iDNR)	■	■
	intelligent Auto Exposure (iAE)	-	-
	starlight (extreme low-light sensitivity)	-	-
	ultra HD	-	-
	Built-in Intelligent Video Analysis (IVA)	-	-
Basic features	Maximum resolution	HD 720p	HD 720p
	Image sensor type	1/2.7"	1/2.7"
	Max. frames per second (fps)	30 fps@720p	30 fps@720p
	Indoor / outdoor / in-vehicle	■/■/-	■/■/-
	Day/night	■	■
	Wide Dynamic Range (WDR)	76dB	76dB
	ONVIF conformant	■	■
	Built-in microphone	-	-
	Power over Ethernet (PoE)	■	■
	Advanced features	Compression (H.264 & MJPEG) / multi-streaming	■/4 streams
Privacy masking		■	■
Region Of Interest tracking		-	-
Alarm triggering	Tamper detection	■	■
	Video motion detection	■	■
	Intelligent Video Analysis (IVA)	-	-
	Audio detection	■	■
Sensitivity	Minimum illumination day mode (color)	0.24 lux	0.24 lux
	Minimum illumination night mode (black / white)	0.05 lux	0 lux
	Night vision	-	■ (infrared)
	Max. range at night	-	15 m (50 ft)
Lens	Automatic Back Focus (ABF)	-	-
	Automatic varifocal	-	-
	Focal length	3-10 mm	3-10 mm
	Horizontal Angle of View (HAoV)	36°-117°	36°-117°
DCRI distances	Detection / Classification / Recognition / Identification (Distances in m with 100 lux illumination)	19-94/10-49/7-33/3-13	19-94/10-49/7-33/3-13
Storage	Memory card slot	■ (up to 2 TB)	■ (up to 2 TB)
	Cloud application storage	Auto or Alarm JPEG Posting, Video Clips or JPEG Exporting	Auto or Alarm JPEG Posting, Video Clips or JPEG Exporting
Connections	Alarm input / output	1/1	1/1
	Audio in/out	■	■
	Hybrid* / confrontation monitor	-/-	-/-
Housing	Weather rating	IP66	IP66
	Vandal resistant	IK10	IK10
	Operating temperature	-30° to 50° C (-22° to 122° F)	-30° to 50° C (-22° to 122° F)

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## IP Video

### Dome Cameras

#### ► FLEXIDOME IP outdoor 5000



■ Available – Not available

Commercial Type Number		NDN-50022-V3	NDN-50051-V3	NDI-50022-V3
Bosch USPs	intelligent Dynamic Noise Reduction (iDNR)	■	■	■
	intelligent Auto Exposure (iAE)	-	-	-
	starlight (extreme low-light sensitivity)	-	-	-
	ultra HD	-	-	-
	Built-in Intelligent Video Analysis (IVA)	-	-	-
Basic features	Maximum resolution	HD 1080p	5 MP	HD 1080p
	Image sensor type	1/2.7"	1/3.2"	1/2.7"
	Max. frames per second (fps)	30 fps@1080p	12 fps@5MP	30 fps@1080p
	Indoor / outdoor / in-vehicle	■/■/-	■/■/-	■/■/-
	Day/night	■	■	■
	Wide Dynamic Range (WDR)	76dB	65dB	76dB
	ONVIF conformant	■	■	■
	Built-in microphone	-	-	-
	Power over Ethernet (PoE)	■	■	■
	Advanced features	Compression (H.264 & MJPEG) / multi-streaming	■/4 streams	■/4 streams
Privacy masking		■	■	■
Region Of Interest tracking		-	-	-
Alarm triggering	Tamper detection	■	■	■
	Video motion detection	■	■	■
	Intelligent Video Analysis (IVA)	-	-	-
	Audio detection	■	■	■
Sensitivity	Minimum illumination day mode (color)	0.24 lux	0.5 lux	0.24 lux
	Minimum illumination night mode (black / white)	0.05 lux	0.075 lux	0 lux
	Night vision	-	-	■ (infrared)
	Max. range at night	-	-	15 m (50 ft)
Lens	Automatic Back Focus (ABF)	-	-	-
	Automatic varifocal	-	-	-
	Focal length	3-10 mm	3-10 mm	3-10 mm
	Horizontal Angle of View (HAoV)	36°-117°	28°-87°	36°-117°
DCRI distances	Detection / Classification / Recognition / Identification (Distances in m with 100 lux illumination)	29-140 / 15-73 / 10-49 / 4-20	66-250 / 34-128 / 23-86 / 9-35	29-140 / 15-73 / 10-49 / 4-20
Storage	Memory card slot	■ (up to 2 TB)	■ (up to 2 TB)	■ (up to 2 TB)
	Cloud application storage	Auto or Alarm JPEG Posting, Video Clips or JPEG Exporting	Auto or Alarm JPEG Posting, Video Clips or JPEG Exporting	Auto or Alarm JPEG Posting, Video Clips or JPEG Exporting
Connections	Alarm input / output	1/1	1/1	1/1
	Audio in/out	■	■	■
	Hybrid* / confrontation monitor	-/-	-/-	-/-
Housing	Weather rating	IP66	IP66	IP66
	Vandal resistant	IK10	IK10	IK10
	Operating temperature	-30° to 50° C (-22° to 122° F)	-30° to 50° C (-22° to 122° F)	-30° to 50° C (-22° to 122° F)

\* The hybrid functionality offers an easy migration path from legacy CCTV to a modern IP-based system



## IP Video

### Dome Cameras

#### ► FLEXIDOME IP starlight 7000 VR



#### ► FLEXIDOME IP 7000 VR



#### ► FLEXIDOME IP dynamic 7000 VR



■ Available – Not available

Commercial Type Number		NIN-733-Vxxxx	NIN-832-Vxxxx	NIN-932-VxxIPx
Bosch USPs	intelligent Dynamic Noise Reduction (iDNR)	■	■	■
	intelligent Auto Exposure (iAE)	■ (IVA models only)	■ (IVA models only)	■
	starlight (extreme low-light sensitivity)	■	-	-
	ultra HD	-	-	-
	Built-in Intelligent Video Analysis (IVA)	■ (depends on model)	■ (depends on model)	■
Basic features	Maximum resolution	HD 720p	HD 1080p	HD 1080p
	Image sensor type	1/3"	1/2.7"	1/3"
	Max. frames per second (fps)	60 fps@720p	30 fps@1080p	30 fps @1080p
	Indoor / outdoor / in-vehicle	■/■/-	■/■/-	■/■/-
	Day/night	■	■	■
	Wide Dynamic Range (WDR)	84dB (IVA model with IAE + 16dB)	76dB (IVA model with IAE + 16dB)	90dB (with IAE + 16dB)
	ONVIF conformant	■	■	■
	Built-in microphone	-	-	-
	Power over Ethernet (PoE)	■	■	■
	Advanced features	Compression (H.264 & MJPEG) / multi-streaming	■/4 streams	■/4 streams
Privacy masking		■	■	■
Region Of Interest tracking		■	■	■
Alarm triggering	Tamper detection	■	■	■
	Video motion detection	■	■	■
	Intelligent Video Analysis (IVA)	■ (depends on model)	■ (depends on model)	■
	Audio detection	■	■	■
Sensitivity	Minimum illumination day mode (color)	0.017 lux (V03xx) 0.03 lux (V10xx)	0.22 lux (V03xx) 0.4 lux (V10xx)	0.25 lux (V03xx) 0.45 lux (V10xx)
	Minimum illumination night mode (black / white)	0.0057 lux (V03xx) 0.01 lux (V10xx)	0.05 lux (V03xx) 0.1 lux (V10xx)	0.08 lux (V03xx) 0.15 lux (V10xx)
	Night vision	■ (starlight)	-	-
	Max. range at night	-	-	-
Lens	Automatic Back Focus (ABF)	■	■	■
	Automatic varifocal	■	■	■
	Focal length	3-9 mm (V03xx) 10-23 mm (V10xx)	3-9 mm (V03xx) 10-23 mm (V10xx)	3-9 mm (V03IPx) 10-23 mm (V10IPx)
	Horizontal Angle of View (HAoV)	32°-96° (V03xx) 12.4°-28° (V10xx)	38°-121° (V03xx) 14.8°-34° (V10xx)	28°-83° (V03IPx) 10.9°-24° (V10IPx)
	DCRI distances	Detection / Classification / Recognition / Identification (Distances in m with 100 lux illumination)	28-107 / 15-55 / 10-37 / 4-15 (V03xx) 123-282 / 63-144 / 43-97 / 17-39 (V10xx)	26-133 / 13-69 / 9-46 / 4-19 (V03xx) 150-352 / 77-181 / 52-122 / 21-49 (V10xx)
Storage	Memory card slot	■ (up to 2 TB)	■ (up to 2 TB)	■ (up to 2 TB)
	Cloud application storage	Auto or Alarm JPEG Posting, Face Detection JPEG posting (IVA models only), Video Clips or JPEG Exporting	Auto or Alarm JPEG Posting, Best Face Detection JPEG posting (IVA models only), Video Clips or JPEG Exporting	Auto or Alarm JPEG Posting, Best Face Detection JPEG posting, Video Clips or JPEG Exporting
Connections	Alarm input / output	2/1	2/1	2/1
	Audio in/out	■	■	■
	Hybrid* / confrontation monitor	■/■	■/■	■/■
Housing	Weather rating	IP66	IP66	IP66
	Vandal resistant	IK10	IK10	IK10
	Operating temperature	-30° to 50° C (-22° to 122° F)	-30° to 50° C (-22° to 122° F)	-30° to 50° C (-22° to 122° F)

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## IP Video

### Dome Cameras

► FLEXIDOME IP starlight 7000 RD



► FLEXIDOME IP 7000 RD



► FLEXIDOME IP dynamic 7000 RD



■ Available – Not available

Commercial Type Number		NDN-733Vxx-xx	NDN-832Vxx-xx	NDN-932Vxx-IP
Bosch USPs	intelligent Dynamic Noise Reduction (iDNR)	■	■	■
	intelligent Auto Exposure (iAE)	■ (IVA models only)	■ (IVA models only)	■
	starlight (extreme low-light sensitivity)	■	-	-
	ultra HD	-	-	-
	Built-in Intelligent Video Analysis (IVA)	■ (depends on model)	■ (depends on model)	■
Basic features	Maximum resolution	HD 720p	HD 1080p	HD 1080p
	Image sensor type	1/3"	1/2.7"	1/3"
	Max. frames per second (fps)	60 fps@720p	30 fps@1080p	30 fps @1080p
	Indoor / outdoor / in-vehicle	■/■/-	■/■/-	■/■/-
	Day/night	■	■	■
	Wide Dynamic Range (WDR)	84dB (IVA model with IAE + 16dB)	76dB (IVA model with IAE + 16dB)	90dB (with IAE + 16dB)
	ONVIF conformant	■	■	■
	Built-in microphone	-	-	-
	Power over Ethernet (PoE)	■	■	■
	Advanced features	Compression (H.264 & MJPEG) / multi-streaming	■/4 streams	■/4 streams
	Privacy masking	■	■	■
	Region Of Interest tracking	■	■	■
Alarm triggering	Tamper detection	■	■	■
	Video motion detection	■	■	■
	Intelligent Video Analysis (IVA)	■ (depends on model)	■ (depends on model)	■
	Audio detection	■	■	■
Sensitivity	Minimum illumination day mode (color)	0.017 lux	0.22 lux	0.25 lux
	Minimum illumination night mode (black / white)	0.0057 lux	0.05 lux	0.08 lux
	Night vision	■ (starlight)	-	-
	Max. range at night	-	-	-
Lens	Automatic Back Focus (ABF)	■	■	■
	Automatic varifocal	-	-	-
	Focal length	1.8-3 mm (V02-xx), 3.8-13 mm (V03-xx), 9-40 mm (V09-xx)	1.8-3 mm (V02-xx), 3.8-13 mm (V03-xx), 9-40 mm (V09-xx)	1.8-3 mm (V02-xx), 3.8-13 mm (V03-xx), 9-40 mm (V09-xx)
	Horizontal Angle of View (HAoV)	77°-105° (V02-xx), 21°-72° (V03-xx), 7.1°-30° (V09-xx)	87°-115° (V02-xx), 26°-87° (V03-xx), 8.5°-37° (V09-xx)	70°-98° (V02-xx), 19°-63° (V03-xx), 6.2°-26° (V09-xx)
DCRI distances	Detection / Classification / Recognition / Identification (Distances in m with 100 lux illumination)	24-39/12-20/8-13/3-5 (V02-xx) 42-165/22-85/15-57/6-23 (V03-xx) 114-493/59-252/40-170/16-69 (V09-xx)	30-49/15-25/10-17/4-7 (V02-xx) 49-199/25-102/17-69/7-28 (V03-xx) 137-616/70-316/48-212/19-86 (V09-xx)	40-66/21-34/14-23/6-9 (V02-xx) 75-274/39-140/26-95/10-38 (V03-xx) 199-846/102-433/69-291/28-118 (V09-xx)
	Storage	Memory card slot	■ (up to 2 TB)	■ (up to 2 TB)
	Cloud application storage	Auto or Alarm JPEG Posting, Best Face Detection JPEG posting (IVA models only), Video Clips or JPEG Exporting	Auto or Alarm JPEG Posting, Best Face Detection JPEG posting (IVA models only), Video Clips or JPEG Exporting	Auto or Alarm JPEG Posting, Best Face Detection JPEG posting, Video Clips or JPEG Exporting
Connections	Alarm input / output	2/1	2/1	2/1
	Audio in/out	■	■	■
	Hybrid* / confrontation monitor	-/-	-/-	-/-
Housing	Weather rating	IP66 & IP67	IP66 & IP67	IP66 & IP67
	Vandal resistant	exceeding IK10	exceeding IK10	exceeding IK10
	Operating temperature	-50° to 50° C (-58° to 122° F)	-50° to 50° C (-58° to 122° F)	-50° to 50° C (-58° to 122° F)

\* The hybrid functionality offers an easy migration path from legacy CCTV to a modern IP-based system

## IP Video

### Fixed Cameras

▶TINYON IP 2000

▶TINYON IP 2000 HD

▶TINYON IP 2000 WI\*\*

▶TINYON IP 2000 PIR\*\*



■ Available – Not available

Commercial Type Number		NPC-20002-F2	NPC-20012-F2	NPC-20012-F2WL	NPC-20012-F2L
Bosch USPs	intelligent Dynamic Noise Reduction (iDNR)	■	■	■	■
	intelligent Auto Exposure (iAE)	-	-	-	-
	starlight (extreme low-light sensitivity)	-	-	-	-
	ultra HD	-	-	-	-
	Built-in Intelligent Video Analysis (IVA)	-	-	-	-
Basic features	Maximum resolution	VGA	HD 720p	HD 720p	HD 720p
	Image sensor type	1/4"	1/4"	1/4"	1/4"
	Max. frames per second (fps)	30 fps@480p	30 fps@720p	30 fps@720p	30 fps@720p
	Indoor / outdoor / in-vehicle	■/-/-	■/-/-	■/-/-	■/-/-
	Day/night	■ (Electronic)	■ (Electronic)	■ (Electronic)	■ (Electronic)
	Wide Dynamic Range (WDR)	76dB	76dB	76dB	76dB
	ONVIF conformant	■	■	■	■
	Built-in microphone	-	■	■	■
	Power over Ethernet (PoE)	-	■	-	■
Advanced features	Compression (H.264 & MJPEG) / multi-streaming	■/4 streams	■/4 streams	■/4 streams	■/4 streams
	Privacy masking	■	■	■	■
	Region Of Interest tracking	-	-	-	-
Alarm triggering	Tamper detection	■	■	■	■
	Video motion detection	■	■	■	■
	Intelligent Video Analysis (IVA)	-	-	-	-
	Audio detection	-	■	■	■
	Passive infrared (PIR) motion detection	-	-	■	■
Sensitivity	Minimum illumination day mode (color)	1 lux	1 lux	1 lux 0 lux (with LED)	1 lux 0 lux (with LED)
	Minimum illumination night mode (black / white)	-	-	-	-
	Night vision	-	-	■ (LED)	■ (LED)
	Max. range at night	-	-	4 m (13 ft)	4 m (13 ft)
Lens	Automatic Back Focus (ABF)	-	-	-	-
	Automatic varifocal	-	-	-	-
	Focal length	2.5 mm	2.5 mm	2.5 mm	2.5 mm
	Horizontal Angle of View (HAoV)	75°	89°	89°	89°
DCRI distances	Detection / Classification / Recognition / Identification (Distances in m with 100 lux illumination)	20/10/7/3	32/16/11/5	32/16/11/5	32/16/11/5
Storage	Memory card slot	■ up to 2 TB	■ up to 2 TB	-	■
	Cloud application storage	Auto or Alarm JPEG Posting, Video Clips or JPEG Exporting	Auto or Alarm JPEG Posting, Video Clips or JPEG Exporting	Auto or Alarm JPEG Posting, Video Clips or JPEG Exporting	Auto or Alarm JPEG Posting, Video Clips or JPEG Exporting
Connections	Alarm input / output	-/-	-/-	-/-	-/-
	Audio in/out	-/-	-/- (Built-in loudspeaker)	-/- (Built-in loudspeaker)	-/- (Built-in loudspeaker)
	Hybrid* / confrontation monitor	-/-	-/-	-/-	-/-
	Wireless (WPS, IEEE 802, 11b/g/n)	-	-	■	-
Housing	Weather rating	-	-	-	-
	Vandal resistant	-	-	-	-
	Operating temperature	-10° to 45° C (14° to 113° F)	-10° to 50° C (14° to 122° F)	-10° to 40° C (14° to 104° F)	-10° to 45° C (14° to 113° F)

\* The hybrid functionality offers an easy migration path from legacy CCTV to a modern IP-based system

\*\* Available as of August 2014

## IP Video

### Fixed Cameras

## ►DINION IP 4000 HD



## ►DINION IP 5000 HD



## ►DINION IP bullet 4000 HD



## ►DINION IP bullet 5000 HD



■ Available – Not available

Commercial Type Number		NBN-40012-xxx	NBN-50022-xxx	NTI-40012-V3	NTI-50022-V3
Bosch USPs	intelligent Dynamic Noise Reduction (iDNR)	■	■	■	■
	intelligent Auto Exposure (iAE)	-	-	-	-
	starlight (extreme low-light sensitivity)	-	-	-	-
	ultra HD	-	-	-	-
	Built-in Intelligent Video Analysis (IVA)	-	-	-	-
Basic features	Maximum resolution	HD 720p	HD 1080p	HD 720p	HD 1080p
	Image sensor type	1/2.7"	1/2.7"	1/2.7"	1/2.7"
	Max. frames per second (fps)	30 fps@720p	30 fps@1080p	30 fps@720p	30 fps@1080p
	Indoor / outdoor / in-vehicle	■/■ (with housing)/-	■/■ (with housing)/-	■/■/-	■/■/-
	Day/night	■	■	■	■
	Wide Dynamic Range (WDR)	76dB	76dB	76dB	76dB
	ONVIF conformant	■	■	■	■
	Built-in microphone	■	■	-	-
	Power over Ethernet (PoE)	■	■	■	■
	Advanced features	Compression (H.264 & MJPEG) / multi-streaming	■/4 streams	■/4 streams	■/4 streams
Privacy masking		■	■	■	■
Region Of Interest tracking		-	-	-	-
Alarm triggering	Tamper detection	■	■	■	■
	Video motion detection	■	■	■	■
	Intelligent Video Analysis (IVA)	-	-	-	-
	Audio detection	■	■	■	■
Sensitivity	Minimum illumination day mode (color)	0.25 lux	0.25 lux	0.24 lux	0.24 lux
	Minimum illumination night mode (black / white)	0.05 lux	0.05 lux	0 lux	0 lux
	Night vision	-	-	■ (infrared)	■ (infrared)
	Max. range at night	-	-	25 m (82ft)	25 m (82ft)
Lens	Automatic Back Focus (ABF)	-	-	-	-
	Automatic varifocal	-	-	-	-
	Focal length	3.3-12 mm (V3)/CS mount	3.3-12 mm (V3)/CS mount	3-10 mm	3-10 mm
	Horizontal Angle of View (HAoV)	34°-110° (V3)	34°-110° (V3)	36°-107°	36°-107°
DCRI distances	Detection / Classification / Recognition / Identification (Distances in m with 100 lux illumination)	22-100/11-52/8-35/3-14 (V3)	33-150/17-77/11-52/5-21 (V3)	23-94/12-49/8-33/3-13	34-142/18-73/12-50/5-20
Storage	Memory card slot	■ up to 2 TB	■ up to 2 TB	-	-
	Cloud application storage	Auto or Alarm JPEG Posting, Video Clips or JPEG Exporting	Auto or Alarm JPEG Posting, Video Clips or JPEG Exporting	Auto or Alarm JPEG Posting, Video Clips or JPEG Exporting	Auto or Alarm JPEG Posting, Video Clips or JPEG Exporting
Connections	Alarm input / output	1/1	1/1	1/1	1/1
	Audio in/out	■/■	■/■	■/■	■/■
	Hybrid* / confrontation monitor	-/■	-/■	-/-	-/-
Housing	Weather rating	-	-	IP66	IP66
	Vandal resistant	-	-	IK7	IK7
	Operating temperature	-30° to 50° C (-22° to 122° F)	-30° to 50° C (-22° to 122° F)	-30° to 50° C (-22° to 122° F)	-30° to 50° C (-22° to 122° F)

\* The hybrid functionality offers an easy migration path from legacy CCTV to a modern IP-based system

## IP Video

### Fixed Cameras

►DINION IP starlight 7000 HD



►DINION IP 7000 HD



►DINION IP dynamic 7000 HD



■ Available – Not available

Commercial Type Number		NBN-71013-xx** / NKN-71013-BAx-xxN***	NBN-71022-xx** / NKN-71022-BAx-xxN***	NBN-71027-xx** / NKN-71027-BAx-xxN***
Bosch USPs	intelligent Dynamic Noise Reduction (iDNR)	■	■	■
	intelligent Auto Exposure (iAE)	■	■	■
	starlight (extreme low-light sensitivity)	■	-	-
	ultra HD	-	-	-
	Built-in Intelligent Video Analysis (IVA)	■ (depends on model)	■ (depends on model)	■
Basic features	Maximum resolution	HD 720p, 1024p (no IVA)	HD 1080p	HD 1080p
	Image sensor type	1/3"	1/2.7"	1/3"
	Max. frames per second (fps)	60 fps@720p	30 fps@1080p	30 fps @1080p
	Indoor / outdoor / in-vehicle	■/■ (with housing)/-	■/■ (with housing)/-	■/■ (with housing)/-
	Day/night	■	■	■
	Wide Dynamic Range (WDR)	84dB (IVA model with IAE + 16dB)	76dB (IVA model with IAE + 16dB)	90dB (with IAE + 16dB)
	ONVIF conformant	■	■	■
	Built-in microphone	-	-	-
	Power over Ethernet (PoE)	■	■	■
	Advanced features	Compression (H.264 & MJPEG) / multi-streaming	■/4 streams	■/4 streams
	Privacy masking	■	■	■
	Region Of Interest tracking	■	■	■
Alarm triggering	Tamper detection	■	■	■
	Video motion detection	■	■	■
	Intelligent Video Analysis (IVA)	■ (depends on model)	■ (depends on model)	■
	Audio detection	■	■	■
Sensitivity	Minimum illumination day mode (color)	0.017 lux	0.22 lux	0.25 lux
	Minimum illumination night mode (black / white)	0.0057 lux	0.05 lux	0.08 lux
	Night vision	■ (starlight)	-	-
	Max. range at night	-	-	-
Lens	Automatic Back Focus (ABF)	■	■	■
	Automatic varifocal	-	-	-
	Focal length	C/CS mount (NBN), 9-40 mm (NKN-71013-BA4), 3.8-13 mm (NKN-71013-BA3)	C/CS mount (NBN), 9-40 mm (NKN-71022-BA4), 3.8-13 mm (NKN-71022-BA3)	C/CS mount (NBN), 9-40 mm (NKN-71027-BA4), 3.8-13 mm (NKN-71027-BA3)
	Horizontal Angle of View (HAoV)	Depending on optional lens	Depending on optional lens	Depending on optional lens
DCRI distances	Detection / Classification / Recognition / Identification (Distances in m with 100 lux illumination)	Depending on optional lens	Depending on optional lens	Depending on optional lens
Storage	Memory card slot	■ up to 2 TB	■ up to 2 TB	■ up to 2 TB
	Cloud application storage	Auto or Alarm JPEG Posting, Best Face Detection JPEG posting (IVA models only), Video Clips or JPEG Exporting	Auto or Alarm JPEG Posting, Best Face Detection JPEG posting (IVA models only), Video Clips or JPEG Exporting	Auto or Alarm JPEG Posting, Best Face Detection JPEG posting (IVA models only), Video Clips or JPEG Exporting
Connections	Alarm input / output	2/1	2/1	2/1
	Audio in/out	■/■	■/■	■/■
	Hybrid* / confrontation monitor	■/■	■/■	■/■
Housing	Weather rating	IP66 (NKN models only)	IP66 (NKN models only)	IP66 (NKN models only)
	Vandal resistant	-	-	-
	Operating temperature	-20° to 50° C (-4° to 122° F)	-20° to 55° C (-4° to 131° F)	-20° to 50° C (-4° to 122° F)

\* The hybrid functionality offers an easy migration path from legacy CCTV to a modern IP-based system

\*\* Lens not included

\*\*\* Ready-to-go, factory assembled pre-packaged camera kits include: DINION IP 7000 camera, lens, indoor/outdoor housing, assembled, pre-wired and back-focussed. EMEA region models: NKN-71013-BAx-10N. US region models: NKN-71013-BAx-20N

## IP Video

### Fixed Cameras

#### ►DINION IP starlight 8000 MP



#### ►DINION IP ultra 8000 MP\*\*



■ Available – Not available

Commercial Type Number		NBN-80052-BA	NBN-80122-Fxx
Bosch USPs	intelligent Dynamic Noise Reduction (iDNR)	■	■
	intelligent Auto Exposure (iAE)	■	■
	starlight (extreme low-light sensitivity)	■	-
	ultra HD	-	■
	Built-in Intelligent Video Analysis (IVA)	■	■
Basic features	Maximum resolution	5 MP	12 MP / UHD
	Image sensor type	1/1.8"	1/2.3"
	Max. frames per second (fps)	30 fps@5MP	20 fps@12MP, 30 fps@UHD
	Indoor / outdoor / in-vehicle	■/■ (with housing)/-	■/■ (with housing)/-
	Day/night	■	■
	Wide Dynamic Range (WDR)	97dB (with IAE + 16dB)	92dB (with IAE + 16dB)
	ONVIF conformant	■	■
	Built-in microphone	-	-
	Power over Ethernet (PoE)	■	■
	Advanced features	Compression (H.264 & MJPEG) / multi-streaming	■/4 streams
Privacy masking		■	■
Region Of Interest tracking		■	■
Alarm triggering	Tamper detection	■	■
	Video motion detection	■	■
	Intelligent Video Analysis (IVA)	■	■
	Audio detection	■	■
Sensitivity	Minimum illumination day mode (color)	0.0121 lux	1.932 lux
	Minimum illumination night mode (black / white)	0.004 lux	0.638 lux
	Night vision	■ (starlight)	-
	Max. range at night	-	-
Lens	Automatic Back Focus (ABF)	■	■
	Automatic varifocal	-	-
	Focal length	C/CS mount	3.2 mm (F2A) 5 mm (F6A)
	Horizontal Angle of View (HAoV)	Depending on optional lens	71° (-F6A) 120° (-F2A)
DCRI distances	Detection / Classification / Recognition / Identification (Distances in m with 100 lux illumination)	Depending on optional lens	134/69/46/20 (-F6A) 71/35/23/10 (-F2A)
Storage	Memory card slot	■ up to 2 TB	■ up to 2 TB
	Cloud application storage	Auto or Alarm JPEG Posting, Best Face Detection JPEG posting (IVA models only), Video Clips or JPEG Exporting	Auto or Alarm JPEG Posting, Best Face Detection JPEG posting (IVA models only), Video Clips or JPEG Exporting
Connections	Alarm input / output	2/1	2/1
	Audio in/out	■/■	■/■
	Hybrid* / confrontation monitor	-/-	-/-
Housing	Weather rating	-	-
	Vandal resistant	-	-
	Operating temperature	-20° to 50° C (-4° to 122° F)	-20° to 50° C (-4° to 122° F)

\* The hybrid functionality offers an easy migration path from legacy CCTV to a modern IP-based system

\*\* Available as of September 2014

# IP Video Specialty Cameras

►DINION IP imager 9000 HD

►VOT thermal

►FLEXIDOME IP corner 9000 MP



■ Available – Not available

Commercial Type Number		NAI-90022-AAA	VOT-320-Vxxx	NCN-90022-F1
Bosch USPs	intelligent Dynamic Noise Reduction (iDNR)	■	-	■
	intelligent Auto Exposure (iAE)	■	-	-
	starlight (extreme low-light sensitivity)	-	-	-
	ultra HD	-	-	-
	Built-in Intelligent Video Analysis (IVA)	■	■	-
Basic features	Maximum resolution	HD 1080p	320 x 240	1080p
	Image sensor type	1/2.7"	FPA - Vox	1/2.7"
	Max. frames per second (fps)	30 fps@1080p	8.3 fps@240p (-VxxL), 30 fps@240p (-VxxH)	30 fps@1080p
	Indoor / outdoor / in-vehicle	-/■/-	-/■/-	■/-/-
	Day/night	■	-	■
	Wide Dynamic Range (WDR)	76dB (with IAE +16dB)	-	-
	ONVIF conformant	■	■	■
	Built-in microphone	-	-	-
	Power over Ethernet (PoE)	■	-	■
	Advanced features	Compression (H.264 & MJPEG) / multi-streaming	■/4 streams	■/4 streams
Privacy masking		■	-	■
Region Of Interest tracking		■	-	-
Alarm triggering	Tamper detection	■	■	■
	Video motion detection	■	■	■
	Intelligent Video Analysis (IVA)	■	■	-
	Audio detection	■	■	■
Sensitivity	Minimum illumination day mode (color)	0.4 lux	-	0.3 lux
	Minimum illumination night mode (black / white)	0 lux	0 lux	0 lux
	Night vision	■ (infrared)	■ (thermal)	■ (infrared)
	Max. range at night	120 m (394 ft)	1450 m (4758 ft)	9 m (30 ft)
Lens	Automatic Back Focus (ABF)	■	-	-
	Automatic varifocal	■	-	-
	Focal length	10 - 23 mm	9 mm (-V9L, -V9H), 13 mm (-V13L, -V13H), 19 mm (-V19L, -V19H), 60 mm (-V60L, -V60H)	2 mm
	Horizontal Angle of View (HAoV)	14.8°-34°	-	121°
DCRI distances	Detection / Classification / Recognition / Identification (Distances in m with 100 lux illumination)	150-352/77-181/52-122/21-49	-	20/10/7/3
Storage	Memory card slot	■ Up to 2 TB	■ Up to 32 GB	■ Up to 2 TB
	Cloud application storage	Auto or Alarm JPEG Posting, Best Face Detection JPEG posting, Video Clips or JPEG Exporting	Auto or Alarm JPEG Posting (FTP only)	Auto or Alarm JPEG Posting, Video Clips or JPEG Exporting
Connections	Alarm input / output	1/1	2/2	1/1
	Audio in/out	■/■	-/-	■/■
	Hybrid* / confrontation monitor	-/-	-/-	-/-
Housing	Weather rating	IP66	IP66	IP65
	Vandal resistant	IK10	-	IK10
	Operating temperature	-40° to 50° C (-40° to 122° F)	-50° to 55° C (-58° to 131° F)	-10° to 50° C (14° to 122° F)

\* The hybrid functionality offers an easy migration path from legacy CCTV to a modern IP-based system

## IP Video Specialty Cameras

►EXTEGRA IP starlight 9000 FX\*\*



►EXTEGRA IP dynamic 9000 FX\*\*



■ Available – Not available

Commercial Type Number		NXF-7130-xx	NXF-7230-xx
Bosch USPs	intelligent Dynamic Noise Reduction (iDNR)	■	■
	intelligent Auto Exposure (iAE)	-	-
	starlight (extreme low-light sensitivity)	■	-
	ultra HD	-	-
	Built-in Intelligent Video Analysis (IVA)	■	■
Basic features	Maximum resolution	HD 720p	HD 1080p
	Image sensor type	1/3"	1/2.8"
	Max. frames per second (fps)	60 fps@720p	30 fps@1080p
	Indoor / outdoor / in-vehicle	-/■ (Ex-Proof/Corrosive)/-	-/■ (Ex-Proof/Corrosive)/-
	Day/night	■	■
	Wide Dynamic Range (WDR)	90dB	90dB
	ONVIF conformant	■	■
	Built-in microphone	-	-
	Power over Ethernet (PoE)	■ (HiPoE)	■ (HiPoE)
Advanced features	Compression (H.264 & MJPEG) / multi-streaming	■	■
	Privacy masking	■	■
	Region Of Interest tracking	-	-
Alarm triggering	Tamper detection	■	■
	Video motion detection	■	■
	Intelligent Video Analysis (IVA)	■	■
	Audio detection	■	■
Sensitivity	Minimum illumination day mode (color)	0.052 lux	0.066 lux
	Minimum illumination night mode (black / white)	0.0103 lux	0.033 lux
	Night vision	■ (External EX65 IR)	■ (External EX65 IR)
	Max. range at night	-	-
Lens	Automatic Back Focus (ABF)	■	■
	Automatic varifocal	■	■
	Focal length	4.3 mm - 129 mm	4.3 mm - 129 mm
DCRI distances	Horizontal Angle of View (HAoV)	2.1° to 59°	2.1° to 59°
	Detection / Classification / Recognition / Identification (Distances in m with 100 lux illumination)	-	-
Storage	Memory card slot	■ Up to 2 TB	■ Up to 2 TB
	Cloud application storage	Auto or Alarm JPEG Posting (FTP only)	Auto or Alarm JPEG Posting (FTP only)
Connections	Alarm input / output	3/2	3/2
	Audio in/out	1/1	1/1
	Hybrid* / confrontation monitor	-/-	-/-
Housing	Weather rating	IP67	IP67
	Vandal resistant	-	-
	Operating temperature	-50° to 60° C (-58° to 140° F) (Aluminum) -50° to 55° C (-58° to 131° F) (Stainless steel)	-50° to 60° C (-58° to 140° F) (Aluminum) -50° to 55° C (-58° to 131° F) (Stainless steel)

\* The hybrid functionality offers an easy migration path from legacy CCTV to a modern IP-based system

\*\* Available as of July 2014



## IP Video

### Moving Cameras

#### ►AUTODOME easy II



#### ►AUTODOME junior HD



■ Available – Not available

Commercial Type Number		VEZ-211/221	VJR-811/821/831
Bosch USPs	intelligent Dynamic Noise Reduction (iDNR)	-	-
	intelligent Auto Exposure (iAE)	-	-
	intelligent Tracking	-	-
	starlight (extreme low-light sensitivity)	-	-
	Built-in Intelligent Video Analysis (IVA)	■	■
Basic features	Maximum resolution	4CIF	HD 1080p
	Image sensor type	1/4" CCD	1/2.8"
	Max. frames per second (fps)	30 fps@576p	60 fps@720p 30 fps@1080p
	Indoor / outdoor / in-vehicle	■/■/-	■/■/-
	Day/night	-	■
	Wide Dynamic Range (WDR)	-	-
	ONVIF conformant	■	■
	Built-in microphone	-	-
	Power over Ethernet (PoE)	■ (only Indoor)	■ (PoE+ only Indoor)
	Advanced features	Compression (H.264 & MJPEG) / multi-streaming	■/3 streams
Alarm triggering	Privacy masking	■	■
	Nbr of presets / guard tours	99/2	99/2
	Wiper	-	-
	Tamper detection	■	■
Sensitivity	Video motion detection	■	■
	Intelligent Video Analysis (IVA)	■	■
	Audio detection	-	■
	PTZ intelligent Tracking	-	-
	Minimum illumination day mode (color)	1 lux	1.2 lux
Lens	Minimum illumination night mode (black / white)	-	0.06 lux
	Night vision	-	-
	Max. range at night	-	-
	Focal length	4.2 - 42 mm	6.3 - 63 mm
DCRI distances	Horizontal Angle of View (HAoV)	-	-
	PTZ Zoom optical / digital	10x/12x	10x/16x
	Tilt angle	-90° to +4°	-90° to 0°
	Detection / Classification / Recognition / Identification (Distances in m with 100 lux illumination)	-	-
Storage	Memory card slot	-	-
	Cloud application storage	Auto or Alarm JPEG Posting (FTP only)	Auto or Alarm JPEG Posting (FTP only)
Connections	Alarm input / output	2/1	2/1
	Audio in/out	-/-	■/■
	Hybrid* / confrontation monitor	-/-	-/-
Housing	Weather rating	IP65 (outdoor)	IP65 (outdoor)
	Vandal resistant	-	-
	Operating temperature	-30° to 50° C (-22° to 122° F)	-30° to 50° C (-22° to 122° F)

\* The hybrid functionality offers an easy migration path from legacy CCTV to a modern IP-based system

## IP Video

### Moving Cameras

▶AUTODOME IP 7000



▶AUTODOME IP 7000 HD



▶AUTODOME IP starlight 7000 HD\*\*



▶AUTODOME IP dynamic 7000 HD\*\*



■ Available – Not available

Commercial Type Number		VG5-7028/7036	VG5-7220	VG5-7130	VG5-7230
Bosch USPs	intelligent Dynamic Noise Reduction (iDNR)	-	-	■	■
	intelligent Auto Exposure (iAE)	-	-	-	-
	intelligent Tracking	■	■	■	■
	starlight (extreme low-light sensitivity)	-	-	■	-
	Built-in Intelligent Video Analysis (IVA)	■	■	■	■
Basic features	Maximum resolution	4CIF	HD 1080p	HD 720p	HD 1080p
	Image sensor type	1/4" CCD	1/2.8"	1/3" CMOS	1/2.8"
	Max. frames per second (fps)	30 fps@576p	60 fps@720p 30 fps@1080p	60 fps@720p	30@1080p
	Indoor / outdoor / in-vehicle	■/■/-	■/■/-	■/■/-	■/■/-
	Day/night	■	■	■	■
	Wide Dynamic Range (WDR)	92dB	86dB	90dB	90dB
	ONVIF conformant	■	■	■	■
	Built-in microphone	-	-	-	-
	Power over Ethernet (PoE)	■ (HiPoE)	■ (HiPoE)	■ (HiPoE)	■ (HiPoE)
	Advanced features	Compression (H.264 & MJPEG) / multi-streaming	■/4 streams	■/4 streams	■/4 streams
Privacy masking		■	■	■	■
Nbr of presets / guard tours		256/2	256/2	256/2	256/2
Wiper		-	-	-	-
Alarm triggering	Tamper detection	■	■	■	■
	Video motion detection	■	■	■	■
	Intelligent Video Analysis (IVA)	■	■	■	■
	Audio detection	■	■	■	■
	PTZ intelligent Tracking	■	■	■	■
Sensitivity	Minimum illumination day mode (color)	0.66 lux (36x) 0.33 lux (28x)	0.8 lux	0.052 lux	0.066 lux
	Minimum illumination night mode (black / white)	0.104 lux (36x) 0.066 lux (28x)	0.12 lux	0.0103 lux	0.033 lux
	Night vision	-	-	■ (starlight)	-
	Max. range at night	-	-	-	-
Lens	Focal length	3.4-122.4 mm (x36) 3.5-98 mm (x28)	4.7 - 94 mm	4.3 mm to 129 mm	4.3 mm to 129 mm
	Horizontal Angle of View (HAoV)	28x : 2.13 to 54.98 36x :1.7 to 56.35	2.9 to 54.1	2.3° to 65°	2.3° to 65°
	PTZ Zoom optical / digital	36x or 28x/12x	20x/12x	30x/12x	30x/12x
	Tilt angle	-90° to 14° (pendant)	-90° to 14° (pendant)	-90° to 14° (pendant)	-90° to 14° (pendant)
	DCRI distances	Detection / Classification / Recognition / Identification (Distances in m with 100 lux illumination)	-	-	-
Storage	Memory card slot	■ Up to 32 GB / 2 TB	■ Up to 32 GB / 2 TB	■ Up to 2 TB	■ Up to 2 TB
	Cloud application storage	Auto or Alarm JPEG Posting, Video Clips or JPEG Exporting	Auto or Alarm JPEG Posting, Video Clips or JPEG Exporting	Auto or Alarm JPEG Posting, Video Clips or JPEG Exporting	Auto or Alarm JPEG Posting, Video Clips or JPEG Exporting
Connections	Alarm input / output	7/4	7/4	7/4	7/4
	Audio in/out	■/■	■/■	■/■	■/■
	Hybrid* / confrontation monitor	-/-	-/-	-/-	-/-
Housing	Weather rating	IP66 (outdoor)	IP66 (outdoor)	IP66 (outdoor)	IP66 (outdoor)
	Vandal resistant	IK08 (with rugged bubble)	-	-	-
	Operating temperature	-40° to 55° C (-40° F to 131° F)	-40° to 55° C (-40° F to 131° F)	-40° to 55° C (-40° F to 131° F)	-40° to 55° C (-40° F to 131° F)

\*The hybrid functionality offers an easy migration path from legacy CCTV to a modern IP-based system \*\* Available as of July 2014

## IP Video

### Moving Cameras

►MIC IP starlight 7000 HD\*\*



►MIC IP dynamic 7000 HD\*\*



►MIC 612



■ Available – Not available

Commercial Type Number		MIC-7130-Px4xx	MIC-7230-Px4xx	MIC612 ***
Bosch USPs	intelligent Dynamic Noise Reduction (iDNR)	■	■	-
	intelligent Auto Exposure (iAE)	-	-	-
	intelligent Tracking	■	■	-
	starlight (extreme low-light sensitivity)	■	-	-
	Built-in Intelligent Video Analysis (IVA)	■	■	■
Basic features	Maximum resolution	HD 720p	HD 1080p	550 TVL (optical) 320x256 / 640x480 (thermal)
	Image sensor type	1/3"	1/3"	1/4" CCD / FPA
	Max. frames per second (fps)	60 fps@720p	30 fps@1080p	30 fps@576p
	Indoor / outdoor / in-vehicle	-/■/-	-/■/-	-/■/-
	Day/night	■	■	■ (optical)
	Wide Dynamic Range (WDR)	90dB	90dB	-
	ONVIF conformant	■	■	■
	Built-in microphone	-	-	-
	Power over Ethernet (PoE)	■ (HiPoE)	■ (HiPoE)	-
	Advanced features	Compression (H.264 & MJPEG) / multi-streaming	■/4 streams	■/4 streams
Privacy masking		■	■	■
Nbr of presets / guard tours		256/2	256/2	99/2
Wiper		■	■	■
Alarm triggering	Tamper detection	■	■	■
	Video motion detection	■	■	■
	Intelligent Video Analysis (IVA)	■	■	■
	Audio detection	■ (With VIDEOJET connect 7000)	■ (With VIDEOJET connect 7000)	-
	PTZ intelligent Tracking	■	■	-
Sensitivity	Minimum illumination day mode (color)	0.052 lux	0.066 lux	0.66 lux (optical) N.A. (thermal)
	Minimum illumination night mode (black / white)	0.0103 lux	0.033 lux	0.104 lux (optical) 0 lux (thermal)
	Night vision	■ (Optional illuminator)	■ (Optional illuminator)	■ (Infrared/Thermal)
	Max. range at night	175 m (575 ft)	175 m (575 ft)	1500 m (4922 ft)
Lens	Focal length	4.3-129 mm	4.3-129 mm	3.4-122.4 mm (optical), 35 mm (thermal T models) 50 mm (thermal H models)
	Horizontal Angle of View (HAoV)	2.1° to 58.3°	2.1° to 58.3°	-
	PTZ Zoom optical / digital	30x/12x	30x/12x	36x/12x
	Tilt angle	-58° to 90° (upright), -103° to 90° (canted)	-58° to 90° (upright), -103° to 90° (canted)	-58° to 90°
DCRI distances	Detection / Classification / Recognition / Identification (Distances in m with 100 lux illumination)	175 / 150 / 100 / 60	150 / 100 / 60 / 50	-
Storage	Memory card slot	■ Up to 32 GB	■ Up to 32 GB	■ Up to 32 GB
	Cloud application storage	Auto or Alarm JPEG Posting, Video Clips or JPEG Exporting	Auto or Alarm JPEG Posting, Video Clips or JPEG Exporting	Auto or Alarm JPEG Posting, Video Clips or JPEG Exporting
Connections	Alarm input / output	8/2 (optional card)	8/2 (optional card)	8/2 (optional card)
	Audio in/out	■/■ (With VIDEOJET connect 7000)	■/■ (With VIDEOJET connect 7000)	-/-
	Hybrid* / confrontation monitor	-/-	-/-	-/-
Housing	Weather rating	IP68	IP68	IP68
	Vandal resistant	IK10	IK10	IK9
	Operating temperature	-60° to 60° C (-76° to 122° F)	-60° to 60° C (-76° to 122° F)	-40° to 60° C (-40° F to 140° F)

\* The hybrid functionality offers an easy migration path from legacy CCTV to a modern IP-based system \*\* Available as of July 2014

\*\*\* IP features are possible when using optional MIC-IP-PSU Power Supply

## IP Video

### Digital Recording

#### All-in-one solution

►DIVAR IP 3000

►BRS HD Series

►DIVAR IP 7000 1U

►DIVAR IP 7000 2U



■ Available – Not available

Commercial Type Number		DIP-304x-xxx	BRS-xxx-xxxxx **	DIP-704x-xxx	DIP-708x-xxx
Basic functions	Max. system size	32	64	64	128
	Integrated video management	■	■	■	■
	RAID Level	—	Mid-Tower: — 19-inch Rack Mount: U1/U2: RAID-5	—	RAID-5
	Supported resolutions	CIF / 2CIF / 4CIF / 720p / 1080p / 5MP	CIF / 2CIF / 4CIF / 720p / 1080p / 3MP, 5MP	CIF / 2CIF / 4CIF / 720p / 1080p / 5MP	CIF / 2CIF / 4CIF / 720p / 1080p / 5MP
	Video compression	H.264, MPEG-4, ONVIF, RTSP, JPEG	H.264, MPEG-4, JPEG	H.264, MPEG-4, ONVIF, RTSP, JPEG	H.264, MPEG-4, ONVIF, RTSP, JPEG
	Transcoding	■	■	■	■
Mechanical	ONVIF	■	—	■	■
	Form factor	4-bay Mini-Tower	Mid-Tower or 19-inch Rack Mount (1U/2U)	1U 19-inch Rack Mount	2U 19-inch Rack Mount
	Network connections (LAN)	1x Gigabit Ethernet	2x Gigabit Ethernet	2x Gigabit Ethernet	2x Gigabit Ethernet
	USB ports	4x USB 2.0 / 1x USB 3.0	2x USB 2.0	4x USB 2.0	4x USB 2.0
	Number of power supplies	1	Mid-Tower: 1 19-inch Rack Mount: 2	2	2
Power supplies hot swappable	—	■ (19-inch Rack Mount)	■	■	
Video output	Connector type	1 DVI, 1 VGA	Mid-Tower: 1 DVI 19-inch Rack Mount: VGA, only for programming	1 DVI, 1 DP	1 DVI, 1 DP
	Spotmonitor	1 per IP decoder, 2nd video output (VGA)	—	1 per IP decoder	1 per IP decoder
Audio	In/out channels	32 (audio playback via remote station only)	32 (audio playback via remote station only)	64 (audio playback via remote station only)	128 (audio playback via remote station only)
	Compression type	G.726	G.726	G.726	G.726
	Synchronous audio	■	■	■	■
	Associate multiple cameras to 1 Audio	■	■	■	■
Recording	Video Recording Manager (VRM)	■	—	■	■
	Schedule recording modes	■	■	■	■
Storage options	Max. drives supported	4	Tower: 4 19-inch Rack Mount 1U: 4 / 2U 8:	4	8
	Available capacities per drive	2 TB	Tower: 1 TB 19-inch Rack Mount 1U: 2TB	2 TB	2 or 3 TB
	Base system capacity TB	0, 4 or 8 TB	4, 8 or 16 TB	0, 4 or 8 TB	0, 16 or 24 TB
	Max. Base system capacity TB	8 TB	Tower: 4 TB 19-inch Rack Mount 1U: 8 TB, 2U: 16 TB	8 TB	24 TB
	Full system capacity TB	24 TB	—	104 TB	120 TB
	Extenable/external support	iSCSI	—	iSCSI	iSCSI
	Max. number of units	2x DIVAR IP 2000	—	4x DIVAR IP 6000	4x DIVAR IP 6000
Storage extentions	Maximum drives supported	4	—	4 or 8	4 or 8
	Available capacities per drive	2 TB	—	2 or 3 TB	2 or 3 TB
	Hot swappable	—	—	■	■
Export / back-up of data	Data format	WMF, Bosch ASF	WMF, Bosch ASF	WMF, Bosch ASF	WMF, Bosch ASF
	Built-in DVD writer	—	■	■	■
	Supported devices	External CD/DVD Writer, USB 2.0, USB 3.0, iSCSI	USB 2.0, Network Drive, DAS SCSI	USB 2.0, iSCSI, internal CD/DVD Writer	USB 2.0, iSCSI, internal CD/DVD Writer
	Back-up mode	Manual or Automatic	Manual or Automatic	Manual or Automatic	Manual or Automatic

Table continued on the next page

## IP Video

### Digital Recording

#### All-in-one solution

►DIVAR IP 3000

►BRS HD Series

►DIVAR IP 7000 1U

►DIVAR IP 7000 2U



■ Available – Not available

Commercial Type Number		DIP-304x-xxx	BRS-xxx-xxxxx **	DIP-704x-xxx	DIP-708x-xxx
Redundancy	Power supply redundancy	–	19-inch Rack Mount	■	■
	Hot swappable HDD	–	–	■	■
Software options	PTZ control	■	■	–	■
	CCTV keyboard support	■	■ (with BVC)	■	■
	Admin control	■	■	■	■
	Export options	■	■	■	■
Remote access	Mobile device (smart phone/tablet)	■ Video security app	–	■ Video security app	■ Video security app
	Network	10/100/1000 Ethernet	10/100/1000 Ethernet	10/100/1000 Ethernet	10/100/1000 Ethernet
	Web browser access	–	■	–	–
	Simultaneous accessible users	–	20	–	–
Advanced features support	Forensic search support (metadata)	■	–	■	■
	Webclient	–	■	–	–
Supported software	Bosch Video Client	■ (v1.5 or newer)	■ (v1.5 or newer)	■ (v1.5 or newer)	■ (v1.5 or newer)
	Bosch Video Management System	■ (v4.50 or newer)	■ (v4.50 or newer)	■ (v4.50 or newer)	■ (v4.50 or newer)
	3rd Party software	–	–	–	–
3rd party integration tools	Optional ATM/POS integration	■	–	■	■
	SDK (IPP)	■	–	■	■

\*\* Not all models are available in all regions, please check with your local sales representative

## IP Video Digital Storage

### Network Video Recorder

►DIVAR IP 2000      ►DLA 1200 Series      ►DIVAR IP 6000 1U      ►DIVAR IP 6000 2U      ►DSA-Series



■ Available – Not available

Commercial Type Number		DIP-204x-xxx	DLA-AIOxx-xxx	DIP-604x-xxx	DIP-608-x-xxx	DSA-Nxxxxx-xxxx
Basic functions	Max. system size	16	32	128	128	600
	Integrated video management	–	–	–	–	–
	RAID Level	–	–	RAID-5	RAID-5	RAID-5/RAID-6
	Supported resolutions	CIF / 2CIF / 4CIF / 720p / 1080p / 5MP	CIF / 2CIF / 4CIF / 720p / 1080p / 5MP	CIF / 2CIF / 4CIF / 720p / 1080p / 5MP	CIF / 2CIF / 4CIF / 720p / 1080p / 5MP	CIF / 2CIF / 4CIF / 720p / 1080p / 5MP
	Video compression	H.264, MPEG-4, ONVIF, RTSP, JPEG	H.264, MPEG-4, ONVIF, RTSP, JPEG	H.264, MPEG-4, ONVIF, RTSP, JPEG	H.264, MPEG-4, ONVIF, RTSP, JPEG	H.264, MPEG-4, ONVIF, RTSP, JPEG
	Transcoding	■	–	■	■	–
	ONVIF	Supported as of Autumn 2014	■	■	■	■
Mechanical	Form factor	4-bay Mini-Tower	Mid-Tower	1U 19-inch Rack Mount	2U 19-inch Rack Mount	2U 19-inch Rack Mount
	Network connections (LAN)	1x Gigabit Ethernet	1x Gigabit Ethernet	2x Gigabit Ethernet	2x Gigabit Ethernet	2x Gigabit Ethernet / 2x 10 Gigabit Ethernet
	USB ports	2x USB 2.0	2x USB 2.0	4x USB 2.0	4x USB 2.0	–
	Number of power supplies	1	1	2	2	2
	Power supplies hot swappable	–	–	■	■	■
	Video output	Connector type	VGA	VGA	VGA	VGA
Audio	Spotmonitor	1 per IP decoder	1 per IP decoder	1 per IP decoder	1 per IP decoder	–
	In/out channels	16 (audio playback via remote station only)	(audio playback via remote station only)	128 (audio playback via remote station only)	128 (audio playback via remote station only)	400 (audio playback via remote station only)
	Compression type	G.726	G.726	G.726	G.726	G.726
	Synchronous audio	■	■	■	■	■
Recording	Associate multiple cameras to 1 Audio	■	■	■	■	■
	Video Recording Manager (VRM)	■	■ (v2.11 embedded)	■	■	–
	Schedule recording modes	■	■	■	■	■
Storage options	Max. drives supported	4	4	4	8	12
	Available capacities per drive	2 TB	1 TB	2 or 3 TB	2 or 3 TB	2 or 3 TB
	Base system capacity TB	0, 4 or 8 TB	4 TB	0, 8 or 12 TB	0, 16 or 24 TB	–
	Max. Base system capacity TB	8 TB	4 TB	12 TB	24 TB	24 / 36 TB
	Full system capacity TB	8 TB	–	108 TB	120 TB	288 TB / 576 TB **
	Extenable/external support	iSCSI	–	iSCSI	iSCSI	6Gb/s SAS (Copper)
Storage extentions	Max. number of units	–	–	4x DIVAR IP 6000	4x DIVAR IP 6000	7 / 3 **
	Maximum drives supported	–	–	4 or 8	4 or 8	12 / 60 **
	Available capacities per drive	–	–	2 or 3 TB	2 or 3 TB	2 TB / 3 TB **
	Hot swappable	–	–	■	■	■
Export / back-up of data	Data format	WMF, Bosch ASF	WMF, Bosch ASF	WMF, Bosch ASF	WMF, Bosch ASF	WMF, Bosch ASF
	Built-in DVD writer	–	–	–	–	–
	Supported devices	External CD/DVD Writer, USB 2.0, iSCSI	External CD/DVD Writer, USB 2.0, iSCSI	External CD/DVD Writer, USB 2.0, iSCSI	External CD/DVD Writer, USB 2.0, iSCSI	External CD/DVD Writer, USB 2.0, iSCSI
	Back-up mode	Manual	Manual	Manual	Manual	Manual or Automatic
	Redundancy	Power supply redundancy	–	–	■	■
	Hot swappable HDD	–	–	■	■	■

Table continued on the next page

# IP Video

## Digital Storage

**Network Video Recorder**

▶ **DIVAR IP 2000**      ▶ **DLA 1200 Series**      ▶ **DIVAR IP 6000 1U**      ▶ **DIVAR IP 6000 2U**      ▶ **DSA-Series**



■ Available – Not available

Commercial Type Number		DIP-204x-xxx	DLA-AIOxx-xxx	DIP-604x-xxx	DIP-604x-xxx	DSA-Nxxxxx-xxxx
Software options	PTZ control	○ *	○ *	○ *	○ *	—
	CCTV keyboard support	○ *	○ *	○ *	○ *	—
	Admin control	○ *	○ *	○ *	○ *	—
	Export options	○ *	○ *	○ *	○ *	—
Remote access	Mobile device (smart phone/tablet)	■ Video security app	■ Video security app	■ Video security app	■ Video security app	—
	Network	10/100/1000 Ethernet	10/100/1000 Ethernet	10/100/1000 Ethernet	10/100/1000 Ethernet	2x 10 Gigabit Ethernet
	Web browser access	■	■	■	■	—
	Simultaneous accessible users	5	5	5	5	—
Advanced features support	Forensic search support (metadata)	—	—	—	—	—
	Webclient	—	—	—	—	SANtricity
Supported software	Bosch Video Client	■	■	■	■	—
	Bosch Video Management System	■ (v2.20 or newer)	■ (v2.20 or newer)	■ (v2.20 or newer)	■ (v2.20 or newer)	—
	3rd Party software	—	—	—	—	—
3rd party integration tools	Optional ATM/POS integration	—	—	—	—	—
	SDK (IPP)	—	—	—	—	—

○ \* Via Bosch video software

\*\* Up to three high-density shelf expansion units (60 x 3 TB HDD per expansion shelf) to one Dual controller base unit may be connected - CTN:DSA-N2C6X2-12AT

## IP Video

### Video Software

#### ►Advanced Viewing Client

#### ►Video Management System



■ Available – Not available

Commercial Type Number	BVC (v1.4)/Rec@edge	BRS (v8.11) including Appliance	BVMS (v4.5) Lite	BVMS (v4.5) Pro
Channel Count	Up to 128	Up to 64 per Station	32 to 64	8 to 200,000
System Architecture Support	Standalone	Standalone or Peer-to-Peer (200 max.)	Standalone to Client Server	Client Server (one server/2000 cameras) Multi Server (up to 30 servers/10,000 cameras) Multi-System (unlimited servers/cameras)
Full VMS	Advanced Viewing Client	Recorder + Viewing Client	Full VMS	Full VMS
Software based Video IP Platform	■	■	■	■
ONVIF for 3rd Party Camera Intergration	■ (with VRM2.30/VSG1)	■ (with v8.10)	■	■
Multi-site Support (independent systems tied together)	–	■ (via VPN tunnelled connection)	■	■
Multi-site Support (dispersed system recording, cameras, remote independent client)	–	Independent Client with VPN or via Web, one site at a time	■	■
Mobile Clients	–	–	■ MVS license required: 1 license provides up to 20 connections. Multiple servers with MVS.	■ MVS license required: 1 license provides up to 20 connections. Multiple servers with MVS per site.
Workstations/Clients	1 standalone at a time (separate config needed)	5 web connections, 20 clients	2 clients for 32; 4 clients for 64	100 (Client-Server and Multi-Server); Unlimited (Multi-System)
LDAP	–	■	■	■
COTS (Commercial off the Shelf) for Server/Workstation	■	■	■	■
Resolution				
HD-ready	■	■	■	■
SD and HD	■	■	■	■
SD and HD Decoder support	■	–	■	■
Monitor Wall Client GUI Support	■	–	■	■
Encoding				
H.264	■	■	■	■
MPEG-4	■	■	■ (via BRS only)	■ (via BRS only)
3rd party camera support	ONVIF 1.02/Profile-S with DIVAR IP	AXIS MPEG-4 (No PTZ); ONVIF 1.02/Profile-S	■ ONVIF 1.02/Profile-S	■ ONVIF 1.02/Profile-S
Display				
Multi-monitor support	■ (2)	■ (via browser or BVC)	■ (4)	■ (4)
Workstation OS support	XP, Vista, Win7,SP1	Win XP SP3 (32-bit); Win7 (32/64-bit)	XP, Win7,SP1	XP, Win7,SP1
16:9 Monitor support	■	■	■	■
Mapping	–	–	■	■
Dynamic cameo scaling	■	–	–	–

Table continued on the next page



# IP Video

## Video Software

►Advanced Viewing Client

►Video Management System



■ Available – Not available

Commercial Type Number	BVC (v1.4)/Rec@edge	BRS (v8.11) including Appliance	BVMS (v4.5) Lite	BVMS (v4.5) Pro
Alarm Management	User management	–	■	■
	Digital I/O alarms	■	■	■
	System event alarms	■	■	■
	Motion alarms	■	■	■
	Event response and command scripts	–	■	■
	IVA alarms	■	■	■
	IVA forensic search	■	–	■
	Audio	■	■	■
	Compound events	–	–	■
	Scheduled dependent alarming	–	■	■
Control	Event allocation to user groups	–	■	■
	AUTODOME Intelligent Tracking	■	–	–
	PTZ	■	■	■
	IntuiKey	■ (limited functionality)	■ (via BVC only)	■
Storage	Virtual matrix	–	■	■
	@edge camera support	■	–	■
	iSCSI	■	–	■
	NVR support	–	■	■ (BRS)
	VRM	■ (via DIVAR IP)	–	■
	IVA metadata	■	–	■
	Support redundant storage	–	–	–
Integration	DLA Support (VRM Mode)	■ (1)	–	■ (40)
	BVMS	–	■	–
	BRS	■	–	■
	DxR 400/600/700	■	–	■
	BVC	–	■	–
	Bosch G Series panel	–	■	–
	Access	–	■	■
	OPC	–	■	■
	CLI/CCL	–	■	■
	ATM/POS	–	■	■
	BIS	–	■	■
	Script control for all system functions	–	–	■
	SDK integration into 3rd party SW	–	■	■
	Virtual inputs	■	■	■
Networking	LAN/intranet	■	■	■
	WAN	–	■ ( via hardware VPN)	■
	Remote/Decoupled Client	–	■	■
	Mobile Viewing APP	–	–	■ (iOS only)
	Web Client	–	■	■ (iOS only)

## IP Video

### Encoders and Decoders

Encoders					Decoders		Transcoders
▶VIP X1XF E	▶VIP X1XF	▶VIDEOJET X20 XF E	▶VIDEOJET X40 XF E	▶VIP X16 XF E	▶VIDEOJET decoder 3000	▶VIDEOJET decoder 7000	▶VIDEOJET XTC XF



■ Available – Not available

Commercial Type Number	VIP-X1XF-E	VIP-X1XF	VJT-X20XF-E	VJT-X40XF-E	VIP-X16XF-E	VJD-3000	VJD-7000	VJT-XTCXF
Description	Single Channel Video Encoder	Single Channel Premium Encoder	2 Channel H.264 Video Encoder	4 Channel H.264 Video Encoder	16 Channel H.264 Video Encoder	Single/Quad-stream Decoder	HD Video Decoder	4 Channel/Dual-stream Transcoder
Video/Audio								
Camera Inputs	1	1	2	4	16	–	–	4
Monitor Outputs	–	–	–	–	–	1 of 2 (HDMI, CVBS)	2 of 3 (DVI-I, HDMI, DP)	–
Video Codec	H.264	H.264	H.264 MP H.264 BP	H.264 MP H.264 BP	H.264 High Profile	H.264 M-JPEG, JPEG	H.264, MPEG-4	H.264 High Profile
Max. frames per second (fps)	25/30 @ 4CIF	25/30 @ 4CIF	25/30	25/30	25/30 @ 4CIF	30 @ 1080p (single view) 60 @ 720p (single view) 4x 25/30 @ 4CIF (quad view)	4x 30 @ 1080p 4x 60 @ 720p 20x 25/30 @ 4CIF	25/30 @ 4CIF
Audio In/Out	1/1	1/1	2/1	2/1	2/1	1/1	1/1	–
Transcoding at the edge	–	–	■	■	–	–	–	■
Storage								
Type	SD Card	SD Card	CF	CF	–	–	–	CF
Capacity	2 TB	2 TB	2 TB	2 TB	–	–	–	2 TB
Intelligence								
Direct-to-iSCSI	■	■	■	■	■	–	–	–
Video Analytics	Motion+	IVA	Motion+	Motion+	Motion+	–	–	–
Interfaces								
Alarm In	1	2	4	4	4	4	–	4
Relay Out	1	2	1	1	1	1	–	1
ONVIF conformant	■	■	■	■	■	–	–	–
Other								
Keyboard	–	–	–	–	–	■	–	–
IP Matrix	–	–	–	–	–	■	–	–

#### ▶Modular Systems



■ Available – Not available

Commercial Type Number	VIP X1600-B	VIP X1600-XFB
Description	Base System	Base System
Bays	4	4
Ethernet	Two 1 Gbps ports (1 front, 1 rear)	Three 1 Gbps ports (2 front, 1 rear)
SFP Fiber Slot	–	■



■ Available – Not available

Commercial Type Number	VIP X1600 XFM4A	VIP X1600 XFM4B
Description	4 Channel H.264 Encoder Module	4 Channel H.264 Encoder Module with Bilinix
Video/Audio		
Camera Inputs	4	4
Video Codec	H.264 MP H.264 BP+ M-JPEG	H.264 MP H.264 BP+ M-JPEG
Max. frames per second (fps)	25/30 @ 4CIF	25/30 @ 4CIF
Audio In/Out	2/1	2/1
Intelligence		
Direct-to-iSCSI	■	■
Video Analytics	IVA	IVA
Interfaces		
Alarm In	4	4
Relay Out	1	1
SFP Fiber Slot	■	■
ONVIF conformant	■	■

# IP Video Flat Panel Monitors

►High Definition



■ Available – Not available

Commercial Type Number		UML-193-90	UML-223-90	UML-273-90	UML-323-90	UML-423-90	UML-553-90
Display	Type	19" LED	22" LED	27" LED	32" LED	42" LED	55" LED
	Max Pixel Resolution	1366 x 768	1920 x 1080	1920 x 1080	1920 x 1080	1920 x 1080	1920 x 1080
	Horizontal Resolution	650 TVL	650 TVL	650 TVL	650 TVL	650 TVL	650 TVL
	Aspect Ratio	16:9	16:9	16:9	16:9	16:9	16:9
	Brightness (cd/m <sup>2</sup> )	250	250	300	350	500	450
	Contrast Ratio	1000:1	1000:1	3000:1	3000:1	4000:1	4000:1
	Backlight	30,000 hours	30,000 hours	30,000 hours	50,000 hours	50,000 hours	50,000 hours
	Viewing Angle (HxV)	170° x 160°	170° x 160°	178° x 178°	178° x 178°	178° x 178°	178° x 178°
Composite Video / Audio Loop-through		Passive	Passive	Passive	Passive	Passive	Passive
PC Compatible		■	■	■	■	■	■
Connectors	Composite Video (BNC)	-	-	2 (looping video)	1 (looping video)	2 (looping video)	2 (looping video)
	VGA	■	■	■	■	■	■
	DVI-D	■	■	■	■	■	■
	HDMI	■	■	■	■	■	■
Audio	Input	■	■	■	■	■	■
	Speaker	■	■	■	■	■	■
Mechanical	Width	448 mm	515 mm	642 mm	745 mm	977 mm	1256 mm
	Height	332 mm*	370 mm*	380 mm	440 mm	570 mm	727 mm
	Depth	182 mm*	182 mm*	76 mm	77 mm	83 mm	83 mm
	Weight	3.0 kg	3.6 kg	9.1 kg	12.5 kg	20 kg	32 kg
Power	Power Supply	Integrated	Integrated	Included	Integrated	Integrated	Integrated
	Power Consumption	42W	42W	75W	75W	150W	170W
Misc.	Picture-in-picture	-	-	-	-	-	-
	Front Panel Lockout	■	■	■	■	■	■
	IR Remote	-	-	-	■	■	■
Cables Included	VGA-to-VGA	■	■	■	■	■	■
	DVI-to-DVI	■	■	■	■	■	■
Mounting	VESA Compliant	■	■	■	■	■	■
	Rack-mountable	-	-	-	-	-	-
	Table Stand	Included	Included	Included	UMM-LED32-SD	UMM-LED42-SD	UMM-LED42-SD
	Fixed Wall Mount	-	-	-	-	ST660	ST660
	Swivel/Tilt Wall Mount	-	-	UMM-WMT-32	UMM-WMT-32	-	-

## **A Tradition of Quality and Innovation**

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Bosch Security Systems proudly offers a wide range of security, safety, communications and sound solutions that are relied upon every day in applications around the world, from government facilities and public venues to businesses, schools and homes.

### **Bosch Security Systems**

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