

# INTELLIGENT VIDEO SURVEILLANCE

Product Guide

**GRUNDIG**

● REC



# What should a video surveillance system of today be able to deliver?

Many small to medium-sized systems can manage without any special requirements. Often, it's enough just to save video sequences, so that in case of an incident the course of events can be determined in the light of the recordings. For standard applications like this, GRUNDIG Security offers a comprehensive range: cameras that supply perfect high-resolution images, irrespective of the light conditions, and recorders that store video sequences for weeks or months when required, even if this is rarely done today for reasons of data privacy.

So many features for a wide range of applications. But the unique thing about GRUNDIG Security is the uncomplicated forensic search function of the GRUNDIG Video Management System powered by C-WERK®. This makes it possible for you to find the recordings that really interest you in a gigantic archive of video data, with little effort and in no time at all.

As an installer or end user of the new GRUNDIG products and solutions, what can you expect? Leaving our tried and tested reliability aside, you will also find a whole lot of image analysis functions, for the most part supported by artificial intelligence (AI). And there's a lot of functionality available. You can use facial recognition, for instance, to recognise people, or the LPR function to identify vehicle licence plates. Or you can

quite simply reduce the frequency of false alarms signalling a spurious break-in or perimeter breach, by classifying objects as 'vehicle', 'person' or 'other'.

Cameras from GRUNDIG Security can see whether your employees are wearing the mandatory helmets or protective gear. They can recognise faces in crowds of people, count heads and determine the length of queues at your supermarket till, therefore helping you to make the best possible use of your resources. Furthermore, they can even read body language. If a person shows an unusual or unnatural posture, an alarm will be triggered. So, you will be warned in good time, before your cash machine risks being blown sky-high.

These are just a few examples out of a plethora of possibilities, which the exceptionally flexible video surveillance systems from GRUNDIG Security are able to offer.

So, if you want more than just pretty pictures and long recording times, please get in touch – we'll be happy to hear from you!



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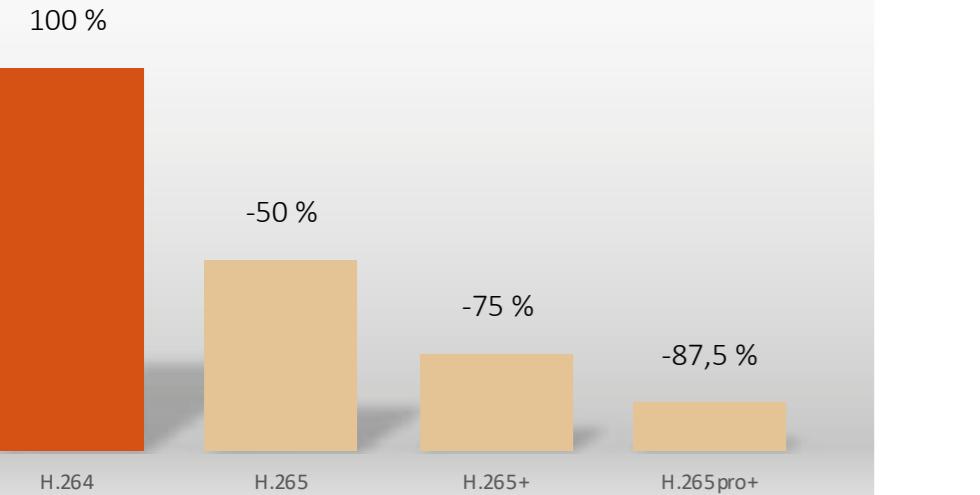
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## 24 Hour Recording File Size



## 5 Years Extended Guarantee

Grundig has launched a new 5-year Guarantee on "PRO" and "PREMIUM" cameras to further support customers and make project maintenance easier and more cost-effective.

Grundig takes quality seriously and puts a lot of effort into ensuring our products are both innovative and reliable. To give customers greater peace of mind, the 5-year Guarantee will be added for PRO and PREMIUM products on electronic parts from 1 January 2021. Mechanical wear and tear on moving parts is not included. Please note our general terms and conditions.

## H.265pro+

Ultra HD security cameras have been in production for a while but were not immediately adopted and widespread because they require excessive transmission bandwidth and enormous storage capacity. The problem can be solved by using H.265pro+ encoding technology, which uses an average of about 87.5 % of the bit rate of H.264. As the bit rate of the recorded video material is greatly reduced, the bandwidth and storage costs are also reduced. H.265pro+ is based on the standard format H.265/High Efficiency Video Coding (HEVC). With H.265pro+, the video quality is close to that of H.265/HEVC, but reduces the required transmission bandwidth and storage capacity due to three key technologies: predictive coding, noise reduction and flexible bit rate control. It shows significant improvements in bandwidth reduction, data storage efficiency and the analysis of video content.

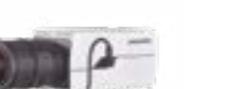
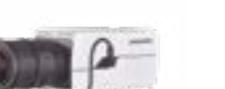


## Many Grundig Recorders, Cameras and Video Management Software have deep Learning Analytics Functions

The rapid development of algorithms, neural networks, human-machine interfaces and computing power is now taking deep learning applications to a new level. Deep learning has also reached the security industry and enables a number of solutions, not only to improve the security of the company premises and to efficiently suppress unwanted alarms. The benefits of deep learning for attribute recognition and image classification make it extremely valuable in the security arena. It touches every aspect of the security industry- from face and vehicle recognition to behavior analysis. Deep learning is a type of machine learning that trains a computer to analyze human-like tasks like recognizing language, classifying images, recognizing objects, and even people's behavior. A real example are virtual assistants like Siri and Cortana, some of which are powered by artificial intelligence. Rather than organizing data to loop through predefined equations, deep learning sets basic parameters for the data and trains the computer to learn on its own by recognizing patterns using processing layers.

## Cybersecurity

Grundig Security supports internationally recognized cyber security standards and best practices. We make extensive efforts to improve the network security of our products and solutions. We continue to improve and use open and transparent methods so that users can evaluate the cybersecurity features of Grundig products. You can find more detailed information on IT security in our product data sheets and our "White Paper Cybersecurity".

**GD-CI-AP2605B****GD-CI-BT2505B****GD-CI-AT4505B****GD-CI-AT8505B****GD-CI-AT12505B****GD-CI-AP4617C****GD-CI-AC2615M****Professional****Premium****Premium****Premium****Premium****Professional****Essential****Video Resolution**

1920 x 1080

1920 x 1080

2560 x 1440

3840 x 2160

4000 x 3000

2688 x 1520

1920 x 1080

**Sensitivity Colour**

0.01 Lux @ F1.2 (AGC ON)

0.002 Lux @ F1.2 (AGC ON)

0.002 Lux @ F1.2 (AGC ON)

0.007 Lux @ F1.2 (AGC ON)

0.008 Lux @ F1.2 (AGC ON)

0.01 Lux @ F1.2 (AGC ON)

0.1 Lux @ F1.2 (AGC ON)

**Lens Focal Length**

—

—

—

—

—

2.8 mm

4.3 mm

**Colour/B&W**

IR-cut filter removable (ICR)

—

**Wide Dynamic Range**

120 dB

120 dB

140 dB

120 dB

Digital WDR

120 dB

120 dB

**Image Enhancement**

BLC, 3D DNR

BLC, 3D DNR, Defog, EIS, HLC

BLC, 3D DNR, Defog, EIS, HLC

BLC, 3D DNR, Defog, EIS, HLC

BLC, 3D DNR, HLC

BLC, 3D DNR, HLC

BLC, 3D DNR, HLC

**Max. IR Distance**

—

—

—

—

—

Up to 10 m

—

**Video Compression**

H.264, H.264+, H.265, H.265+, MJPEG

H.264, H.265, MJPEG

**SD memory**

up to 128G, ANR Function

up to 128G, ANR Function

up to 256G, ANR Function

up to 256G, ANR Function

up to 256G, ANR Function

up to 128G, ANR Function

up to 128G

**Video Outputs**

1x CVBS (1 Vcc) BNC

1x CVBS (1 Vcc) BNC

1 Test Monitor out, BNC cable

1 Test Monitor out, BNC cable

1 Test Monitor out, BNC cable

—

1x CVBS (1 Vcc) BNC

**Alarm Input/Output**

yes

yes

yes

yes

yes

yes

—

**Audio Input/Output**

yes

yes

yes

yes

yes

—

—

**Intelligent Video Analytics**

Several Analytics Functions

Motion detection

**Surge Protection**

—

—

TVS 2000V

—

—

—

—

**Operating Temperature**

-30 °C ~ 60 °C (-22 °F ~ 140 °F)

-30 °C ~ 60 °C (-22 °F ~ 140 °F)

-30 °C ~ 60 °C (-22 °F ~ 140 °F)

-30 °C ~ 60 °C (-22 °F ~ 140 °F)

-30 °C ~ 60 °C (-22 °F ~ 140 °F)

-10 °C ~ 50 °C (-14 °F ~ 122 °F)

-10 °C ~ 50 °C (-14 °F ~ 122 °F)

**Supply Voltage**

12 VDC, PoE (IEEE 802.3af)

12 VDC, 24 VAC, PoE (IEEE 802.3af)

12 VDC, 24 VAC, PoE (IEEE 802.3af)

12 VDC, 24 VAC, PoE (IEEE 802.3af)

12 VDC, PoE (IEEE 802.3af)

12 VDC, PoE (IEEE 802.3af)

12 VDC ±10%

**Power Consumption**

Max. 6 W

Max. 6 W

Max. 8 W

Max. 10 W

Max. 10 W

Max. 7 W

Max. 4 W

**GD-CI-AP2605B****GD-CI-BT2505B****GD-CI-AT4505B****GD-CI-AT8505B****GD-CI-AT12505B****GD-CI-AP4617C****GD-CI-AC2615M****Professional****Premium****Premium****Premium****Premium****Professional****Essential****Video Resolution**

1920 x 1080

1920 x 1080

2560 x 1440

3840 x 2160

4000 x 3000

2688 x 1520

1920 x 1080

**Sensitivity Colour**

0.01 Lux @ F1.2 (AGC ON)

0.002 Lux @ F1.2 (AGC ON)

0.002 Lux @ F1.2 (AGC ON)

0.007 Lux @ F1.2 (AGC ON)

0.008 Lux @ F1.2 (AGC ON)

0.01 Lux @ F1.2 (AGC ON)

0.1 Lux @ F1.2 (AGC ON)

**Lens Focal Length**

—

—

—

—

—

2.8 mm

4.3 mm

**Colour/B&W**

IR-cut filter removable (ICR)

IR-cut filter removable (ICR)

IR-cut filter removable (ICR)

IR-cut filter removable (ICR)

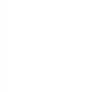


	<b>GD-CI-AP4617V</b>	<b>GD-CI-AP4617W</b>	<b>GD-CI-AP2627V</b>	<b>GD-CI-AP4637V</b>	<b>GD-CI-BP4637V</b>	<b>GD-CI-AT2637V</b>	<b>GD-CI-AT2637VH</b>
	Professional	Professional	Professional	Professional	Professional	Premium	Premium
<b>Video Resolution</b>	2688 × 1520	2688 × 1520	1920 × 1080	2688 × 1520	2592 × 1944	1920 × 1080	1920 × 1080
<b>Sensitivity Colour</b>	0.01 Lux @ F1.2 (AGC ON)	0.01 Lux @ F1.2 (AGC ON)	0.005 Lux @ F1.2 (AGC ON)	0.01 Lux @ F1.2 (AGC ON)	0.002 Lux @ F1.2 (AGC ON)	0.002 Lux @ F1.2 (AGC ON)	0.002 Lux @ F1.2 (AGC ON)
<b>Lens Focal Length</b>	2.8 mm	2.8 mm	2.8 ~ 12 mm motorized, auto-focus				
<b>Colour/B&amp;W</b>	IR-cut filter removable (ICR)						
<b>Wide Dynamic Range</b>	120 dB	140 dB	140 dB				
<b>Image Enhancement</b>	BLC, 3D DNR	BLC, 3D DNR, HLC	BLC, 3D DNR, HLC	BLC, 3D DNR	BLC, 3D DNR, HLC, AWB, AGC	BLC, 3D DNR, Defog, EIS, HLC	BLC, 3D DNR, Defog, EIS, HLC
<b>Max. IR Distance</b>	Up to 30 m	Up to 10 m	Up to 30 m	Up to 30 m	Up to 40 m	Up to 30 m	Up to 30 m
<b>Video Compression</b>	H.264, H.264+, H.265, H.265+, MJPEG						
<b>SD memory</b>	up to 128G, ANR Function	up to 128G, ANR Function	up to 256G, ANR Function	up to 128G, ANR Function	up to 256G, ANR Function	up to 256G, ANR Function	up to 256G, ANR Function
<b>Video Outputs</b>	—	—	1 Test Monitor out, BNC cable	1 Test Monitor out, BNC cable	—	1 Test Monitor out, BNC cable	1 Test Monitor out, BNC cable
<b>Alarm Input/Output</b>	yes						
<b>Audio Input/Output</b>	yes						
<b>Intelligent Video Analytics</b>	Several Analytics Functions	Several Analytics Functions	Several Analytics Functions	Several Analytics Functions	Deep Learning AI Functions	Several Analytics Functions	Several Analytics Functions
<b>Surge Protection</b>	TVS 2000V	—	—	TVS 2000V	—	TVS 2000V	TVS 2000V
<b>Operating Temperature</b>	-40 °C ~ 60 °C (-40 °F ~ 140 °F)	-40 °C ~ 60 °C (-40 °F ~ 140 °F)	-40 °C ~ 60 °C (-40 °F ~ 140 °F)	-40 °C ~ 60 °C (-40 °F ~ 140 °F)	-30 °C ~ 60 °C (-22 °F ~ 140 °F)	-30 °C ~ 60 °C (-22 °F ~ 140 °F)	-50 °C ~ 65 °C (-58 °F ~ 149 °F)
<b>Supply Voltage</b>	12 VDC, PoE (IEEE 802.3af)	12 VDC, PoE+ (IEEE 802.3at)	12 VDC, PoE+ (IEEE 802.3at)	12 VDC, PoE+ (IEEE 802.3at)			
<b>Power Consumption</b>	Max. 6 W	Max. 10 W	Max. 11 W	Max. 12 W	Max. 11 W	Max. 12 W	Max. 17 W



	<b>GD-CI-AT3637V</b>	<b>GD-CI-AT4637V</b>	<b>GD-CI-AT4637VH</b>	<b>GD-CI-AT8637V</b>	<b>GD-CI-AP5617F</b>	<b>GD-CI-BT12617F</b>
	Premium	Premium	Premium	Premium	Professional	Premium
<b>Video Resolution</b>	2048 × 1536	2560 × 1440	2560 × 1440	3840 × 2160	2560 × 1920	4000 × 3000
<b>Sensitivity Colour</b>	0.005 Lux @ F1.2 (AGC ON)	0.002 Lux @ F1.2 (AGC ON)	0.002 Lux @ F1.2 (AGC ON)	0.01 Lux @ F1.2 (AGC ON)	0.01 Lux @ F1.2 (AGC ON)	0.05 Lux @ F2.2 (AGC ON)
<b>Lens Focal Length</b>	2.8 ~ 12 mm motorized, autofocus	1.05 mm	1.29 mm			
<b>Colour/B&amp;W</b>	IR-cut filter removable (ICR)					
<b>Wide Dynamic Range</b>	120 dB	140 dB	140 dB	120 dB	120 dB	Digital WDR
<b>Image Enhancement</b>	BLC, 3D DNR, Defog, EIS, HLC	BLC, 3D DNR, Defog, EIS, HLC	BLC, 3D DNR, Defog, EIS, HLC	BLC, 3D DNR	BLC, 3D DNR, Defog	BLC, 3D DNR, Defog, HLC
<b>Max. IR Distance</b>	Up to 30 m	Up to 8 m	Up to 15 m			
<b>Video Compression</b>	H.264, H.264+, H.265, H.265+, MJPEG					
<b>SD memory</b>	up to 128G, ANR Function	up to 128G, ANR Function	up to 256G, ANR Function	up to 256G, ANR Function	up to 128G, ANR Function	up to 256G, ANR Function
<b>Video Outputs</b>	1 Test Monitor out, BNC cable	—	—			
<b>Alarm Input/Output</b>	yes	yes	yes	yes	yes	yes
<b>Audio Input/Output</b>	yes	yes	yes	yes	yes	yes
<b>Intelligent Video Analytics</b>	Several Analytics Functions					
<b>Surge Protection</b>	—	TVS 2000V	TVS 2000V	—	—	—
<b>Operating Temperature</b>	-40 °C ~ 60 °C (-40 °F ~ 140 °F)	-40 °C ~ 65 °C (-40 °F ~ 149 °F)	-50 °C ~ 65 °C (-58 °F ~ 149 °F)	-30 °C ~ 60 °C (-22 °F ~ 140 °F)	-10 °C ~ 50 °C (-14 °F ~ 122 °F)	-40 °C ~ 60 °C (-40 °F ~ 140 °F)
<b>Supply Voltage</b>	12 VDC, PoE (IEEE 802.3af)	12 VDC, PoE+ (IEEE 802.3at)	12 VDC, PoE+ (IEEE 802.3at)	12 VDC, PoE (IEEE 802.3af)	12 VDC, PoE (IEEE 802.3af)	12 VDC, PoE (IEEE 802.3af)
<b>Power Consumption</b>	Max. 10 W	Max. 12 W	Max. 17 W	Max. 12 W	Max. 6.7 W	Max. 15 W





	<b>GD-CI-CC2616T</b>	<b>GD-CI-DC2616T</b>	<b>GD-CI-CC4617T</b>	<b>GD-CI-DC4617T</b>	<b>GD-CI-BC2626T</b>	<b>GD-CI-BC4627T</b>
	Essential	Essential	Essential	Essential	Essential	Essential
Video Resolution	1920 x 1080	1920 x 1080	2560 x 1440	2560 x 1440	1920 x 1080	2560 x 1440
Sensitivity Colour	0.01 Lux @ F1.2 (AGC ON)					
Lens Focal Length	2.8 mm	4 mm	2.8 mm	4 mm	2.8 ~ 12 mm	2.8 ~ 12 mm
Colour/B&W	IR-cut filter removable (ICR)					
Wide Dynamic Range	Digital WDR	Digital WDR	120 dB	120 dB	Digital WDR	120 dB
Image Enhancement	BLC, 3D DNR					
Max. IR Distance	Up to 30 m					
Video Compression	H.264, H.264+, H.265, H.265+, MJPEG					
SD memory	—	—	—	—	up to 256G, ANR Function	up to 256G, ANR Function
Video Outputs	—	—	—	—	1x CVBS (1 Vcc) BNC	1x CVBS (1 Vcc) BNC
Alarm Input/Output	—	—	—	—	—	—
Audio Input/Output	—	—	—	—	—	—
Intelligent Video Analytics	Motion Detection					
Surge Protection	—	—	—	—	—	—
Operating Temperature	-40 °C ~ 60 °C (-40 °F ~ 140 °F)	-40 °C ~ 60 °C (-40 °F ~ 140 °F)	-40 °C ~ 60 °C (-40 °F ~ 140 °F)	-40 °C ~ 60 °C (-40 °F ~ 140 °F)	-40 °C ~ 60 °C (-40 °F ~ 140 °F)	-40 °C ~ 60 °C (-40 °F ~ 140 °F)
Supply Voltage	12 VDC, PoE (IEEE 802.3af)					
Power Consumption	Max. 5 W	Max. 5 W	Max. 5 W	Max. 5 W	Max. 7 W	Max. 7 W





	<b>GD-CI-DT2647T</b>	<b>GD-CI-AT2637T</b>	<b>GD-CI-AT2637TH</b>	<b>GD-CI-AT3637T</b>	<b>GD-CI-AT4637T</b>	<b>GD-CI-AT4637TH</b>
	Premium	Premium	Premium	Premium	Premium	Premium
<b>Video Resolution</b>	1920 x 1080	1920 x 1080	1920 x 1080	2048 x 1536	2560 x 1440	2560 x 1440
<b>Sensitivity Colour</b>	0.002 Lux @ F1.2 (AGC ON)	0.002 Lux @ F1.2 (AGC ON)	0.002 Lux @ F1.2 (AGC ON)	0.005 Lux @ F1.2 (AGC ON)	0.002 Lux @ F1.2 (AGC ON)	0.002 Lux @ F1.2 (AGC ON)
<b>Lens Focal Length</b>	8 ~ 32 mm motorized, autofocus	2.8 ~ 12 mm motorized, autofocus	2.8 ~ 12 mm motorized, autofocus	2.8 ~ 12 mm motorized, autofocus	2.8 ~ 12 mm motorized, autofocus	2.8 ~ 12 mm motorized, autofocus
<b>Colour/B&amp;W</b>	IR-cut filter removable (ICR)					
<b>Wide Dynamic Range</b>	140 dB	140 dB	140 dB	120 dB	140 dB	140 dB
<b>Image Enhancement</b>	BLC, 3D DNR, Defog, EIS, HLC	BLC, 3D DNR, Defog, EIS, HLC	BLC, 3D DNR, Defog, EIS, HLC	BLC, 3D DNR, HLC	BLC, 3D DNR, Defog, EIS, HLC	BLC, 3D DNR, Defog, EIS, HLC
<b>Max. IR Distance</b>	Up to 100 m	Up to 50 m	Up to 50 m	Up to 60 m	Up to 50 m	Up to 50 m
<b>Video Compression</b>	H.264, H.264+, H.265, H.265+, MJPEG					
<b>SD memory</b>	up to 256G, ANR Function	up to 256G, ANR Function	up to 256G, ANR Function	up to 128G, ANR Function	up to 256G, ANR Function	up to 256G, ANR Function
<b>Video Outputs</b>	1 Test Monitor out, BNC cable	1 Test Monitor out, BNC cable	1 Test Monitor out, BNC cable	—	1 Test Monitor out, BNC cable	1 Test Monitor out, BNC cable
<b>Alarm Input/Output</b>	yes	yes	yes	yes	yes	yes
<b>Audio Input/Output</b>	—	—	—	yes	—	—
<b>Intelligent Video Analytics</b>	LPR & Deep Learning AI Functions	Several Analytics Functions	Several Analytics Functions	Several Analytics Functions	Several Analytics Functions	Several Analytics Functions
<b>Surge Protection</b>	—	TVS 2000V				
<b>Operating Temperature</b>	-40 °C ~ 60 °C (-40 °F ~ 140 °F)	-40 °C ~ 60 °C (-40 °F ~ 140 °F)	-50 °C ~ 65 °C (-58 °F ~ 149 °F)	-40 °C ~ 60 °C (-40 °F ~ 140 °F)	-40 °C ~ 65 °C (-40 °F ~ 149 °F)	-50 °C ~ 65 °C (-58 °F ~ 149 °F)
<b>Supply Voltage</b>	12 VDC, PoE+ (IEEE 802.3at)					
<b>Power Consumption</b>	Max. 14.5 W	Max. 13 W	Max. 18 W	Max. 15.5 W	Max. 13 W	Max. 18 W



	<b>GD-CI-BT4637T</b>	<b>GD-CI-AT4636T</b>	<b>GD-CI-AT8637T</b>	<b>GD-CI-AT12626T</b>	<b>GD-CI-AT12637T</b>	<b>GD-CI-BP4637E</b>
	Premium	Premium	Premium	Premium	Premium	Professional
<b>Video Resolution</b>	2560 x 1440	2560 x 1440	3840 x 2160	4000 x 3000	4000 x 3000	2688 x 1520
<b>Sensitivity Colour</b>	0.002 Lux @ F1.2 (AGC ON)	0.007 Lux @ F1.2 (AGC ON)	0.01 Lux @ F1.2 (AGC ON)	0.007 Lux @ F1.2 (AGC ON)	0.009 Lux @ F1.2 (AGC ON)	0.01 Lux @ F1.2 (AGC ON)
<b>Lens Focal Length</b>	"8 ~ 32 mm motorized, autofocus"	4.7 ~ 94 mm motorized, autofocus	2.8 ~ 12 mm motorized, autofocus	2.8 ~ 12 mm motorized, autofocus	"8 ~ 32 mm motorized, autofocus"	2.8 ~ 12 mm motorized, autofocus
<b>Colour/B&amp;W</b>	IR-cut filter removable (ICR)					
<b>Wide Dynamic Range</b>	140 dB	105 dB	120 dB	Digital WDR	Digital WDR	120 dB
<b>Image Enhancement</b>	BLC, 3D DNR, Defog, EIS, HLC	BLC, 3D DNR, Defog, EIS, HLC	BLC, 3D DNR	BLC, 3D DNR, Defog, EIS, HLC	BLC, 3D DNR, Defog, EIS, HLC	BLC, 3D DNR, HLC
<b>Max. IR Distance</b>	Up to 100 m	Up to 150m	Up to 60 m	Up to 50 m	Up to 100 m	Up to 30 m
<b>Video Compression</b>	H.264, H.264+, H.265, H.265+, MJPEG					
<b>SD memory</b>	up to 256G, ANR Function	up to 128G, ANR Function	up to 256G, ANR Function	up to 256G, ANR Function	up to 256G, ANR Function	up to 128G, ANR Function
<b>Video Outputs</b>	1 Test Monitor out, BNC cable	—				
<b>Alarm Input/Output</b>	yes	yes	yes	yes	yes	yes
<b>Audio Input/Output</b>	—	—	—	—	—	yes
<b>Intelligent Video Analytics</b>	Several Analytics Functions	Several Analytics Functions	Several Analytics Functions	Several Analytics Functions	Deep Learning AI Functions	Several Analytics Functions
<b>Surge Protection</b>	—	TVS 4000V	TVS 2000V	—	—	TVS 2000V
<b>Operating Temperature</b>	-30 °C ~ +65 °C (-22 °F ~ 149 °F)	-30 °C ~ 60 °C (-22 °F ~ 140 °F)	-40 °C ~ 60 °C (-40 °F ~ 140 °F)	-30 °C ~ +65 °C (-22 °F ~ 149 °F)	-40 °C ~ 60 °C (-40 °F ~ 140 °F)	-30 °C ~ 60 °C (-22 °F ~ 140 °F)
<b>Supply Voltage</b>	12 VDC, PoE+ (IEEE 802.3at)	12 VDC, PoE+ (IEEE 802.3at)	12 VDC, PoE+ (IEEE 802.3at)	12 VDC, PoE (IEEE 802.3af)	12 VDC, PoE (IEEE 802.3at)	12 VDC, PoE (IEEE 802.3af)
<b>Power Consumption</b>	Max. 13 W	Max. 12 W	Max. 19 W	Max. 13 W	Max. 18 W	Max. 10 W





	<b>GD-CI-AC4637P</b>	<b>GD-CI-AP2647P</b>	<b>GD-CI-AP2747P</b>	<b>GD-CI-BP2747P</b>	<b>GD-CI-AP4746P</b>	<b>GD-CI-AT4747P</b>	<b>GD-CI-AT8746P</b>
	Essential	Professional	Professional	Professional	Professional	Premium	Premium
<b>Image Sensor</b>	1/3" progressive Scan CMOS	1/2.8" progressive Scan CMOS	1/2.8" progressive Scan CMOS	1/2.8" progressive Scan CMOS	1/1.9" progressive scan CMOS	1/1.8" progressive Scan CMOS	2/3" progressive scan CMOS
<b>Video Resolution</b>	2560 x 1440	1920 x 1080	1920 x 1080	1920 x 1080	2560 x 1440	2560 x 1440	4096 x 2160
<b>Sensitivity Colour</b>	0.005 Lux @ F1.6 (AGC ON)	0.05 Lux @ F1.6 (AGC ON)	0.005 Lux @ F1.6 (AGC ON)	0.005 Lux @ F1.6 (AGC ON)	0.005 Lux @ F1.5 (AGC ON)	0.002 Lux @ F1.5 (AGC ON)	0.005 Lux @ F1.5 (AGC ON)
<b>Lens Focal Length</b>	2.8 ~ 12 mm motorized, auto-focus	4.7 ~ 94 mm motorized, autofocus	4.8 ~ 153 mm motorized, autofocus	4.8 ~ 153 mm motorized, autofocus	5.9 ~ 177 mm motorized, autofocus	5.7 ~ 205.2 mm motorized, autofocus	7.5 ~ 270 mm motorized, autofocus
<b>Optical Zoom Ratio</b>	4x	20x	32x	32x	30X	36x	36x
<b>Col/B&amp;W</b>	Removable IR-Cut Filter (ICR)	Removable IR-Cut Filter (ICR)	Removable IR-Cut Filter (ICR)	Removable IR-Cut Filter (ICR)	Removable IR-Cut Filter (ICR)	Removable IR-Cut Filter (ICR)	Removable IR-Cut Filter (ICR)
<b>Number of Privacy Zones</b>	24 programmable zones	8 programmable zones	24 programmable zones	24 programmable zones	8 programmable zones	24 programmable zones	24 programmable zones
<b>Image Enhancement</b>	BLC, 3D DNR, Defog, EIS, HLC, AGC, Regional Exposure, Regional Focus	BLC, 3D DNR	BLC, 3D DNR, Defog, EIS, HLC, AGC, Regional Exposure, Regional Focus	BLC, 3D DNR, Defog, EIS, HLC, AGC, Regional Exposure, Regional Focus	BLC, 3D DNR, Defog, EIS, HLC, AGC, Regional Exposure, Regional Focus	BLC, 3D DNR, Defog, EIS, HLC, AGC, Regional Exposure, Regional Focus, Rapid Focus	BLC, 3D DNR, Defog, EIS, HLC, AGC, Regional Exposure, Regional Focus, Rapid Focus
<b>Max. IR Distance</b>	Up to 20 m	Up to 50 m	Up to 180m	Up to 200m	Up to 200m	Up to 200m	Up to 200m
<b>SD memory</b>	up to 256G, ANR Function	up to 128G, ANR Function	up to 256G, ANR Function	up to 256G, ANR Function	up to 128G, ANR Function	up to 256G, ANR Function	up to 256G, ANR Function
<b>Video Outputs</b>	—	—	—	—	—	1x CVBS (1 Vcc) BNC	1x CVBS (1 Vcc) BNC
<b>Alarm Input/Output</b>	yes	yes	yes	yes	yes	yes	yes
<b>Audio Input/Output</b>	yes	yes	yes	yes	yes	yes	yes
<b>Surge Protection</b>	TVS 2000V	TVS 4000V	TVS 4000V	TVS 4000V	TVS 2000V	TVS 6000V	TVS 6000V
<b>Operating Temperature</b>	-20 °C ~ 60 °C (-4 °F ~ 140 °F)	-40 °C ~ 65 °C (-40 °F ~ 149 °F)	-40 °C ~ 65 °C (-40 °F ~ 149 °F)	-40 °C ~ 65 °C (-40 °F ~ 149 °F)	-40 °C ~ 70 °C (-40 °F ~ 158 °F)	-40 °C ~ 70 °C (-40 °F ~ 158 °F)	-40 °C ~ 70 °C (-40 °F ~ 158 °F)
<b>Supply Voltage</b>	12 VDC, PoE (IEEE 802.3af)	12 VDC, PoE+ (IEEE 802.3at)	24 VAC, PoE+ (IEEE 802.3at)	24 VAC, PoE+ (IEEE 802.3at)	24 VAC, PoE (IEEE 802.3bt)	24 VAC, Hi-PoE (IEEE 802.3bt)	24 VAC, Hi-PoE (IEEE 802.3bt)
<b>Power Consumption</b>	Max. 12 W	Max. 18 W	Max. 30 W	Max. 40 W	Max. 40 W	Max. 60W	Max. 60W



	<b>GD-TI-AP1603V</b>	<b>GD-TI-AP1606V</b>	<b>GD-TI-AP1603T</b>	<b>GD-TI-AP1606T</b>	<b>GD-TI-BT2510T</b>	<b>GD-TI-BT2515T</b>	<b>GD-TI-AT2510T</b>
	Professional	Professional	Professional	Professional	Premium	Premium	Premium
<b>Thermal Sensor</b>	Vanadium Oxide Uncooled Focal Plane Array						
<b>Resolution</b>	160 x 120	160 x 120	160 x 120	160 x 120	384 x 288	384 x 288	384 x 288
<b>NETD</b>	< 40 mk (@25° C, F=1.0)	< 35 mk (@25° C, F=1.0)	< 40 mk (@25° C, F=1.0)	< 40 mk (@25° C, F=1.0)			
<b>Viewing Angle (IR)</b>	50° x 37.2° (HxV)	25° x 18.7° (HxV)	50° x 37.2° (HxV)	25° x 18.7° (HxV)	37.5° x 28.5° (HxV)	24.5° x 18.5° (HxV)	37.2° x 28.3° (HxV)
<b>Measuring range</b>	From 0.8 m distance with 0.7 m width up to 1.5 m distance with 1.4 m width	From 1.5 m distance with 0.7 m width up to 3 m distance with 1.3 m width	From 0.8 m distance with 0.7 m width up to 1.5 m distance with 1.4 m width	From 1.5 m distance with 0.7 m width up to 3 m distance with 1.3 m width	From 2 m distance with 1.3 m width up to 7 m distance with 4.8 m width	From 2.5 m distance with 1.1 m width up to 9 m distance with 3.9 m width	902m (vehicles), 294m (humans)
<b>Detector Pitch</b>	17 µm						
<b>Optical: Image Sensor</b>	1/2.7" progressive Scan CMOS	—					
<b>Video Resolution</b>	2688 x 1520	—					
<b>Sensitivity Colour</b>	0.009 Lux @ F1.6 (AGC ON)	—					
<b>Lens Focal Length</b>	4 mm	8 mm	4 mm	8 mm	4 mm	6 mm	—
<b>Video Compression</b>	H.264, H.264+, H.265, H.265+, MJPEG						
<b>Accuracy</b>	±0,5° (±0,3° with black body)	—					
<b>Measurement option</b>	support 3 temperature measurement rule types, 21 rules (10 points, 10 regions and 1 line)	support 3 temperature measurement rule types, 21 rules (10 points, 10 regions and 1 line)	support 3 temperature measurement rule types, 21 rules (10 points, 10 regions and 1 line)	support 3 temperature measurement rule types, 21 rules (10 points, 10 regions and 1 line)	support 3 temperature measurement rule types, 21 rules (10 points, 10 regions and 1 line)	support 3 temperature measurement rule types, 21 rules (10 points, 10 regions and 1 line)	support 3 temperature measurement rule types, 21 rules (10 points, 10 regions and 1 line)
<b>Operating Temperature</b>	10 °C ~ + 35°C (indoor & windless)	10 °C ~ + 35°C (indoor & windless)	10 °C ~ + 35°C (indoor & windless)	10 °C ~ + 35°C (indoor & windless)	10 °C ~ + 35°C (indoor & windless)	10 °C ~ + 35°C (indoor & windless)	-40 °C ~ 65 °C (-40 °F ~ 149 °F)
<b>Supply Voltage</b>	12 VDC, PoE (IEEE 802.3af)	12 VDC, 24 VAC, PoE (IEEE 802.3af)	12 VDC, 24 VAC, PoE (IEEE 802.3af)	12 VDC, PoE+ (IEEE 802.3at)			
<b>Power Consumption</b>	Max. 6 W	Max. 6 W	Max. 8 W	Max. 8 W	Max. 9.5 W	Max. 9.5 W	20 W



	<b>GD-RN-AC2004P</b>	<b>GD-RN-AC2416N</b>	<b>GD-RN-AC2416P</b>	<b>GD-RN-AP8616P</b>	<b>GD-RN-AP8632P</b>
	Essential	Essential	Essential	Professional	Professional
IP Inputs	4 channels	16 channels	16 channels	16 channels	32 channels
Recording Bandwidth	max. 40 Mbps	160Mbps	160Mbps	160Mbps	256Mbps
Outgoing Bandwidth	max. 80 Mbps	max. 160 Mbps	max. 160 Mbps	256Mbps	256Mbps
Recording Resolution	Max. 8 MP	Max. 8 MP	Max. 8 MP	Max. 12 MP	Max. 12 MP
Video Compression	H.264, H.264+, H.265	H.264, H.264+, H.265, H.265+, MPEG4			
Recording Mode	Continuous, Event Alarm, Motion, Video Loss, Schedule	Continuous, Event Alarm, Motion, Schedule	Continuous, Event Alarm, Motion, Video Loss, Schedule	Continuous, Event Alarm, Motion, Video Loss, Schedule	Continuous, Event Alarm, Motion, Video Loss, Schedule
Search Mode	Date, Time, Event Alarm, Motion, Search Backup				
External Backup	USB HDD, USB Memory, DVD-R, Network	USB HDD, USB Memory, DVD-R, Network	USB HDD, USB Memory, DVD-R, Network	USB HDD, USB Memory, USB DVD-R, Network	USB HDD, USB Memory, USB DVD-R, Network
HDMI Output	4K (3840x2160)				
Audio Inputs	—	—	—	1-ch, RCA (2.0 Vp-p, 1kΩ)	1-ch, RCA (2.0 Vp-p, 1kΩ)
Audio Outputs	—	—	—	1-ch, RCA (2.0Vp-p, 1KΩ)	1 CH, RCA
Harddisk bay	1 x SATA III	2 x SATA III	2 x SATA III	4 x SATA III, 1 x eSATA	4 x SATA III, 1 x eSATA
Max. Storage Capacity	Up to 6TB capacity for each HDD	Up to 6TB capacity for each HDD	Up to 6TB capacity for each HDD	Up to 10TB capacity for each HDD	Up to 10TB capacity for each HDD
Disk Array type	—	—	—	—	—
Alarm Inputs	—	4 contact input N/O or N/C	4 contact input N/O or N/C	16 contact input N/O or N/C	16 contact input N/O or N/C
Alarm Outputs	—	1	1	4	4
Power over Ethernet	4 independent 10, 100 Mbps PoE Ethernet interfaces	—	16 independent 10, 100 Mbps PoE Ethernet interfaces	16 independent 10, 100 Mbps PoE Ethernet interfaces	16 independent 10, 100 Mbps PoE Ethernet interfaces
Chassis	—	385 mm	385 mm	19-inch rack-mounted, 1.5U	19-inch rack-mounted, 1.5U
Supply Voltage	48 VDC, Power Adapter 100 ~ 240 VAC 50, 60Hz included	12 VDC, Power Adapter 100 ~ 240 VAC 50, 60Hz included	100 ~ 240 VAC, 50Hz / 60Hz	100 ~ 240 VAC, 50Hz / 60Hz	100 ~ 240 VAC, 50Hz / 60Hz
Power Consumption	≤ 64 W with PoE 2 W without PoE	≤ 40 W without harddisk	≤ 280 W ≤ 15 W without hard disk, PoE	≤ 300 W ≤ 20 W without hard disk, PoE	≤ 300 W ≤ 20 W without hard disk, PoE

	<b>GD-RN-AP8632N</b>	<b>GD-RN-CT8832N</b>	<b>GD-RN-AT8864N</b>	<b>GD-RN-CT8864N</b>	<b>GD-RN-AT819128N</b>
	Professional	Premium	Premium	Premium	Premium
IP Inputs	32 channels	32 channels	64 channels	64 channels	128 channels
Recording Bandwidth	256Mbps	320Mbps or 200Mbps (when RAID is enabled)	320Mbps or 200Mbps (when RAID is enabled)	320Mbps or 200Mbps (when RAID is enabled)	576Mbps
Outgoing Bandwidth	256Mbps	256Mbps or 200Mbps (when RAID is enabled)	256Mbps or 200Mbps (when RAID is enabled)	256Mbps or 200Mbps (when RAID is enabled)	512 Mbps
Recording Resolution	Max. 12 MP	Max. 12 MP	Max. 12 MP	Max. 12 MP	Max. 12 MP
Video Compression	H.264, H.264+, H.265, H.265+, MPEG4	H.264, H.264+, H.265, H.265+, MPEG4	H.264, H.264+, H.265, H.265+, MPEG4	H.264, H.264+, H.265, H.265+, MPEG4	H.264, H.264+, H.265, H.265+, MPEG4
Recording Mode	Continuous, Event Alarm, Motion, Video Loss, Schedule	Continuous, Event Alarm, Motion, Schedule	Continuous, Event Alarm, Motion, Video Loss, Schedule	Continuous, Event Alarm, Motion, Video Loss, Schedule	Continuous, Event Alarm, Motion, Video Loss, Schedule
Search Mode	Date, Time, Event Alarm, Motion, Search Backup	Date, Time, Event Alarm, Motion, Search Backup	Date, Time, Event Alarm, Motion, Search Backup	Date, Time, Event Alarm, Motion, Search Backup	Date, Time, Event Alarm, Motion, Search Backup
External Backup	USB HDD, USB Memory, USB DVD-R, Network	USB HDD, USB Memory, USB DVD-R, Network	USB HDD, USB Memory, USB DVD-R, Network	USB HDD, USB Memory, USB DVD-R, Network	USB HDD, USB Memory, USB DVD-R, Network
HDMI Output	4K (3840x2160)	HDMI1: 4K (3840 × 2160) HDMI2: 1920 × 1080p	HDMI1: 4K (3840 × 2160) HDMI2: 1920 × 1080p	HDMI1: 4K (3840 × 2160) HDMI2: 1920 × 1080p	HDMI1: 4K (3840 × 2160) HDMI2: 1920 × 1080p
Audio Inputs	1-ch, RCA (2.0 Vp-p, 1kΩ)	1-ch, RCA (2.0 Vp-p, 1kΩ)	1-ch, RCA (2.0 Vp-p, 1kΩ)	1-ch, RCA (2.0 Vp-p, 1kΩ)	1-ch, RCA (2.0 Vp-p, 1kΩ)
Audio Outputs	—	—	1 CH, RCA	2-ch, RCA (2.0Vp-p, 1KΩ)	2-ch, RCA (2.0Vp-p, 1KΩ)
Harddisk bay	4 x SATA III, 1 x eSATA	8 x SATA III, 1x eSATA	8 x SATA III, 1x eSATA	8 x SATA III, 1x eSATA	16 x SATA III, 1 x eSATA
Max. Storage Capacity	Up to 10TB capacity for each HDD	Up to 10TB capacity for each HDD	Up to 10TB capacity for each HDD	Up to 10TB capacity for each HDD	Up to 10TB capacity for each HDD
Disk Array type	—	HDD hot swap with RAID0, 1, 5, 6, 10 storage (4 Arrays)	HDD hot swap with RAID0, 1, 5, 6, 10 storage (4 Arrays)	HDD hot swap with RAID0, 1, 5, 6, 10 storage (8 Arrays)	HDD hot swap with RAID0, 1, 5, 6, 10 storage (8 Arrays)
Alarm Inputs	16 contact input N/O or N/C	16 contact input N/O or N/C	16 contact input N/O or N/C	16 contact input N/O or N/C	16 contact input N/O or N/C
Alarm Outputs	4	4	4	4	8
Power over Ethernet	—	—	—	—	—
Chassis	19-inch rack-mounted, 1.5U	19-inch rack-mounted, 2U	19-inch rack-mounted, 2U	19-inch rack-mounted, 2U	19-inch rack-mounted, 3U
Supply Voltage	100 ~ 240 VAC, 50Hz / 60Hz	2 x 100 ~ 240 VAC, 50Hz / 60Hz redundant power supply	2 x 100 ~ 240 VAC, 50Hz / 60Hz redundant power supply	2 x 100 ~ 240 VAC, 50Hz / 60Hz redundant power supply	100 ~ 240 VAC, 50Hz / 60Hz
Power Consumption	≤ 25W without hard disks	Max. 550 W, 30W without harddisk	≤ 200 W	Max. 550 W, 30W without harddisk	≤ 140 W without harddisk, PoE

**GRUNDIG ANALYTICS**

Embedded video analytics and intelligence can greatly improve the efficiency of your security personnel and offer insights to improve operations. Protect your premises and gain business intelligence into traffic patterns and trends. Count objects, cars or people entering and exiting a specific area to determine the proper staffing needed during peak traffic times. Automatically monitor areas where no objects or people are to be present and alert for instant action to be taken.



Scan QR Code  
for video example

- **Line Crossing Detection.** Cross a pre-defined virtual line.
- **Intrusion Detection.** Enter and loiter in a pre-defined virtual region.
- **Region Entrance.** Enter a pre-defined virtual region from the outside place.
- **Region Exiting.** Exit from a pre-defined virtual region.
- **Object (People) Counting.**
- **Unattended Baggage and Object Removal.** Objects left over in the pre-defined region such as the baggage, purse, dangerous materials. Video verification and real-time alerts when objects have been placed or removed from a field of view.
- **Heat Map.** Graphical representation of density of visit in a configured area. Easily identify traffic patterns and trends to improve product placement, promotional graphics and staffing.
- **Face Detection.** Human face appears in the image can be detected and trigger linkage method.

**GD-RX-AC1416R****GD-RX-AC1424R****GD-RX-AC1432R****GD-RX-AP1416R****GD-RX-AP2424R****GD-RX-AP2432R****GD-RX-AP3448R****GD-RX-AP3464R****GD-RX-AP2496R****Essential****Essential****Essential****Professional****Professional****Professional****Professional****Professional****Professional****Number of cameras**

16 channel (extendable with CAM licences)

24 channel (extendable with CAM licences)

32 channel (extendable with CAM licences)

16 channel (extendable with CAM licences)

24 channel (extendable with CAM licences)

32 channel (extendable with CAM licences)

48 channel (extendable with CAM licences)

64 channel (extendable with CAM licences)

96 channel (extendable with CAM licences)

**Operating System**

Microsoft® Windows 10 64-bit

**CPU**

Intel® Core™ i5-8400, 6 Cores, 6 Threads, 9 MB Cache, 2.80 GHz Base Frequency, 4.00 GHz Turbo Frequency

Intel® Core™ i5-8400, 6 Cores, 6 Threads, 9 MB Cache, 2.80 GHz Base Frequency, 4.00 GHz Turbo Frequency

Intel® Core™ i5-8400, 6 Cores, 6 Threads, 9 MB Cache, 2.80 GHz Base Frequency, 4.00 GHz Turbo Frequency

Intel® Core™ i5-8400, 6 Cores, 6 Threads, 9 MB Cache, 2.80 GHz Base Frequency, 4.00 GHz Turbo Frequency

Intel® Xeon® E-2146G, 6 Cores, 12 Threads, 12 MB Cache, 3.50 GHz Base Frequency, 4.50 GHz Turbo Frequency

Intel® Xeon® E-2146G, 6 Cores, 12 Threads, 12 MB Cache, 3.50 GHz Base Frequency, 4.50 GHz Turbo Frequency

Intel® Xeon® W-2135, 6 Cores, 12 Threads, 8.25 MB Cache, 3.70 GHz Base Frequency, 4.50 GHz Turbo Frequency

Intel® Xeon® W-2135, 6 Cores, 12 Threads, 8.25 MB Cache, 3.70 GHz Base Frequency, 4.50 GHz Turbo Frequency

**Video Compression**

H.264, H.264+, H.265, H.265+, MJPEG

**Harddisk bay**

3x SATA

**Supply Voltage**

220 ~ 240 VAC, 50Hz

**Power Consumption**

Max. 400 W

**C-WERK**

The Grundig Video Management System powered by C-WERK is the advanced solution for video security systems in virtually all areas of application. The C-WERK sets new standards, especially with its simple and user-friendly operation. Regardless of the requirements placed, C-WERK allows you to effectively meet almost any challenge: with logical, systematic, and especially user-friendly implementation. The C-WERK platform is completely scalable and modular — and it features open system architecture. The simple license model enables individual solutions, and you will pay for only what you need.

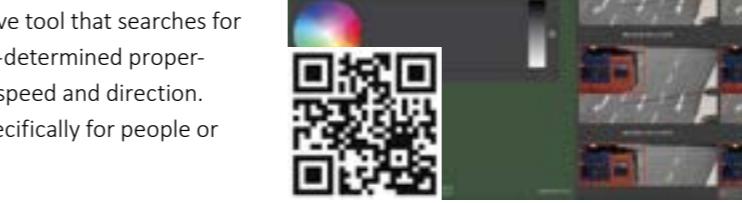
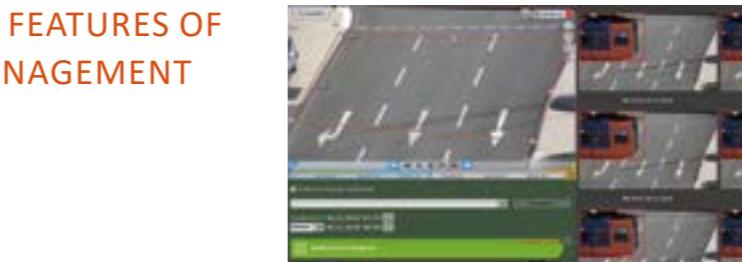
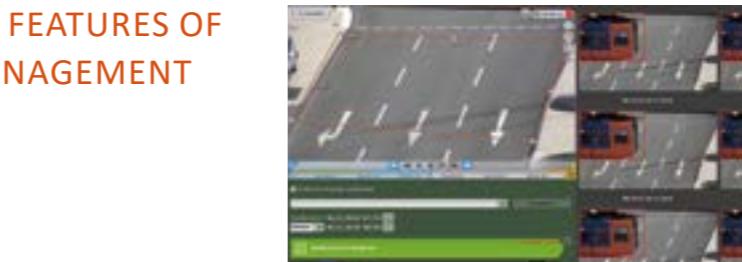
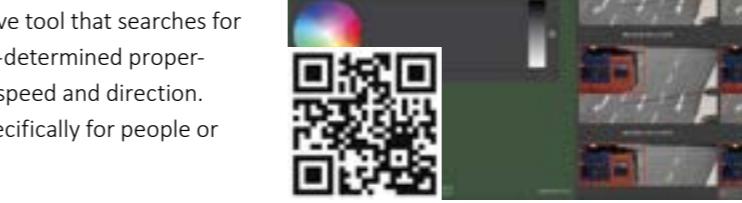
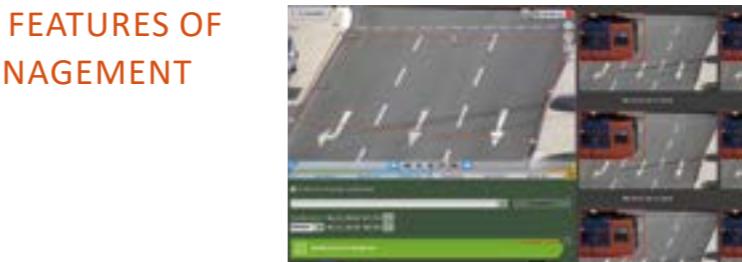
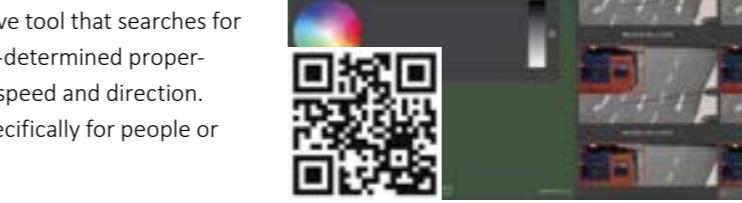
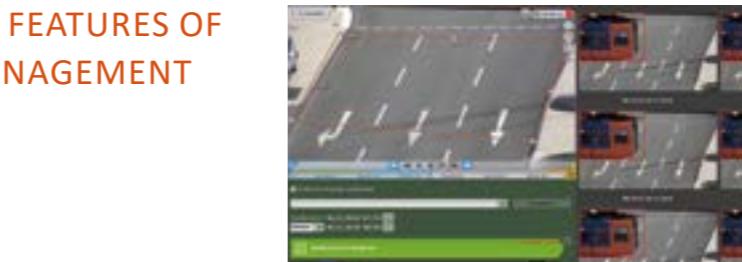
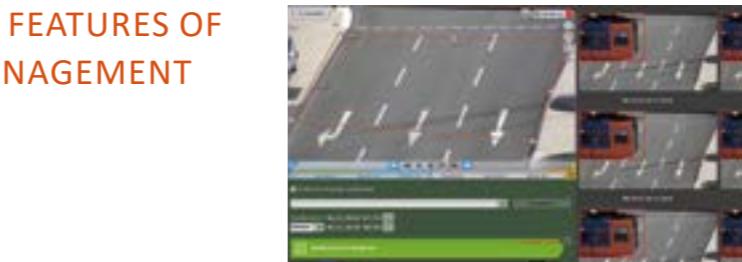
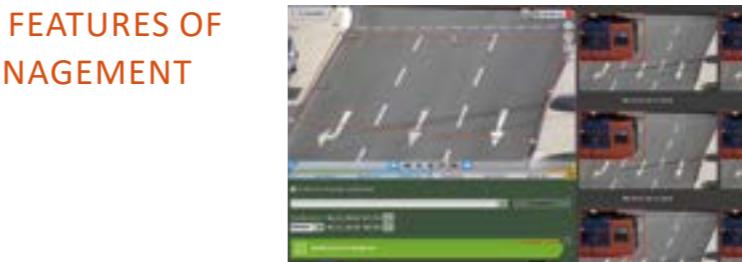
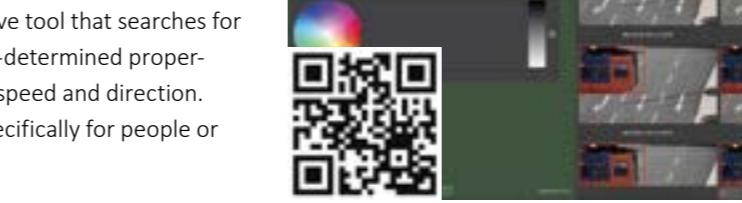
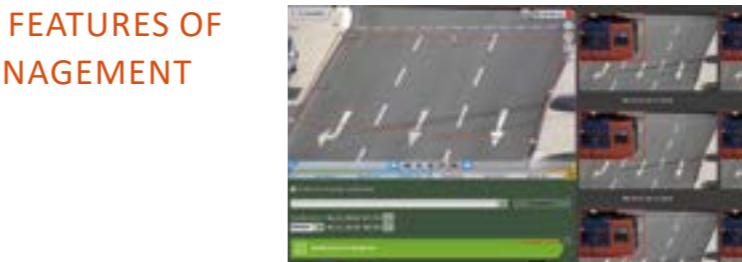
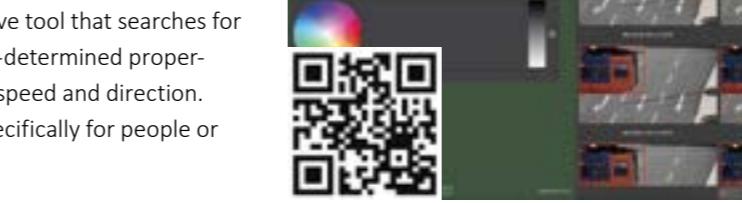
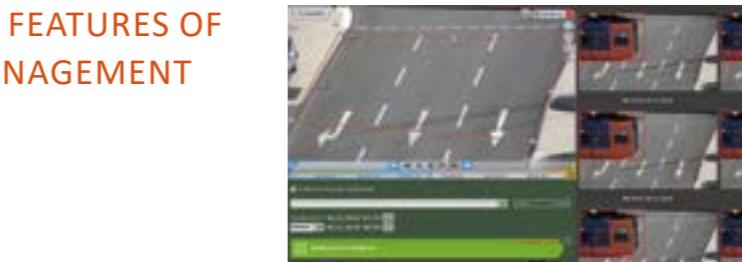
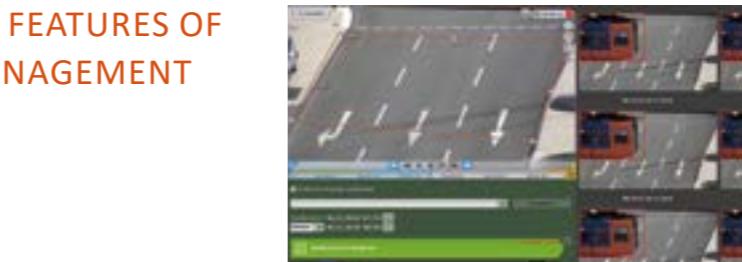
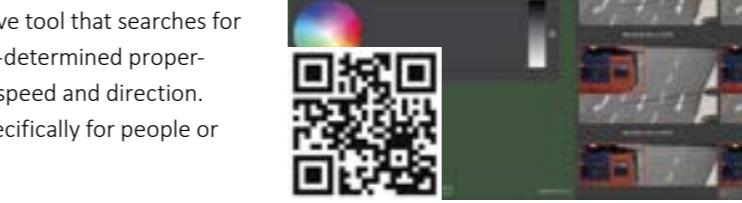
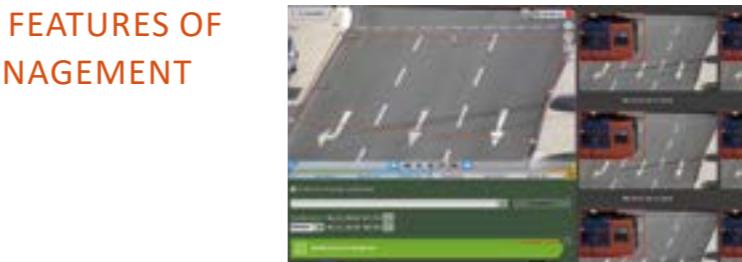
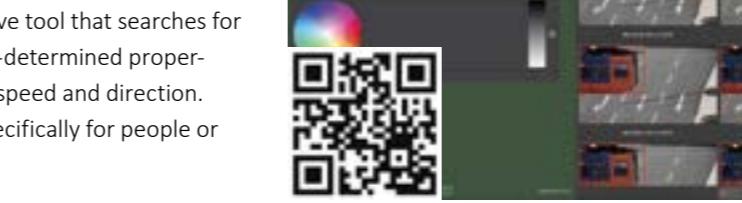
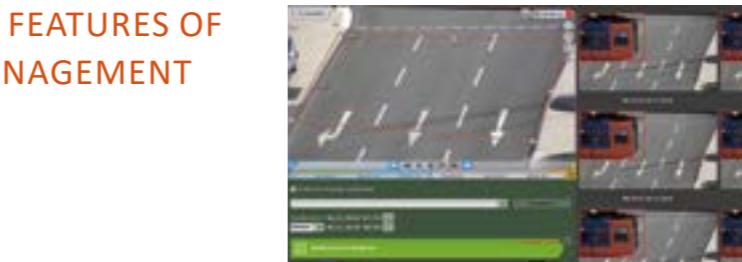
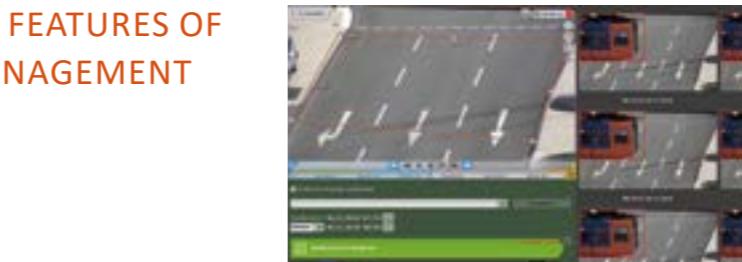
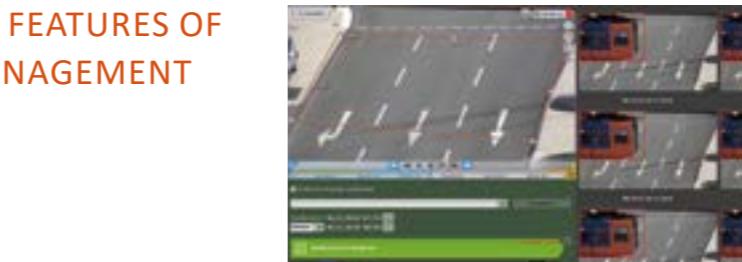
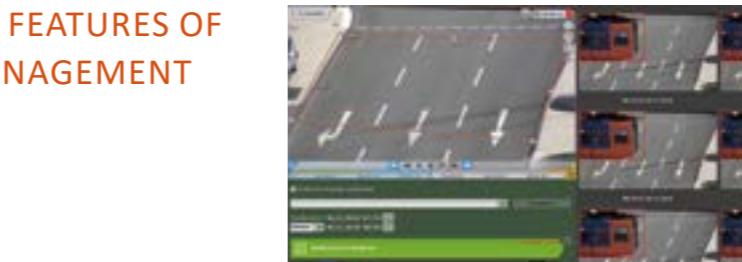
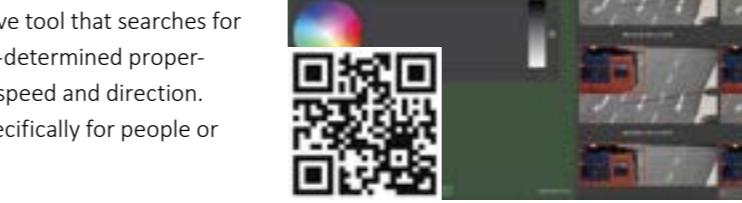
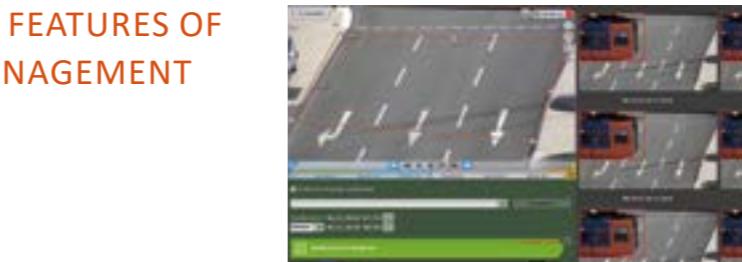
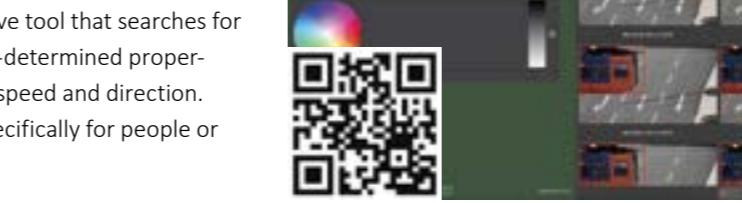
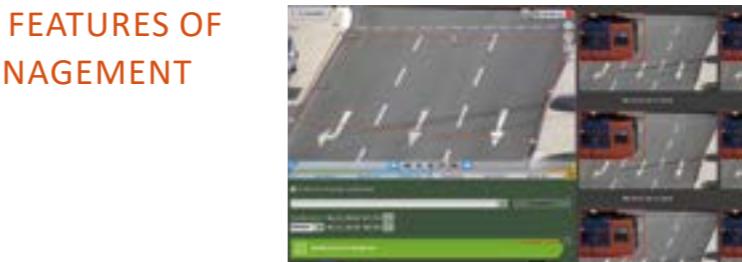
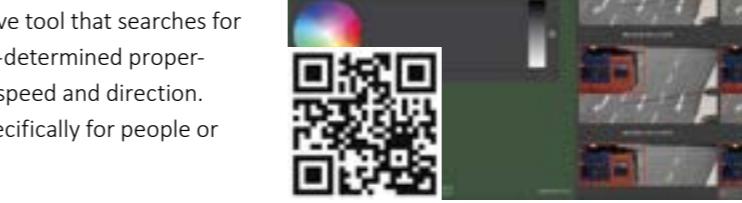
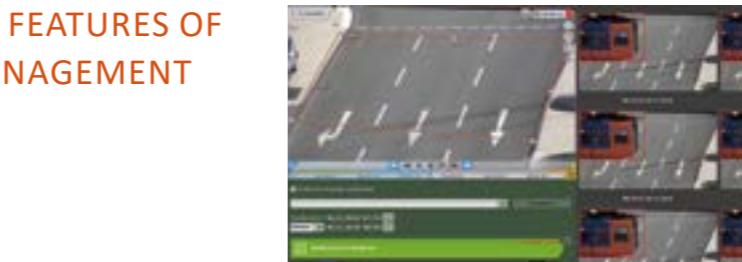
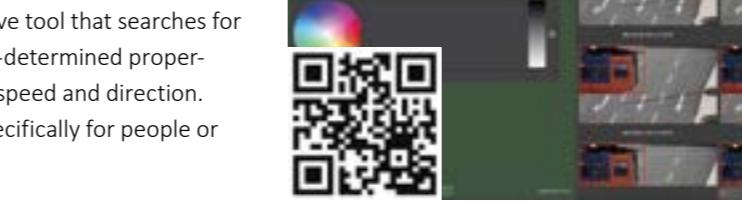
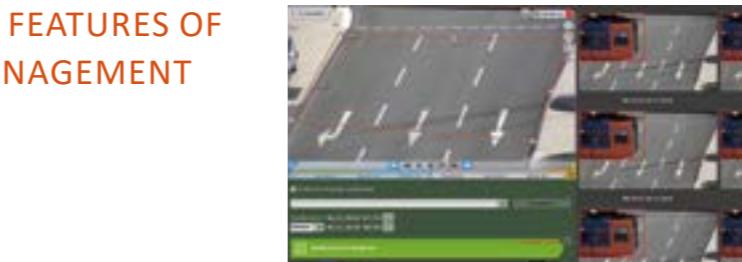
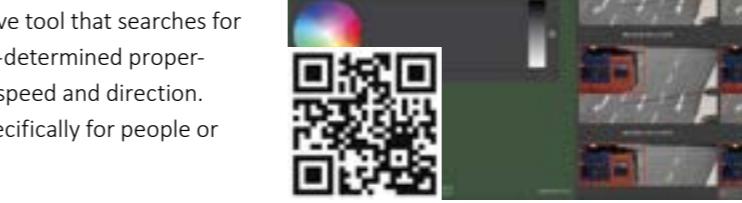
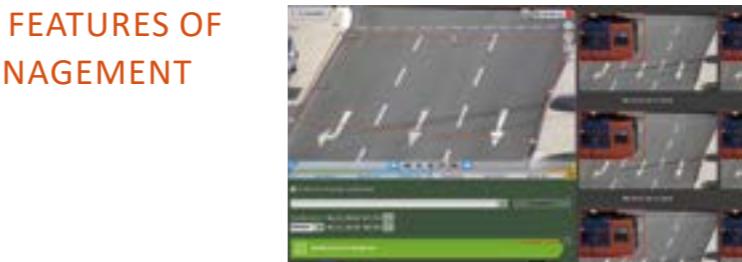
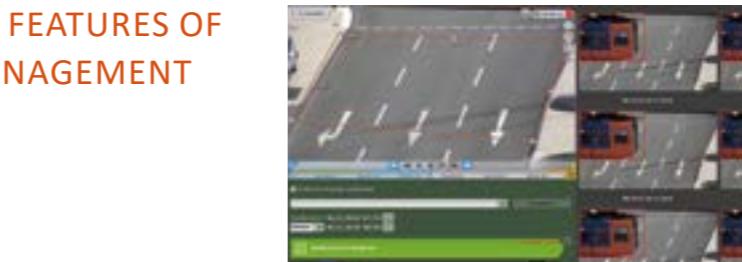
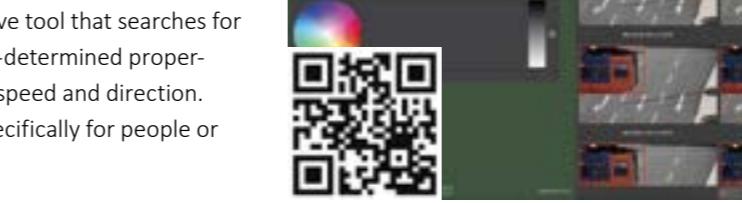
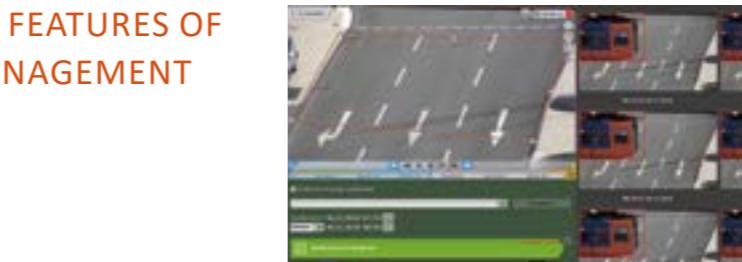
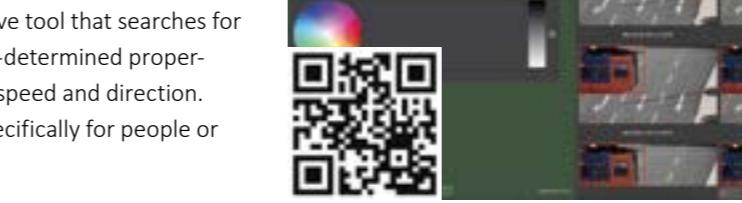
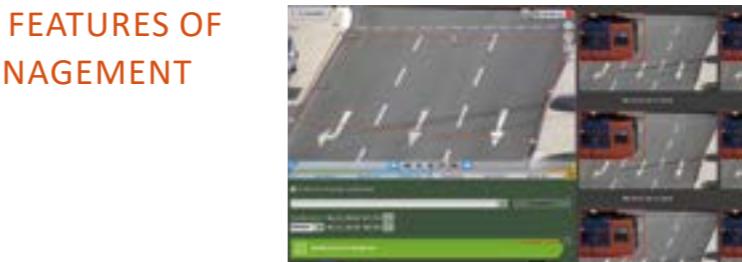
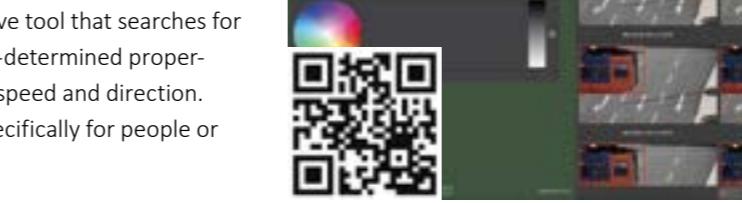
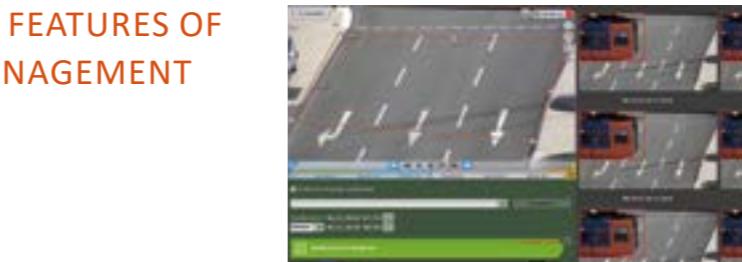
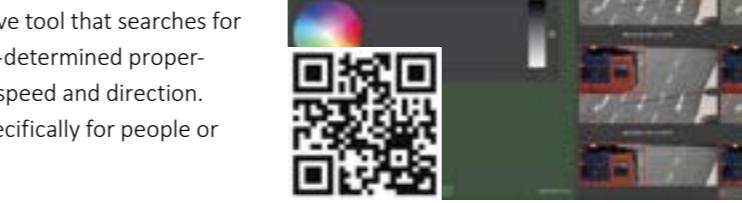
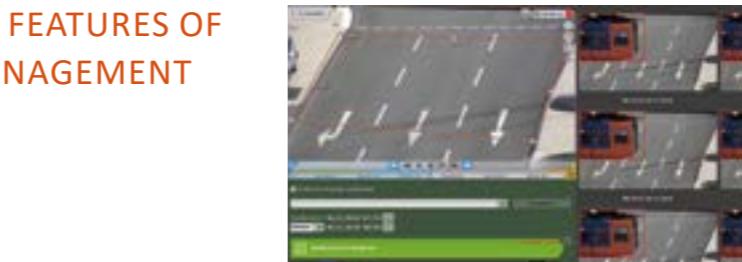
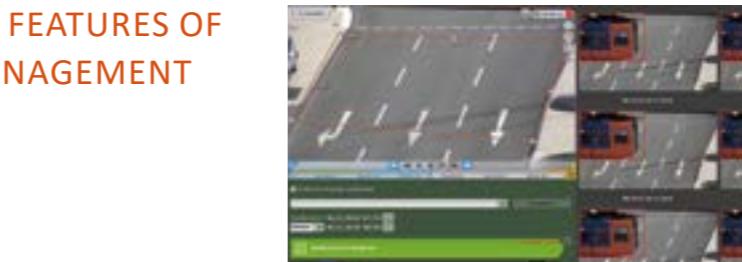
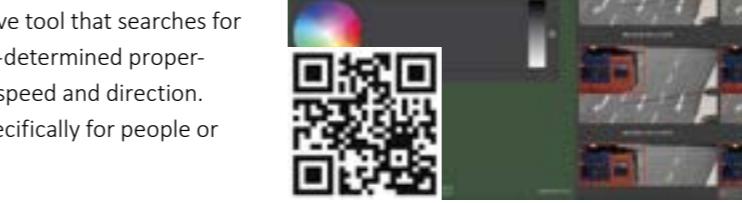
The Grundig VMS powered by C-WERK is based on an end-to-end concept with a unified software solution throughout: ranging from IP camera / recorder freeware to a video management solution for extensive, complex video facilities.

**Scan the QR codes to start videos.**

For more information please check [www.c-werk.com](http://www.c-werk.com)



Time Lapse is a tool that allows the user to display all moving actions of a predetermined period in a single video. This significantly reduces the effort of finding a particular scene.



## ESSENTIAL

Great user convenience and an amazing range of functions for smaller applications

## PROFESSIONAL

The professional solution, which covers most applications for advanced video systems

## PREMIUM

Designed for comprehensive solutions with special, unique performance characteristics

## Open Platform VMS by C-WERK

C-WERK is best-in-class, new-generation Video Management Software that is based on open standards to offer a truly open platform. C-WERK's reliability, performance, and convenience are unmatched on the market. Experience unprecedented flexibility and freedom of configuration: unlimited number of video servers, video cameras, workstations and mobile client devices, and more than 10.000 IP devices are all supported. Thanks to the program's application programming interface (API), C-WERK allows easy integration with third-party hardware to extend your video system's functionality even further. The advanced ergonomic interface makes all functions intuitively easy to use and find. A transparent customer-oriented pricing policy means that you can take advantage of the program's full functionality, no matter the size of your system.



## C-WERK Highlights

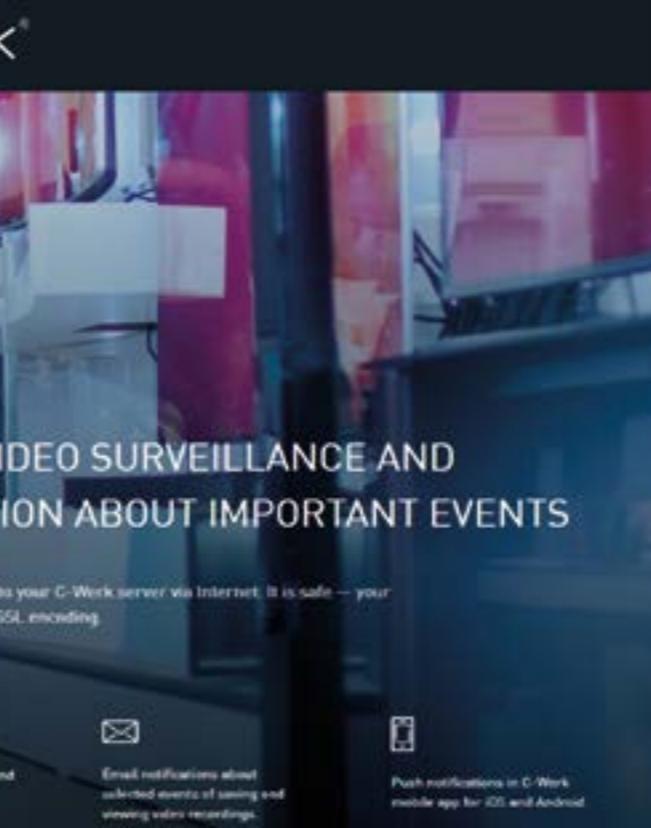
- Unlimited number of cameras, servers and remote clients
- Support for more than 10.000 IP devices
- Advanced video analytics
- Unique tools for fast video footage retrieval
- Flat pricing – easy to budget and save
- Zero maintenance fees
- Free support
- Free viewer software with C-WERK VIEWER

**C-WERK®**

## C-WERK Cloud

C-WERK Cloud is a service by Grundig enabling you to:

- Securely connect to the Web Server
- Store and activate licenses
- Send E-Mails letting you know when a macro is triggered
- View & export recordings from edge devices
- Send push messages to clients



## C-WERK mobile App

The client App allows connection to C-WERK Servers from mobile devices. The App supports receiving live video & audio from cameras, playback of recorded videos, controlling PTZ-cameras, receiving push notifications about events in the system and many more functions. The C-WERK App is available for iOS and Android.



# Behaviour Analytics

The intelligent Behaviour Analytics of C-WERK recognizes potentially dangerous situations by detecting specific human postures. The software identifies the positions of the body parts to detect the pose. This will improve the security for example schools, airports, banks, commercial spaces, or office buildings.



# C-WERK Licenses

ITEM CODE	DESCRIPTION	PRODUCT LINE
<b>Camera License</b>		
GD-CW-AC-CAM	C-WERK Essential Single-Channel Camera License	ESSENTIAL
GD-CW-AP-CAM	C-WERK Pro Single-Channel Camera License	PROFESSIONAL
GD-CW-AT-CAM	C-WERK Premium Single-Channel Camera License	PREMIUM
<b>Extension License</b>		
GD-CW-AC-SRC	C-WERK Essential Source License	ESSENTIAL
GD-CW-AP-SRC	C-WERK Pro Source License	PROFESSIONAL
GD-CW-AT-SRC	C-WERK Premium Source License	PREMIUM
GD-CW-AP-IFS	C-WERK Pro Forensic Search License	PROFESSIONAL
<b>Upgrade</b>		
GD-CW-AP-CAM-PLUS	C-WERK Essential to Professional Camera License Upgrade	PROFESSIONAL
GD-CW-AT-CAM-PLUS	C-WERK Professional to Premium Camera License Upgrade	PREMIUM
<b>Additional modules</b>		
GD-CW-AP-LPS	C-WERK Pro License Realtime License Plate Recognition slow	PROFESSIONAL
GD-CW-AP-LPF	C-WERK Pro License Realtime License Plate Recognition fast	PROFESSIONAL
GD-CW-AP-FRT	C-WERK Pro License Realtime Face Recognition for 1 Video Channel	PROFESSIONAL
GD-CW-AP-FRT10	C-WERK Pro License Realtime Face Recognition for 10 Video Channels	PROFESSIONAL
GD-CW-AP-HBA	C-WERK Pro License Realtime Behavior Analytics	PROFESSIONAL
GD-CW-AP-PPE	C-WERK Pro License Personal Protective Equipment Recognition for 1 Camera	PROFESSIONAL
GD-CW-AT-LPS	C-WERK Premium License Realtime License Plate Recognition slow	PREMIUM
GD-CW-AT-LPF	C-WERK Premium License Realtime License Plate Recognition fast	PREMIUM
GD-CW-AT-FRT	C-WERK Premium License Realtime Face Recognition for 1 Video Channel	PREMIUM
GD-CW-AT-FRT10	C-WERK Premium License Realtime Face Recognition for 10 Video Channels	PREMIUM
GD-CW-AT-HBA	C-WERK Premium License Realtime Behavior Analytics	PREMIUM
GD-CW-AT-PPE	C-WERK Premium License Personal Protective Equipment Recognition	PREMIUM
GD-CW-AT-WLD	C-WERK Premium License Water Level Recognition for 1 Camera	PREMIUM
GD-CW-AT-OFS	C-WERK Premium Offline Forensic Search License	PREMIUM

# Content of License Packages

FUNCTION	ESSENTIAL	PROFESSIONAL	PREMIUM
Number of Cameras	64	unlimited	unlimited
Thumbnail search	✓	✓	✓
Alarm search	✓	✓	✓
POS transaction search	✓	✓	✓
Bookmarking	✓	✓	✓
3D Maps	✓	✓	✓
Web browser client	✓	✓	✓
IOS & Android Apps	✓	✓	✓
C-WERK Cloud Service	✓	✓	✓
Fisheye Dewarping	✓	✓	✓
Edge Analytics (camera metadata)	✓	✓	✓
Blue Stream (Bandwidth Management)	✓	✓	✓
H.265	✓	✓	✓
ONVIF profile G,S,T	✓	✓	✓
Edge Storage (Read only from SD-card or HDD)	✓	✓	✓
Event Makros	✓	✓	✓
Free Software Updates	✓	✓	✓
Video Wall	✓	✓	✓
LDAP Service	-	-	✓
Cross System Client	-	✓	✓
Time Lapse	-	✓	✓
Edge Storage copy	-	-	✓
Failover	-	-	✓

FUNCTION	ESSENTIAL	PROFESSIONAL	PREMIUM
Object Tracker	✓	✓	✓
Face Recognition	-	optional (GD-CW-AP-IFS)	✓
LPR Detection	-	optional (GD-CW-AP-IFS)	✓
Fire Detection	-	optional (GD-CW-AP-IFS)	✓
Smoke Detection	-	optional (GD-CW-AP-IFS)	✓
Multicamera Search	-	-	✓
Retail Pack (Visitors Counter, Queue Detection, Heat Map)	-	optional (GD-CW-AP-IFS)	✓
Forensic Search Function	-	optional (GD-CW-AP-IFS)	✓
Tag & Track	-	optional (GD-CW-AP-IFS)	✓
LPR Search	-	optional (GD-CW-AP-IFS)	✓
Face search	-	optional (GD-CW-AP-IFS)	✓
Realtime-LPR 6 fps	-	optional (GD-CW-AP-LPS)	optional (GD-CW-AT-LPS)
Realtime-LPR 25 fps	-	optional (GD-CW-AP-LPF)	optional (GD-CW-AT-LPF)
Realtime-Face Recognition	-	optional (GD-CW-AP-FRT)	optional (GD-CW-AT-FRT)
Pose Detection	-	optional (GD-CW-AP-HBA)	optional (GD-CW-AT-HBA)
Personal Protective Equipment	-	optional (GD-CW-AP-PPE)	optional (GD-CW-AT-PPE)
Offline Analytics	-	-	optional (GD-CW-AT-OFS)
Water Level Detection	-	-	optional (GD-CW-AT-WLD)
Administration of external Events (Alarm I/O, POS, etc.)	optional (GD-CW-AC-SRC)	optional (GD-CW-AP-SRC)	optional (GD-CW-AT-SRC)

	<b>GD-HW-APSV08R</b>	<b>GD-HW-APSV012R</b>	<b>GD-HW-APSV024R</b>	<b>GD-HW-APSV04T</b>	<b>GD-HW-APSV05T</b>	<b>GD-HW-APSV06T</b>
CPU	Professional Intel® Xeon® E3-1220v6, 4 Cores, 4 Threads, 8 MB Cache, 3.00 GHz Base Frequency, 3.50 GHz Turbo Frequency	Professional Intel® Xeon® E3-1220v6, 4 Cores, 4 Threads, 8 MB Cache, 3.00 GHz Base Frequency, 3.50 GHz Turbo Frequency	Professional Intel® Xeon® E3-1230v6, 4 Cores, 8 Threads, 8 MB Cache, 3.50 GHz Base Frequency, 3.50 GHz Turbo Frequency	Professional Intel® Core™ i5-8400, 6 Cores, 6 Threads, 9 MB Cache, 2.80 GHz Base Frequency, 4.00 GHz Turbo Frequency	Professional Intel Core i7-10700K, 8 Cores, 16 Threads, 16 MB Cache, 3.80 GHz Base Frequency, 5.10 GHz Turbo Frequency	Professional Intel® Core™ i9-9900X, 10 Cores, 20 Threads, 19.25 MB Cache, 3.50 GHz Base Frequency, 4.40 GHz Turbo Frequency
Graphic Card	—	—	—	MSI GT710 1GD3H, Memory 1 GB, DDR3, max. resolution 4096 x 2160, up to 2 monitors supported	MSI GT710 1GD3H, Memory 1 GB, DDR3, max. resolution 4096 x 2160, up to 2 monitors supported	MSI GT710 1GD3H, Memory 1 GB, DDR3, max. resolution 4096 x 2160, up to 2 monitors supported
Memory	16 GB	16 GB	16 GB	8GB DDR4 FSB2666 288-pin CL19	2x 8 GB DDR4 FSB3200 288-pin CL22	16 GB DDR4 FSB2666 288-pin CL19
Operating System	Windows Server 2016 Essential + 25 CALs	Windows Server 2019 Essential + 25 CALs	Windows Server 2019 Essential + 25 CALs	Microsoft® Windows 10 64-bit	Microsoft® Windows 10 64-bit	Microsoft® Windows 10 64-bit
Network Interface	2 x RJ45 Gbit LAN	2x RJ45 Gbit LAN	2x RJ45 Gbit LAN	1x RJ45 Gbit LAN	2x RJ45 Gbit LAN	1x RJ45 Gbit LAN
Operating Temperature	+5°C ~ 40°C (+41°F ~ +104°F)	+5°C ~ 40°C (+41°F ~ +104°F)	+5°C ~ 40°C (+41°F ~ +104°F)	+5°C ~ 40°C (+41°F ~ +104°F)	+5°C ~ 40°C (+41°F ~ +104°F)	+5°C ~ 40°C (+41°F ~ +104°F)
Supply Voltage	220 ~ 240 VAC, 50Hz	220 ~ 240 VAC, 50Hz	220 ~ 240 VAC, 50Hz	220 ~ 240 VAC, 50Hz	220 ~ 240 VAC, 50Hz	220 ~ 240 VAC, 50Hz
Power Consumption	Max. 400 W	2x 800W	600 W	450 W	450 W	450 W

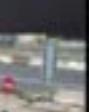
	<b>GD-HW-HDD-2TB</b>	<b>GD-HW-HDD-4TB</b>	<b>GD-HW-HDD-6TB</b>	<b>GD-HW-HDD-8TB</b>	<b>GD-HW-HDD-10TB</b>
	Professional Server HDD 2TB Western Digital Purple	Professional Server HDD 4TB Western Digital Purple	Professional Server HDD 6TB Western Digital Purple	Professional Server HDD 8TB Western Digital Purple	Professional Server HDD 10TB Western Digital Purple

## The SCMS app by GRUNDIG

### SECURITY: installed & configured in no time!

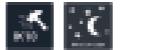
Supreme Central Monitoring Service is a surveillance application for mobile phone and tablet supporting the full line of surveillance products, including NVRs, DVRs, as well as network cameras and speed domes that support cloud P2P function. The Mobile Software App has been designed to help small businesses effectively operate and manage security devices from a smartphone or tablet. The power to view live images, play back footage, and receive notifications remotely keeps owners and operators in touch with their business, even when away.

- Real-time video preview of up to 16 channels
- Swipe for PTZ control and camera movement, pinch to zoom in/out in preview mode
- Preset activation and configuration as well as brightness calibration supported
- Push alarm notification
- Snapshot function
- Manage up to 256 device sets; add/delete/modify device profiles





	<b>GD-CT-AC2805B</b>	<b>GD-CT-AC2116E</b>	<b>GD-CT-AC2113E</b>	<b>GD-CT-AC5813E</b>	<b>GD-CT-AP2117E</b>	<b>GD-CT-AP8117E</b>
	Essential	Essential	Essential	Essential	Professional	Professional
Image Sensor	2 Megapixel progressive scan CMOS	2 Megapixel progressive scan CMOS	2 Megapixel progressive scan CMOS	5 Megapixel progressive scan CMOS	2 Megapixel progressive scan CMOS	8.29 Megapixel progressive scan CMOS
Pixels - Effective	1944 (H) x 1092 (V)	1920 (H) x 1080 (V)	1984 (H) x 1105 (V)	2560 (H) x 1944 (V)	1920 (H) x 1080 (V)	3840 (H) x 2160 (V)
Sensitivity Colour	0.003 Lux @ F1.2 (AGC ON)	0.01 Lux @ F1.2 (AGC ON)	0.01 Lux @ F1.2 (AGC ON)	0.01 Lux @ F1.2 (AGC ON)	0.005 Lux @ F1.2	0.003 Lux @ F1.2 (AGC ON)
Sensitivity B/W	—	0 Lux LED IR on	0 Lux LED IR on			
Lens Focal Length	—	2.8 mm	2.8 mm	2.8 mm	2.8 mm	3.6 mm
Col/B&W	Auto , Color , B&W, IR-cut filter removable (ICR)	Auto , Color , B&W, IR-cut filter removable (ICR)	Auto , Color , B&W, IR-cut filter removable (ICR)	Auto , Color , B&W, IR-cut filter removable (ICR)	Auto , Color , B&W, IR-cut filter removable (ICR)	Auto , Color , B&W, IR-cut filter removable (ICR)
Wide Dynamic Range	120 dB	—	Digital WDR	Digital WDR	130 dB	120 dB
Image Enhancement	BLC, 3D DNR, Anti-Flicker, Mirror, Defog, AGC, WDR, Smart Digital Zoom, Defect Pixel Correction	BLC, 3D DNR, Anti-Flicker, Mirror, AGC	BLC, 2D DNR, Anti-Flicker, Mirror, AGC	BLC, 2D DNR, Anti-Flicker, Mirror, AGC	BLC, 3D DNR, Anti-Flicker, Mirror, AGC, WDR, Brightness, Sharpness, Smart-IR	BLC, 3D DNR, Defog, HLC
Max. IR Distance	—	Up to 20 m	Up to 60 m			
Video Outputs	1x HD-TVI (BNC) , 1x Composite 1.0Vp-p 75 OHM (BNC) WDR off	1x HD-TVI (BNC)	1x HD-TVI (BNC)	1x HD-TVI (BNC)	1x HD-TVI (BNC) , 1x Composite 1.0Vp-p 75 OHM (BNC) WDR off	—
Regulation	CE, EAC, FCC, RoHS Compliant	CE, EAC, FCC, RoHS Compliant	CE, EAC, FCC, RoHS Compliant	CE, EAC, FCC, RoHS Compliant	CE, EAC, FCC, RoHS Compliant	CE, EAC, FCC, RoHS Compliant
Operating Temperature	-30 °C ~ 60 °C (-22 °F ~ 140 °F)	-40 °C ~ 60 °C (-40 °F ~ 140 °F)	-40 °C ~ 60 °C (-40 °F ~ 140 °F)	-40 °C ~ 60 °C (-40 °F ~ 140 °F)	-40 °C ~ 60 °C (-40 °F ~ 140 °F)	-40 °C ~ 60 °C (-40 °F ~ 140 °F)
Supply Voltage	12 VDC ±15%, PoC.af	12 VDC ±10%	12 VDC ±10%	12 VDC ±15%, PoC.af	12 VDC ±10%	12 VDC ±10%
Power Consumption	Max. 7 W	Max. 4 W	Max. 4 W	Max. 4.5 W	Max. 4.5 W	Max. 5.5 W





	<b>GD-CT-AC2126T</b>	<b>GD-CT-AC5816T</b>	<b>GD-CT-AC5833T</b>	<b>GD-CT-AP2837T</b>	<b>GD-CT-BP2837T</b>	<b>GD-CT-AP5837T</b>	<b>GD-CT-AP8837T</b>	<b>GD-CT-BP2247P</b>
	Essential	Essential	Essential	Professional	Professional	Professional	Professional	Professional
Image Sensor	2 Megapixel progressive scan CMOS	5 Megapixel progressive scan CMOS	5 Megapixel progressive scan CMOS	2 Megapixel progressive scan CMOS	2 Megapixel progressive scan CMOS	5 Megapixel progressive scan CMOS	8.29 Megapixel progressive scan CMOS	2 Megapixel progressive scan CMOS
Pixels - Effective	1920 (H) x 1080 (V)	2560 (H) x 1944 (V)	2560 (H) x 1944 (V)	1920 (H) x 1080 (V)	1944 (H) x 1092 (V)	2560 (H) x 1944 (V)	3840 (H) x 2160 (V)	1920 (H) x 1080 (V)
Sensitivity Colour	0.01 Lux @ F1.2 (AGC ON)	0.01 Lux @ F1.2 (AGC ON)	0.01 Lux @ F1.2 (AGC ON)	0.003 Lux @ F1.2 (AGC ON)	0.003 Lux @ F1.2 (AGC ON)	0.008 Lux @ F1.2 (AGC ON)	0.003 Lux @ F1.2 (AGC ON)	0.005 Lux @ F1.6 (AGC ON)
Sensitivity B/W	0 Lux LED IR on	0 Lux LED IR on	0 Lux LED IR on	0 Lux LED IR on	0 Lux LED IR on			
Lens Focal Length	2.8 ~ 12 mm	3.6 mm	2.7 ~ 13.5 mm motorized, autofocus	2.7 ~ 13.5 mm motorized, autofocus	5 ~ 50 mm motorized varifocal lens	2.8 ~ 12 mm motorized, autofocus	2.8 ~ 12 mm motorized, autofocus	4.8 ~ 120 mm motorized, autofocus
Col/B&W	Auto , Color , B&W, IR-cut filter removable (ICR)	Auto , Color , B&W, IR-cut filter removable (ICR)	Auto , Color , B&W, IR-cut filter removable (ICR)	Auto , Color , B&W, IR-cut filter removable (ICR)	Auto , Color , B&W, IR-cut filter removable (ICR)	Auto , Color , B&W, IR-cut filter removable (ICR)	Auto , Color , B&W, IR-cut filter removable (ICR)	Auto , Color , B&W, IR-cut filter removable (ICR)
Wide Dynamic Range	Digital WDR	Digital WDR	Digital WDR	130 dB	120 dB	Digital WDR	120 dB	120 dB
Image Enhancement	BLC, 2D DNR, Anti-Flicker, Mirror, AGC	BLC, DNR, Mirror, AGC	BLC, 2D DNR, Anti-Flicker, Mirror, AGC	BLC, 3D DNR, Anti-Flicker, Mirror, AGC, WDR, Brightness, Sharpness, Smart-IR	BLC, 3D DNR, Anti-Flicker, Mirror, Defog, AGC, WDR, Smart Digital Zoom, Defect Pixel Correction	BLC, 2D DNR, Anti-Flicker, Mirror, AGC	BLC, 3D DNR, Defog, HLC	BLC, 3D DNR, EIS, HLC
Max. IR Distance	25, 40 m (according to scene reflexion)	Up to 20 m	Up to 40 m	Up to 80 m	Up to 110 m	Up to 50 m	Up to 80 m	Up to 150m
Video Outputs	—	1x HD-TVI (BNC)	1x HD-TVI (BNC)	1x HD-TVI (BNC) , 1x Composite 1.0Vp-p 75 OHM (BNC) WDR off	1x HD-TVI (BNC) , 1 CVBS, 1 Vpp (BNC) , Test Monitor Output	1x HD-TVI (BNC) , 1x Composite 1.0Vp-p 75 OHM (BNC)	1x HD-TVI (BNC) , 1x Composite 1.0Vp-p 75 OHM (BNC)	Switchable TVI/AHD/CVI/CVBS video output, (NTSC or PAL composite, BNC)
Regulation	CE, EAC, FCC, RoHS Compliant	CE, EAC, FCC, RoHS Compliant	CE, EAC, FCC, RoHS Compliant	CE, EAC, FCC, RoHS Compliant	CE, EAC, FCC, RoHS Compliant			
Operating Temperature	-40 °C ~ 60 °C (-40 °F ~ 140 °F)	-40 °C ~ 60 °C (-40 °F ~ 140 °F)	-40 °C ~ 60 °C (-40 °F ~ 140 °F)	-40 °C ~ 60 °C (-40 °F ~ 140 °F)	-40 °C ~ 60 °C (-40 °F ~ 140 °F)	-40 °C ~ 60 °C (-40 °F ~ 140 °F)	-40 °C ~ 60 °C (-40 °F ~ 140 °F)	-40 °C ~ 65 °C (-40 °F ~ 149 °F)
Supply Voltage	12 VDC ±10%	12 VDC ±15%, PoC.af	12 VDC ±15%, PoC.af	12 VDC ±15%, PoC.at	12 VDC, 24 VAC	12 VDC ±15%, PoC.af	12 VDC ±10%	24 VAC, 50, 60Hz
Power Consumption	Max. 4 W	Max. 5.5 W	Max. 8 W	Max. 8.2 W	20 W	Max. 8 W	Max. 15 W	Max. 30 W



## DIRECT CONTROL OF PTZ-CAMERA AND DVR / NVR WITH ONE KEYBOARD

The control of the PTZ-camera is smooth and fluent. It allows the user to follow an object in real time with nearly no latency between the movement of the joystick and the corresponding movement of the camera.

### PTZ CONTROL WITH DVR / NVR

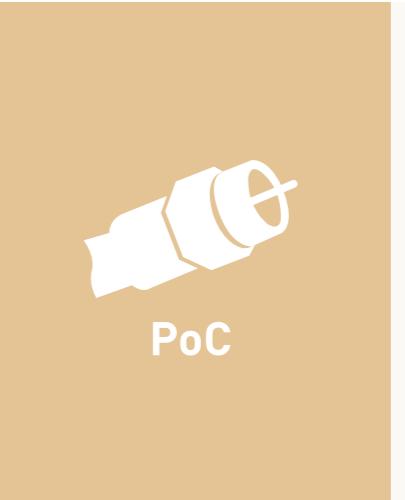


### PTZ DIRECT CONTROL



	<b>GD-RT-AC3004N</b>	<b>GD-RT-AC3008N</b>	<b>GD-RT-AC3016N</b>	<b>GD-RT-AP5004P</b>	<b>GD-RT-AP5008P</b>	<b>GD-RT-AP5016P</b>
Video Inputs	Essential	Essential	Essential	Professional	Professional	Professional
HD-TVI Input	4-ch, BNC	8-ch, BNC	16-ch, BNC	4-ch, BNC	8-ch, BNC, supporting PoC	16-ch, supporting PoC
AHD Input	3 MP, 1080p30	3 MP, 1080p30	3 MP, 1080p30	8 MP, 5 MP, 4 MP, 3 MP, 1080p30	8 MP, 5 MP, 4 MP, 3 MP, 1080p30	8 MP, 5 MP, 4 MP, 3 MP, 1080p30
CVI Input	4 MP, 1080p25, 1080p30	4 MP, 1080p25, 1080p30	4 MP, 1080p25, 1080p30	5 MP, 4 MP, 1080p30	5 MP, 4 MP, 1080p30	5 MP, 4 MP, 1080p30
CVBS Input	4 MP, 1080p30	4 MP, 1080p30	4 MP, 1080p30	4 MP, 1080p30	4 MP, 1080p30	4 MP, 1080p30
IP Inputs	PAL, NTSC	PAL, NTSC	PAL, NTSC	PAL, NTSC	PAL, NTSC	PAL, NTSC
Recording Resolution	5 (6 IP enhance mode)	4 (12 IP enhance mode)	18 (24 IP enhance mode)	6 (8 IP enhance mode)	12 (16 IP enhance mode)	24 (32 IP enhance mode)
Video Compression	4 MP, 3 MP, 1080p, 720p, WD1, 4CIF (when 1080P lite not enabled)	4 MP, 3 MP, 1080p, 720p, WD1, 4CIF (when 1080P lite not enabled)	4 MP, 3 MP, 1080p, 720p, WD1, 4CIF (when 1080P lite not enabled)	5 MP, 4 MP, 3 MP, 1080p, 720p, D1, 4CIF, VGA, CIF	8 MP, 5 MP, 4 MP, 3 MP, 1080p, 720p, WD1, 4CIF, VGA, CIF	8 MP, 5 MP, 4 MP, 3 MP, 1080p, 720p, WD1, 4CIF, VGA, CIF
Recording Mode	Continuous, Event Alarm, Motion, Video Loss, Schedule	Continuous, Event Alarm, Motion, Video Loss, Schedule	Continuous, Event Alarm, Motion, Video Loss, Schedule	Continuous, Event Alarm, Motion, Video Loss, Schedule	Continuous, Event Alarm, Motion, Video Loss, Schedule	Continuous, Event Alarm, Motion, Video Loss, Schedule
Search Mode	Date, Time, Event Alarm, Motion, Search Backup, Quick search by object or event type	Date, Time, Event Alarm, Motion, Search Backup, Quick search by object or event type	Date, Time, Event Alarm, Motion, Search Backup	Date, Time, Event Alarm, Motion, Search Backup	Date, Time, Event Alarm, Motion, Search Backup	Date, Time, Event Alarm, Motion, Search Backup
External Backup	USB HDD, USB Memory, USB DVD-R, Network	USB HDD, USB Memory, USB DVD-R, Network	USB HDD, USB Memory, USB DVD-R, Network	USB HDD, USB Memory, USB DVD-R, Network	USB HDD, USB Memory, USB DVD-R, Network	USB HDD, USB Memory, USB DVD-R, Network
Motion Detection	On, Off, Area Setting	On, Off, Area Setting	On, Off, Area Setting	On, Off, Area Setting	On, Off, Area Setting	On, Off, Area Setting
HDMI Output	1920×1080, 60Hz, 1280×1024, 60Hz, 1280×720, 60Hz, 1024×768, 60Hz	1920×1080, 60Hz, 1280×1024, 60Hz, 1280×720, 60Hz, 1024×768, 60Hz	1920×1080, 60Hz, 1280×1024, 60Hz, 1280×720, 60Hz, 1024×768, 60Hz	4K (3840 × 2160)/30Hz	4K (3840 × 2160)/30Hz	"HDMI1 & VGA: 1920 × 1080, 60Hz HDMI2: 4K (3840 × 2160)"
Harddisk bay	1 x SATA III	1 x SATA III	1 x SATA III	1 x SATA III	2 x SATA III	2 x SATA III
Max. Storage Capacity	Up to 10TB capacity for each HDD	Up to 10TB capacity for each HDD	Up to 10TB capacity for each HDD	Up to 10TB capacity for each HDD	Up to 10TB capacity for each HDD	Up to 10TB capacity for each HDD
PoC Interface	—	—	—	4-ch	8-ch	16-ch
ONVIF compliant	Profile S, Profile G	Profile S, Profile G	Profile S, Profile G	Profile S, Profile G	Profile S, Profile G	Profile S, Profile G
Alarm Inputs	—	—	—	4 contact input N/O or N/C	8 contact input N/O or N/C	4 contact input N/O or N/C
Alarm Outputs	—	—	—	1	4	1
Supply Voltage	12 VDC, Power Adapter 100 ~ 240 VAC 50, 60Hz included	12 VDC, Power Adapter 100 ~ 240 VAC 50, 60Hz included	12 VDC, Power Adapter 100 ~ 240 VAC 50, 60Hz included	48 VDC, Power Adapter 100 ~ 240 VAC 50, 60Hz included	48 VDC, Power Adapter 100 ~ 240 VAC 50, 60Hz included	100 ~ 240 VAC, 50Hz / 60Hz
Power Consumption	≤ 18 W without harddisk	≤ 18 W without harddisk	≤ 24W without hard disks	≤ 40 W without harddisk	< 60 W without hard disk, PoC	≤ 140 W without hard disk, PoC

	<b>GD-RT-AP5016N</b>	<b>GD-RT-AT5016N</b>
Video Inputs	Professional	Premium
HD-TVI Input	16-ch, BNC	16-ch, BNC
AHD Input	8 MP, 5 MP, 4 MP, 3 MP, 1080p30	8 MP, 5 MP, 4 MP, 3 MP, 1080p30
CVI Input	5 MP, 4 MP, 1080p30	5 MP, 4 MP, 1080p30
CVBS Input	5MP, 4 MP, 1080p30	4 MP, 1080p30
IP Inputs	PAL, NTSC	PAL, NTSC
Recording Resolution	24 (32 IP enhance mode)	18, up to 8 MP
Video Compression	8 MP, 5 MP, 4 MP, 3 MP, 1080p, 720p, WD1, 4CIF, VGA, CIF	8 MP, 5 MP, 4 MP, 3 MP, 1080p, 720p, WD1, 4CIF, VGA, CIF
Recording Mode	Continuous, Event Alarm, Motion, Video Loss, Schedule	Continuous, Event Alarm, Motion, Video Loss, Schedule
Search Mode	Date, Time, Event Alarm, Motion, Search Backup, Quick search by object or event type	Date, Time, Event Alarm, Motion, Search Backup
External Backup	USB HDD, USB Memory, USB DVD-R, Network	USB HDD, USB Memory, USB DVD-R, Network, eSATA
Motion Detection	On, Off, Area Setting	On, Off, Area Setting
HDMI Output	4K (3840 × 2160)/30Hz	"HDMI1 & VGA: 1920 × 1080, 60Hz HDMI2: 4K (3840 × 2160)"
Harddisk bay	2 x SATA III	4 x SATA III, 1 x eSATA
Max. Storage Capacity	Up to 10TB capacity for each HDD	Up to 10TB capacity for each HDD
PoC Interface	—	—
ONVIF compliant	Profile S, Profile G	Profile S, Profile G
Alarm Inputs	16 contact input N/O or N/C	16 contact input N/O or N/C
Alarm Outputs	4	4
Supply Voltage	12 VDC, Power Adapter 100 ~ 240 VAC 50, 60Hz included	100 ~ 240 VAC, 50Hz / 60Hz
Power Consumption	≤ 25W without hard disks	≤ 65W without hard disks



## MIGRATION FROM ANALOGUE COAXIAL CABLE TO IP SOLUTIONS

GRUNDIG offers the most efficient and cost-effective upgrade from existing video security systems to high-resolution technology solutions. Depending on the existing cable and technology in place, with GRUNDIG you can upgrade your system using high-resolution cameras, display and recording. With high-definition TVI-cameras you can replace analogue standard-resolution cameras, upgrading your existing embedded system to a TVI embedded recorder, therefore enhancing your equipment from a 0.5 Megapixel to a 5 Megapixel resolution system.



GRUNDIG embedded recorders are ONVIF profile G compatible and can be managed by the GRUNDIG Video Management System or by any other third-party VMS.

GRUNDIG HD-TVI recorders operate with all common analogue standards such as CVBS, 960H, CVI, AHD and of course HD-TVI — up to 8 Megapixel resolution. And even more: In addition, IP camera channels are available to mix all front-end technologies on site.

## POWER OVER COAXIAL (POC)

With the Power over Coaxial (PoC) option the camera can be powered by the DVR via coaxial video cable. This removes the need for separate cables and power supplies to power your cameras. For installers this means a much more time and cost-efficient installation.

PoC can be used on cable runs up to 800 meters for a 5 MP-camera (depending on cable type) and is available in 4, 8 and 16 channel DVRs (models ending with -P). A full complement of GRUNDIG TVI PoC-cameras is also available which together offer a cost effective and time saving solution to your TVI installations.





GD-ML-AP1031SD



GD-ML-BC2230HD



GD-ML-AC2430HD



GD-ML-AP2231HD



GD-ML-AP2431HD



GD-ML-AP3230HD



GD-ML-AP2830UHD



GD-ML-AP4360UHD



GD-ML-AP5560UHD



GD-ML-AT4650UHD



GD-ML-AT5550UHD

	GD-ML-AP1031SD	GD-ML-BC2230HD	GD-ML-AC2430HD	GD-ML-AP2231HD	GD-ML-AP2431HD	GD-ML-AP3230HD
LCD Panel size	25.6 cm (10.1") Diagonal AM-TFT LED Backlight	54.6 cm (21, 5") Diagonal AM-TFT LED Backlight	61 cm (23.6") Diagonal AM-TFT LED Backlight	54.6 cm (21, 5") Diagonal AM-TFT LED Backlight	61 cm (23.6") Diagonal AM-TFT LED Backlight	81.3 cm (32") Diagonal AM-TFT LED Backlight
Pixels - Total	1280 (H) x 800 (V)	1920 (H) x 1080 (V)	1920 (H) x 1080 (V)	1920 (H) x 1080 (V)	1920 (H) x 1080 (V)	1920 (H) x 1080 (V)
Pixel Pitch	0.192 mm (H) x 0.192 mm (V)	0.248 mm (H) x 0.248 mm (V)	0.36375 mm (H) x 0.36375 mm (V)			
Aspect Ratio	16 : 9	16 : 9	16 : 9	16 : 9	16 : 9	16 : 9
Video Standard	PAL, NTSC	PAL, NTSC				
Video Inputs	1x Composite, BNC, 1x VGA, 1x HDMI	1x HDMI, 1x VGA	1x HDMI, 1x VGA, 1x DVI	1x Composite, BNC, 1x VGA, 1x HDMI	1x Composite, BNC, 1x VGA, 1x HDMI	1x Composite, BNC, Looped, 1x VGA, 2xHDMI
Brightness	330 cd, m <sup>2</sup>	250 cd, m <sup>2</sup>	300 cd, m <sup>2</sup>			
Contrast Ratio	800:1	1000:1	1000:1	1000:1	1000:1	3000:1
Number of Colours	262K	16.7 million	16.7 million	16.7 million	16.7 million	16.7 million
Viewing Angle	160° (H) ~ 160° (V)	178° (H) ~ 178° (V)	170° (H) ~ 170° (V)	170° (H) ~ 170° (V)	170° (H) ~ 170° (V)	178° (H) ~ 178° (V)
Response Time	12 ms	5 ms	5 ms	5 ms	5 ms	6.5 ms
Display protection	Tempered acryl glass with anti-reflection coating	—	—	Tempered acryl glass with anti-reflection coating	Tempered acryl glass with anti-reflection coating	—
Audio Inputs	1x 3.5mm jack (Line), 1x HDMI	—	—	2 CH (1xHDMI, 1xMiniJack Connector)	2 CH (1xHDMI, 1xMiniJack Connector)	2 CH (1xHDMI, 1xMiniJack Connector)
Speakers	yes	2 x 2 W	—	2 x 2.5 W	2 x 2.5 W	2 x 2 W
Vesa Mount	75 x 75 mm	100 x 100 mm	100 x 100 mm	100 x 100 mm	100 x 100 mm	200 x 100 mm
OSD (On Screen Display)	Yes, multi language	Yes, multi language				
Accessories included	Stand, power adapter, HDMI cable and remote control	Power Adapter and HDMI cable	Power Adapter and HDMI cable	Power adapter, HDMI cable and remote rontrol	Power adapter, HDMI cable and remote rontrol	Power adapter, HDMI cable and remote rontrol
Regulation	CE, EAC, FCC, RoHS Compliant	CE, EAC, FCC, RoHS Compliant				
Power Consumption	Max. 15 W	20 W	Max. 25 W	Max. 25 W	Max. 25 W	55 W
Supply Voltage	12 VDC, Power Adapter 100 ~ 240 VAC 50, 60Hz included	12 VDC, Power Adapter 100 ~ 240 VAC 50, 60Hz included	12 VDC, Power Adapter 100 ~ 240 VAC 50, 60Hz included	12 VDC, Power Adapter 100 ~ 240 VAC 50, 60Hz included	12 VDC, Power Adapter 100 ~ 240 VAC 50, 60Hz included	100 ~ 240 VAC, 50Hz / 60Hz

	GD-ML-AP2830UHD	GD-ML-AP4360UHD	GD-ML-AP5560UHD	GD-ML-AT4650UHD	GD-ML-AT5550UHD
LCD Panel size	71 cm (28") Diagonal AM-TFT LED Backlight	109 cm (43") Diagonal AM-TFT LED Backlight	140 cm (55") Diagonal AM-TFT LED Backlight	117 cm (46") Diagonal AM-TFT LED Backlight	140 cm (55") Diagonal AM-TFT LED Backlight
Pixels - Total	3840 (H) x 2160 (V)	3840 (H) x 2160 (V)	3840 (H) x 2160 (V)	1920 (H) x 1080 (V)	1920 (H) x 1080 (V)
Pixel Pitch	0.16 mm (H) x 0.16 mm (V)	—	—	0.248 mm (H) x 0.248 mm (V)	0.248 mm (H) x 0.248 mm (V)
Aspect Ratio	16 : 9	16 : 9	16 : 9	16 : 9	16 : 9
Video Standard	PAL, NTSC	PAL, NTSC	PAL, NTSC	PAL, NTSC	PAL, NTSC
Video Inputs	1x Display Port, 1x HDMI, 1x VGA, 1x BNC Composite (1Vpp)	1x Display Port, 2x HDMI, 1x VGA, 1x RS232 (in/out)	1x Display Port, 1x DVI, 1x HDMI, 1x VGA, 1x BNC Composite (1Vpp) looped	1x Display Port, 1x DVI, 1x HDMI, 1x VGA, 1x BNC Composite (1Vpp) looped	1x Display Port, 1x DVI, 1x HDMI, 1x VGA, 1x BNC Composite (1Vpp) looped
Brightness	250 cd, m <sup>2</sup>	450 cd, m <sup>2</sup>	500 cd, m <sup>2</sup>	500 cd, m <sup>2</sup>	500 cd, m <sup>2</sup>
Contrast Ratio	1000:1	3000:1	3000:1	4000:1	4000:1
Number of Colours	16.7 million	1,070 million	1,070 million	16.7 million	16.7 million
Viewing Angle	170° (H) ~ 160° (V)	178° (H) ~ 178° (V)	178° (H) ~ 178° (V)	178° (H) ~ 178° (V)	178° (H) ~ 178° (V)
Response Time	5 ms	5 ms	8 ms	5 ms	5 ms
Display protection	—	—	—	—	—
Audio Inputs	1x 3.5mm jack (Line), 1x HDMI	—	—	—	—
Speakers	2 x 5 W	2 x 5 W	2 x 5 W	—	—
Vesa Mount	100 x 100 mm	400 x 400 mm	400 x 400 mm	500 x 400 mm	600 x 400 mm
OSD (On Screen Display)	Yes, multi language	Yes, multi language	Yes, multi language	Yes, multi language	Yes, multi language
Accessories included	Stand, power adapter, HDMI cable and remote control	Wall bracket, power cord, HDMI cable and remote control	Wall bracket, power cord, HDMI cable and remote control	—	—
Regulation	CE, EAC, FCC, RoHS Compliant	CE, EAC, FCC, RoHS Compliant	CE, EAC, FCC, RoHS Compliant	CE, EAC, FCC, RoHS Compliant	CE, EAC, FCC, RoHS Compliant
Power Consumption	Max. 40 W	130 W	150 W	Max: 143W/h, Typical: 87W/h,BTU(Max):524.14W	Max:198W, Typ.:136W, BTU(Max):524.14W
Supply Voltage	100 ~ 240 VAC, 50Hz / 60Hz	100 ~ 240 VAC, 50Hz / 60Hz	100 ~ 240 VAC, 50Hz / 60Hz	100 ~ 240 VAC, 50Hz / 60Hz	100 ~ 240 VAC, 50Hz / 60Hz

## RESOLUTION 8 MEGAPIXELS VERSUS 2 MEGAPIXELS



### Resolution

GRUNDIG offers a wide range of cameras, with resolutions from 1 Megapixels up to 12 Megapixels. This allows use of the most cost-effective camera in a variety of applications, depending on the area that needs to be monitored and on the level of desired recognition. GRUNDIG always offers the most effective camera to help you fully manage your surveillance job.

	GD-CI-AP2605B GD-CI-AT12505B GD-CI-AT4505B GD-CI-AT8505B GD-CI-BT2505B	GD-BR-AWA03 Box Camera Wall Mount Bracket
	GD-CI-BC2626V GD-CI-BC4627V GD-CI-BC4637V	GD-BR-AJX01 Junction Box
	GD-BR-AMP08	GD-BR-AMP08 Pendant Mount Bracket
	GD-BR-AMW04	GD-BR-AMW04 Wall Mount Bracket
	GD-BR-AWJ01	GD-BR-AWJ01 Wall Mount Bracket and Junction Box
	GD-CI-AP4617V GD-CI-CC2616V GD-CI-CC4617V GD-CI-DC2616V GD-CI-DC4617V	GD-BR-AJX03 Junction Box
	GD-BR-AMP09	GD-BR-AMP09 Pendant Mount Bracket
	GD-BR-AMW05	GD-BR-AMW05 Wall Mount Bracket
	GD-BR-ASN01	GD-BR-ASN01 Sunshield for Fixed Domes
	GD-BR-AWJ02	GD-BR-AWJ02 Wall Mount Bracket and Junction Box
	GD-CI-AP4617W	GD-BR-AJX10 Junction Box
	GD-CI-AP2627V GD-CI-AP4637V GD-CI-AT8637V GD-CI-BP4637V	GD-BR-AMF06 Flush Mount Adapter
	GD-BR-AMP10	GD-BR-AMP10 Pendant Mount Bracket
	GD-BR-AMW01	GD-BR-AMW01 Wall Mount Bracket
	GD-BR-AWJ07	GD-BR-AWJ07 Wall Mount Bracket and Junction Box
	GD-BR-CG245	Cable gland
	GD-CI-AT2637V GD-CI-AT2637VH GD-CI-AT4637V GD-CI-AT4637VH	GD-BR-AMF06 Flush Mount Adapter
	GD-BR-AMP10	GD-BR-AMP10 Pendant Mount Bracket
	GD-BR-AMW01	GD-BR-AMW01 Wall Mount Bracket
	GD-CI-AT3637V	GD-BR-AMP02 Pendant Mount Bracket (Long)
		GD-BR-AMP03 Pendant Mount Bracket (Medium long)
		GD-BR-AMP05 Pendant Mount Bracket (short)
		GD-BR-AMP11 Pendant Mount Bracket
		GD-BR-AMW07 Wall Mount Bracket
	GD-CI-AP5617F	GD-BR-AMF03 Angle Mount Adapter
		GD-BR-AMP12 Pendant Mount Bracket
		GD-BR-AMW06 Wall Mount Bracket
	GD-BR-AJX08	GD-BR-AJX08 Junction Box
	GD-CI-AT12617F	GD-BR-AMW19 Wall Mount Bracket
	GD-CI-BT12617F	GD-BR-AJX05 Junction Box



GD-CI-AP4617T  
GD-CI-BC2626T  
GD-CI-BC4627T  
GD-CI-BC4637T  
GD-CI-AT4636T



GD-BR-AJX04  
Junction Box  
  
GD-BR-AMC03  
Corner Mount Bracket  
  
GD-BR-AML01  
Pole Mount Bracket



GD-CI-AP2627T  
GD-CI-AP4637T  
GD-CI-AT12626T  
GD-CI-AT2637T  
GD-CI-AT2637TH  
GD-CI-AT3637T  
GD-CI-AT4637T  
GD-CI-AT4637TH  
GD-CI-AT8637T  
GD-CI-BT4637T  
GD-CI-CT2647T  
GD-CI-DT2647T  
GD-CI-BP4637T



GD-BR-AMC01  
Corner Mount Bracket  
  
GD-BR-AML03  
Pole Mount Bracket



GD-CI-AC4637P



GD-BR-AMW18  
Wall Mount Bracket



GD-CI-AP2647P



GD-BR-AJX02  
Junction Box  
  
GD-BR-AMF02  
Flush Mount Adapter  
  
GD-BR-AMP02  
Pendant Mount Bracket (Long)  
  
GD-BR-AMP03  
Pendant Mount Bracket (Medium long)  
  
GD-BR-AMP05  
Pendant Mount Bracket (short)  
  
GD-BR-AMW11  
Wall Mount Bracket



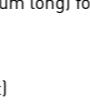
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GD-CI-AP4746P  
GD-CI-AT4747P  
GD-CI-AT8746P  
GD-CI-BP2747P  
GD-CT-BP2247P



GD-BR-AWJ03  
Wall Mount Bracket and Junction Box for PTZ Domes  
  
GD-BR-AMC04  
Corner Mount Bracket Junction Box for PTZ Domes  
  
GD-BR-AMW02  
Corner Mount Adapter and Junction Box for PTZ Domes



GD-BR-AMW17  
Pole Mount for PTZ Domes  
  
GD-BR-AML06  
Pole Mount Bracket Junction Box for PTZ Domes  
  
GD-BR-AMP01  
Pendant Mount Bracket (Long) for PTZ Domes  
  
GD-BR-AMP04  
Pendant Mount Bracket (Medium long) for PTZ Domes



GD-BR-AMP06  
Pendant Mount Bracket (short)  
  
GD-BR-AMP07  
Pendant Mount Bracket extendable  
  
GD-BR-AMA01  
Parapet Wall Mount for PTZ Domes  
  
GD-BR-AMS01

GD-BR-AMW08  
Wall Mount Bracket for PTZ Dome

GD-CT-AC2805B



GD-CT-AC2113E  
GD-CT-AC5813E  
  
GD-BR-AJX05  
Junction Box  
  
GD-BR-AMW14  
Wall Mount Bracket



GD-CT-AC2116E  
GD-CT-AP2117E  
GD-CT-AP8117E  
  
GD-BR-AJX04  
Junction Box  
  
GD-BR-AMW14  
Wall Mount Bracket



GD-CT-AC2126V



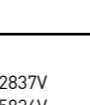
GD-BR-AJX06  
Junction Box inclined  
  
GD-BR-AMF04  
Flush Mount Adapter



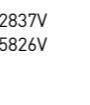
GD-BR-AMP15  
Pendant Mount Bracket  
  
GD-BR-AMW16  
Wall Mount Bracket  
  
GD-BR-AWJ06  
Wall Mount Bracket and Junction Box



GD-CT-AP2817V



GD-BR-AJX03  
Junction Box  
  
GD-BR-AMP09  
Pendant Mount Bracket  
  
GD-BR-AMW20  
Wall Mount Bracket  
  
GD-BR-ASN01  
Sunshield for Fixed Domes



GD-CT-AP2837V



GD-BR-AJX01



GD-CT-AP5826V



GD-BR-AMF08



GD-CT-AMW15



GD-BR-AWJ05



GD-BR-AWJ06



GD-CT-BP2837V



GD-BR-AJX06



GD-BR-AMF04



GD-BR-AMP15



GD-BR-AMW16



GD-BR-AWJ06



GD-CT-AC2126T  
GD-CT-AC5833T  
GD-CT-AP2837T  
GD-CT-AP8837T  
GD-CT-BP2837T



GD-BR-AJX04



Junction Box  
Corner Mount Bracket



GD-BR-AMC03



Corner Mount Bracket



GD-HW-BPBB0550G



Black body temperature reference



GD-HW-BPBB0550G



Black body temperature reference



GD-BR-AMC03



Corner Mount Bracket



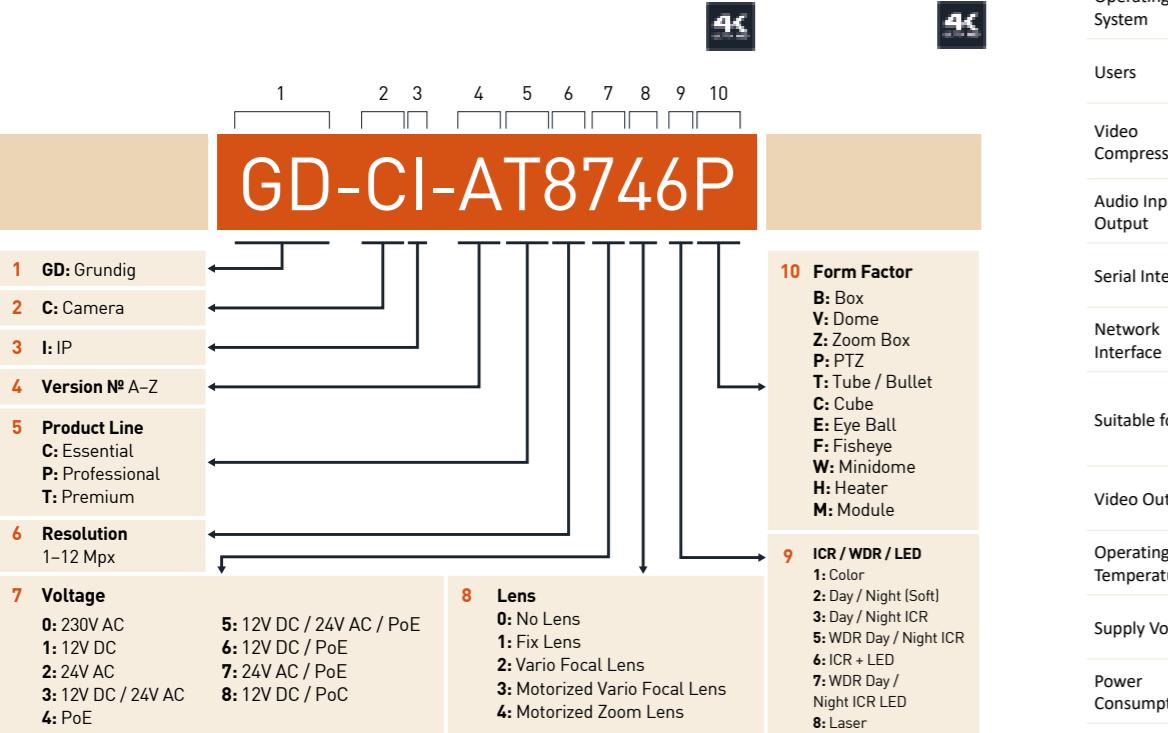
GD-BR-AML01



Pole Mount Bracket



	GD-LD-AC2812DC-IR	GD-LD-AC0550DC-IR	GD-LF-BT3611D-IR	GD-LF-BT1150D-IR	
	Essential	Essential	Premium	Premium	
Lens Focal Length	2.8 ~ 12 mm	5 ~ 50 mm	3.6 ~ 11 mm	11 ~ 50 mm	LCD Panel size
Iris F-Number	F= 1.4 ~ 360	F= 1.4 ~ 360	F= 1.5 ~ 360	F= 1.4 ~ 360	
Lens Drive Type	Auto Iris (DC)	Auto Iris (DC)	Auto Iris (DC)	Auto Iris (DC)	PTZ Control
Lens Mount	CS mount	CS mount	CS mount	CS mount	
Material	Aluminium alloy	Aluminium alloy	Polycarbonate and Glass Fiber	Aluminium alloy	DVR Control
Max. Image Format	1/2,7"	1/2,7"	1/1.8"	1/1.8"	Play, M
Minimum Object Distance	0.5 m	0.5 m	0.2 m	1.5 m	Iris (Close)



DEWARP		
D-KB-AP0110M	GD-KB-AP1120P	GD-KB-AT2430P
Professional	Professional	Premium
6 Gray Graphic LCD	—	10.1" (25.6 cm) TFT LCD colour touch display, 1280 x 800
Joystick, Pan, Tilt, Zoom, Set, Sequence, Auto Pan	4-axis joystick, PTZ-, focus- &iris-control, setting and calling Presets, Patterns & Patrols, Auto-Scan, Auto-Pan, Wiper, AUX	4-axis joystick, PTZ-, focus- &iris-control, setting and calling Presets, Patterns & Patrols, Auto-Scan, Auto-Pan, Wiper, AUX
Stop, Pause, FF, RW, Rec, Menu, Search, Backup	Play, Stop, Pause, FF, RW, Rec, Menu, Search, Backup	Play, Stop, Pause, FF, RW, Rec, Menu, Search, Backup
(Open), Focus (Near, Far) Zoom (Tele, Wide)	Iris (Close, Open), Focus (Near, Far, Auto), Zoom (Tele, Wide)	Iris (Close, Open), Focus (Near, Far, Auto), Zoom (Tele, Wide)
—	Microsoft Windows® and Linux®	Android 6.0
1 user, 1 level	1 user, 1 level	Up to 32 users, 2 levels: Administrator and User
—	—	H.264, H.265
—	—	1-ch audio input and 1-ch audio output
RS-232, 1x RS-485	USB 2.0, DirectX	2x USB 2.0 (RS232/485 with adapter)
—	—	1x 10, 100, 1000 Base T, TX (RJ-45)
2247P, GD-RT-AT5016N, 3864N, GD-RN-CT8832N, GD-RN-AT819128N	C-WERK clients	NVR, DVR, PTZ-camera, C-WERK clients
—	—	1x DVI, 1x HDMI
0°C ~ 45°C	0°C ~ 45°C	-10°C ~ 55°C
DC, Power Adapter 10 VAC 50, 60Hz included	5 VDC by USB port	12 VDC, PoE (IEEE 802.3af)
Max. 15 W	Max. 2 W	Max. 15.5 W

Dewarping is used to enable "fisheye" camera. With this function the image area is converted to a rectangular dimensions and the selected area is displayed. You control the view like with a normal camera in several windows.

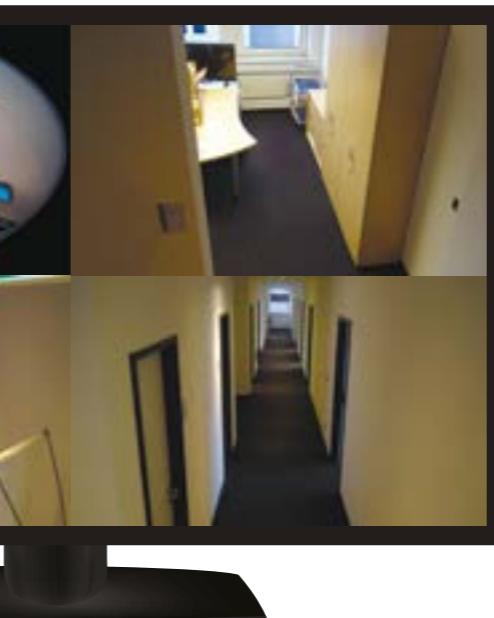
The Dewarp function is standard in the Pro and Premium models.

GD-CI-BT12617F with its dewarping function outperforms all competition.

e a round image that is from a  
rping, the respectively selected  
e viewer in the respective  
viewing angle — and thus equalized.  
n / tilt camera or you can view the  
panoramic view.

supported from the GRUNDIG NVRs

vision® panoramorph optical design  
technologies



NOT

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