

PROJECT REF: BS 2131

DATE: JANUARY 2022

**COLEY PARK GARAGE SITE
WENSLEY ROAD, READING**

**DESIGN PERFORMANCE SPECIFICATION
FOR CCTV INSTALLATION**

PREPARED BY :-

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PROJECT REVISION SHEET

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DESIGN PERFORMANCE SPECIFICATION FOR CCTV INSTALLATION

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SPECIFICATION NOTES FOR MECHANICAL AND ELECTRICAL ENGINEERING SERVICES

Nature of Works

The main project is a residential development comprising 46 dwellings including 28 individual town houses and a block of apartments containing 18 apartments.

The site includes extensive landscape works including access roads, car parks and community space.

As part of the works 8 garages and 4 parking spaces are being re-provided to the rear of 51-65 Wensley Road.

The work covered by this Specification is for the design, supply, installation, testing and commissioning of the CCTV installation to the site.

Schedule of Contract Drawings

The following drawings will form part of the Contract Documents associated with the Electrical Engineering Services Contract :-

Drawing No Drawing Title

EBS 2131-SK10 Proposed External Lighting Layout

CDM

CDM Regulations will apply to this Contract and the Contractor shall fully comply with the regulations and shall supply all such information as required.

Description of the Works

The Contractor shall include for the design, supply, installation, testing and commissioning of the complete electrical and CCTV installation items as follows :-

- a] Installation of all power requirements associated with the CCTV installations.
- b] CCTV installation including all equipment, columns and cabling.
- c] The complete testing and commissioning of the installations together with the provision of all relevant data within the maintenance manuals.

All the above installation works to be in accordance with the 18th Edition of the IET Regulations for Electrical Installations (BS 7671) all applicable British Standards/Codes of Practice.

Method of Wiring

The Contractor shall design, supply, install, connect, test and commission the following wiring requirements associated with the various electrical engineering services :-

a] Power Distribution Cables

LSF single core cables in HGSW galvanised conduit or multi-core MICV specification .

b] CCTV Wiring

Cabling supplied and installed to CCTV Specialists requirements..

01

02

03

04

05

<u>CCTV Installation</u> The contractor shall design, supply, install, test and commission the CCTV system to the garage site as indicated on the drawing. The drawing details the proposed pit and duct arrangement which will be provided by others which the CCTV specialist should review and detail any changes or additional requirements. Before the CCTV installation is commenced the specialist shall carry out a survey of the pit and duct installation and install draw ropes to all ducts prior to installation. The contractor shall install within the landlords cupboard of the adjacent flats the new central equipment including a 6 channel POE professional NVR with 4TB HDD and 22" full HD LCD monitor. The DVR shall be as Hikvision ISD 7260HQHI range, or similar. The column mounted cameras to the car park shall be of the 12V, 3.6mm fixed lens day / night camera, dome type, weather resistant housing complete with vertical pole mount. and infra-red up to a distance of 20 metres, as Hikvision model DS-2CE57HOT-VPITF (C), or similar. The camera's will be mounted on the lighting columns with a purpose made bracket. Details of the proposed equipment are included in Appendix A. The specialist shall install all cabling required to complete the installation. The installation shall be complete with all network cabinets and switches as required. Exact locations and mounting heights of all equipment to be agreed with the Architect and Employer prior to installation. The CCTV systems shall be designed, installed, tested and commissioned by a specialist CCTV installer. The maintenance of the system shall be included within the CCTV System contract during the the year's defects liability period.		06
<u>Wiring Regulations and Earthing</u> The Contractor shall appreciate that the whole of the electrical services installation works shall be carried out in strict accordance with the <u>18th Edition</u> of the IET Wiring Regulations (BS 7671).		07

APPENDIX 'A'

Equipment details

DS-2CE57H0T-VPITF(C) 5 MP Camera



- 5 MP, 2560 × 1944 resolution
- 2.8 mm, 3.6 mm, 6 mm fixed focal lens
- Smart IR, up to 20 m IR distance
- 4 in 1 video output (switchable TVI/AHD/CVI/CVBS)
- IP67, IK10



Specification

Camera	
Image Sensor	5 MP CMOS
Signal System	PAL/NTSC
Resolution	2560 (H) × 1944 (V)
Frame Rate	TVI: 5M@20fps, 4M@30fps, 4M@25fps, 1080p@30fps, 1080p@25fps AHD: 5M@20fps, 4M@30fps, 4M@25fps CVI: 4M@30fps, 4M@25fps CVBS: PAL/NTSC
Min. illumination	0.01 Lux@(F1.2, AGC ON), 0 Lux with IR
Shutter Time	PAL: 1/25 s to 1/50, 000 s NTSC: 1/30 s to 1/50, 000 s
Lens	2.8 mm, 3.6 mm, 6 mm fixed lens
Field of View	2.8 mm, horizontal FOV: 85°, vertical FOV: 63°, diagonal FOV:110° 3.6 mm, horizontal FOV: 80°, vertical FOV: 63°, diagonal FOV:105° 6 mm, horizontal FOV: 57°, vertical FOV: 43°, diagonal FOV:72°
Lens Mount	M12
Day & Night	ICR
WDR (Wide Dynamic Range)	Digital WDR
Angle Adjustment	Pan: 0 to 355°, Tilt: 0 to 75°, Rotation: 0 to 355°
Menu	
Image Mode	STD/HIGH-SAT
AGC	Yes
Day/Night Mode	Auto/Color/BW (Black and White)
White Balance	Auto/Manual
AE (Auto Exposure) Mode	DWDR/BLC/HLC/Global
Noise Reduction	2D DNR
Language	English
Function	Brightness, Sharpness, Mirror, Smart IR
Interface	
Video Output	Switchable TVI/AHD/CVI/CVBS
General	
Operating Conditions	-40 °C to 60 °C (-40 °F to 140 °F), humidity 90% or less (non-condensing)
Power Supply	12 VDC ± 25%
Power Consumption	Max. 4.3 W
Protection Level	IP67, IK10
Material	Metal
IR Range	Up to 20 m
Communication	HIKVISION-C

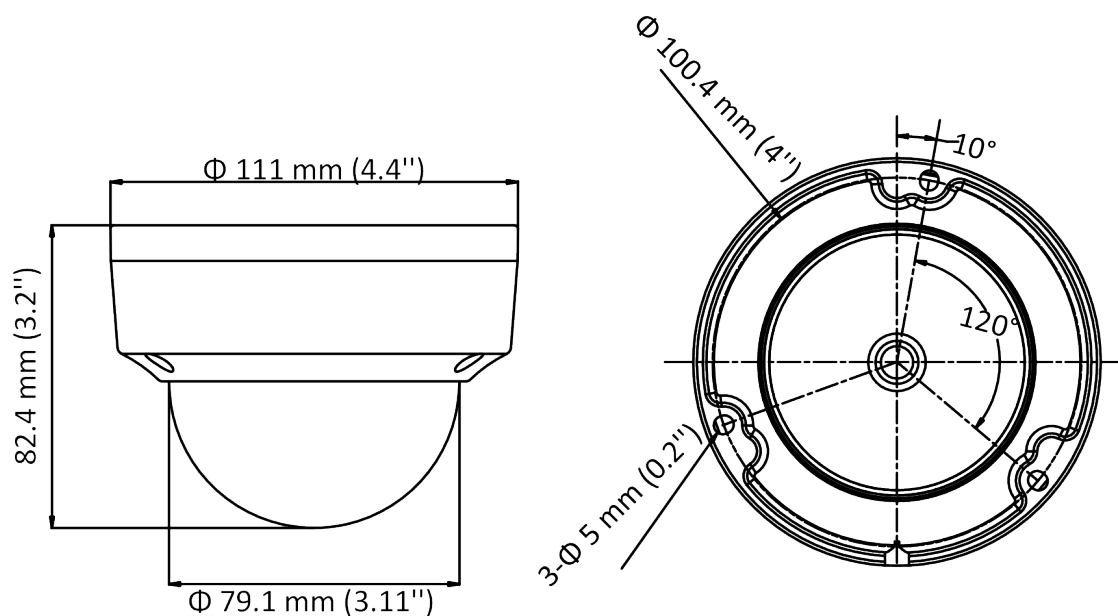
General

Dimensions	Φ 100.4 mm × 82.4 mm (Φ 4" × 3.2")
Weight	Approx. 362 g (0.80 lb.)

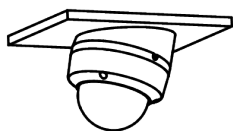
Available Model

DS-2CE57H0T-VPITF(C)

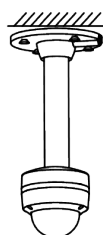
Dimension



Accessory



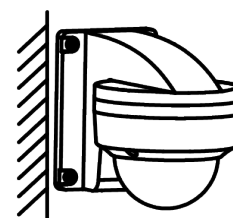
DS-1259ZJ
Inclined-Ceiling Mount



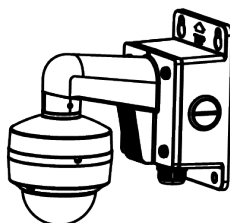
DS-1271ZJ-110
Pendant Mount



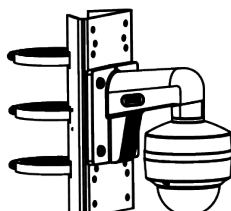
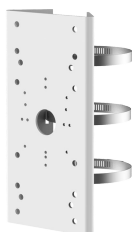
DS-1272ZJ-110
Wall Mount



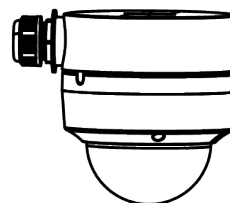
DS-1258ZJ
Wall Mount



DS-1272ZJ-110B
Wall Mount



DS-1275ZJ-SUS
Vertical Pole Mount



DS-1280ZJ-DM18
Junction Box

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iDS-7200HQHI-K1/S(B) SERIES TURBO ACUSENSE DVR

Key Feature

- Deep learning-based behavior analysis or facial detection
- H.265 Pro+/H.265 Pro/H.265 video compression
- HDTVI/AHD/CVI/CVBS/IP video inputs
- Up to 6/12/24-ch IP camera inputs (up to 6 MP)
- Max. 800 m for 1080p and 1,200 m for 720p HDTVI signal transmission
- Up to 10 TB capacity per HDD



Compression and Recording

- H.265 Pro+ video compression improves encoding efficiency, and reduces data storage costs
- Full channel recording at up to 1080p resolution

Storage and Playback

- Smart search for efficient playback
- Support the third party cloud storage (Dropbox/Google Drive/Microsoft OneDrive)

Smart Function

- Deep learning-based behavior analysis (line crossing and intrusion detection) or facial detection
- Support multiple VCA (Video Content Analytics) events for both analog and smart IP cameras

Network & Ethernet Access

- Hik-Connect & DDNS (Dynamic Domain Name System) for easy network management
- Output bandwidth limit configurable



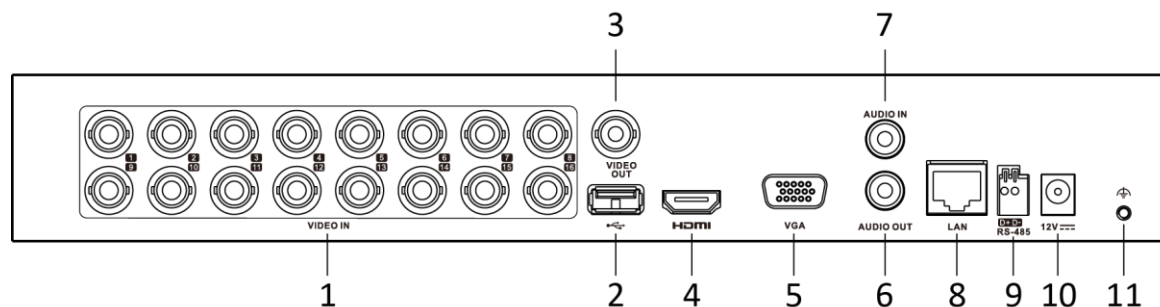
Specification

Model	iDS-7204HQHI-K1/2S(B)	iDS-7208HQHI-K1/4S(B)	iDS-7216HQHI-K1/4S(B)
Facial Detection ¹			
Facial detection and capture	1-ch human face capture (HD analog camera)		
Human/Vehicle Analysis ¹			
False alarm reduction	Up to 2-ch	Up to 4-ch	
Recording			
Video compression	H.265 Pro+/H.265 Pro/H.265/H.264+/H.264		
Encoding resolution	Main stream: When 1080p lite mode not enabled: For 4 MP stream access: 4 MP lite@15 fps; 1080p lite/720p/WD1/4CIF/VGA/CIF@25 fps (P)/30 fps (N) For 3 MP stream access: 3 MP/1080p/720p/VGA/WD1/4CIF/CIF@15fps For 1080p stream access: 1080p/720p@15 fps; VGA/WD1/4CIF/CIF@25 fps (P)/30 fps (N) For 720p stream access: 720p/VGA/WD1/4CIF/CIF@25 fps (P)/30 fps (N) When 1080p Lite mode enabled: 4 MP lite/3 MP@15 fps; 1080p lite/720p lite/VGA/WD1/4CIF/CIF@25 fps (P)/30 fps (N)		
	Sub-stream: WD1/4CIF@12 fps; CIF@25 fps (P)/30 fps (N)		
Video bitrate	32 Kbps to 6 Mbps		
Dual stream	Support		
Stream type	Video, Video & Audio		
Audio compression	G.711u		
Audio bitrate	64 Kbps		
Video and Audio			
IP video input	1-ch (up to 5-ch)	2-ch (up to 10-ch)	2-ch (up to 18-ch)
	IP enhanced mode on: 2-ch (up to 6-ch), each up to 4 Mbps	IP enhanced mode on: 4-ch (up to 12-ch), each up to 4 Mbps	IP enhanced mode on: 8-ch (up to 24-ch), each up to 4 Mbps
	Up to 6 MP resolution		
	Support H.265+/H.265/H.264+/H.264 IP cameras		
Analog video input	4-ch	8-ch	16-ch
	BNC interface (1.0 Vp-p, 75 Ω), supporting coaxitron connection		
HDTVI input	3 MP, 1080p@30 fps, 1080p@25 fps, 720p@60 fps, 720p@50 fps, 720p@30 fps, 720p@25 fps *: The 3 MP signal input is only available for channel 1 of iDS-7204HQHI-K1/2S(B), for channel 1/2 of iDS-7208HQHI-K1/4S(B), and for channel 1/2/3/4 of iDS-7216HQHI-K1/4S(B).		
AHD input	4 MP, 1080p@25 fps, 1080p@30 fps, 720p@25 fps, 720p@30 fps		
HDCVI input	4 MP, 1080p@25 fps, 1080p@30 fps, 720p@25 fps, 720p@30 fps		
CVBS input	PAL/NTSC		
CVBS output	1-ch, BNC (1.0 Vp-p, 75 Ω),		

	resolution: PAL: 704 × 576, NTSC: 704 × 480		
HDMI/VGA output	1-ch, 1920 × 1080/60Hz, 1280 × 1024/60Hz, 1280 × 720/60Hz, 1024 × 768/60Hz, HDMI/VGA simultaneous output		
Audio input	1-ch, RCA (2.0 Vp-p, 1 KΩ)		
Audio output	1-ch, RCA (Linear, 1 KΩ)		
Two-way audio	1-ch, RCA (2.0 Vp-p, 1 KΩ) (using the first audio input)		
Synchronous playback	4-ch	8-ch	16-ch
Network			
Remote connection	32	64	128
Network protocol	TCP/IP, PPPoE, DHCP, Hik-Connect, DNS, DDNS, NTP, SADP, NFS, iSCSI, UPnP™, HTTPS, ONVIF		
Network interface	1, RJ45 10M/100M self-adaptive Ethernet interface		1, RJ45 10M/100M/1000M self-adaptive Ethernet interface
Auxiliary interface			
SATA	1 SATA interface, up to 10 TB capacity for each disk		
Serial interface	RS-485 (half-duplex)		
USB interface	2 × USB 2.0		
Alarm in/out	N/A		
General			
Power supply	12 VDC		
Consumption (without HDD)	≤ 18 W		≤ 24 W
Working temperature	-10 °C to 55 °C (14 °F to 131 °F)		
Working humidity	10% to 90%		
Dimension (W × D × H)	315 × 242 × 45 mm (12.4 × 9.5 × 1.8 inch)		
Weight (without HDD)	≤ 1.16 kg (2.6 lb)	≤ 1.78 kg (3.9 lb)	≤ 2 kg (4.4 lb)

1: Facial detection and human/vehicle analysis cannot be enabled at the same time. Enable one function will make the other one unavailable.

Physical Interface



*: The rear panel of iDS-7204HQHI-K1/2S(B) provides 4 video input interfaces. The rear panel of iDS-7208HQHI-K1/4S(B) provides 8 video input interfaces.

No.	Description	No.	Description
1	VIDEO IN	7	AUDIO IN, RCA connector
2	USB interface	8	LAN network interface
3	VIDEO OUT	9	RS-485 serial interface
4	HDMI interface	10	12 VDC power input
5	VGA interface	11	GND
6	AUDIO OUT, RCA connector		

Available Model

iDS-7204HQHI-K1/2S(B), iDS-7208HQHI-K1/4S(B), iDS-7216HQHI-K1/4S(B)

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APPENDIX 'B'

Drawing

