Schréder
Experts in lightability™

SHUFFLE

180 CAMERA
INTERNAL
SOLUTION

SHUFFLE is a connected, modular approach to city hardware - with its plug-and-play rotatable modules that contain pre-certified hardware, it can be configured to suit your specific needs.

KEY ADVANTAGES

> **Seamless integration in the SHUFFLE column**

> **Professional camera network**

> **Easy installation with patented mounting system**

> **Compatible with video management systems**

The SHUFFLE 180 CAMERA (internal) module offers a solution for integrating a camera in a non-intrusive public CCTV solution. It is designed to offer cities a way to improve and increase security in public spaces.

Our selection of cameras support a broad range of applications from security to business intelligence. It supports additional plug-ins, offering increased efficiency and new opportunities.

The range of full HD 1080 cameras with infrared capabilities are specifically chosen to ensure excellent visibility under different conditions. IR LED can produce clear monochrome images in 0 lux conditions. The Intelligent Auto (iA) feature enables the camera to automatically adjust settings in real-time adapting to its' surroundings, reducing distortion or motion blur.

Modules are in high-grade, high-pressure die-cast aluminium. A clear protector in PC is used to protect the camera and secure the module. All fasteners are in stainless steel. The housing is covered in the highest graded polyester powder paint supporting a variety of colours.

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SHUFFLE

180 CAMERA INTERNAL | CHARACTERISTICS

KEY FEATURES

> **Resolution: full HD (1920 x 1080)**

> **Image optimisation (back-light, contrasts, night vision, high luminosity)**

> **Privacy layers**

> **ONVIF communication standard**

> **Event triggering: motion detection, video analytics, tampering...**

> **Digital zoom**

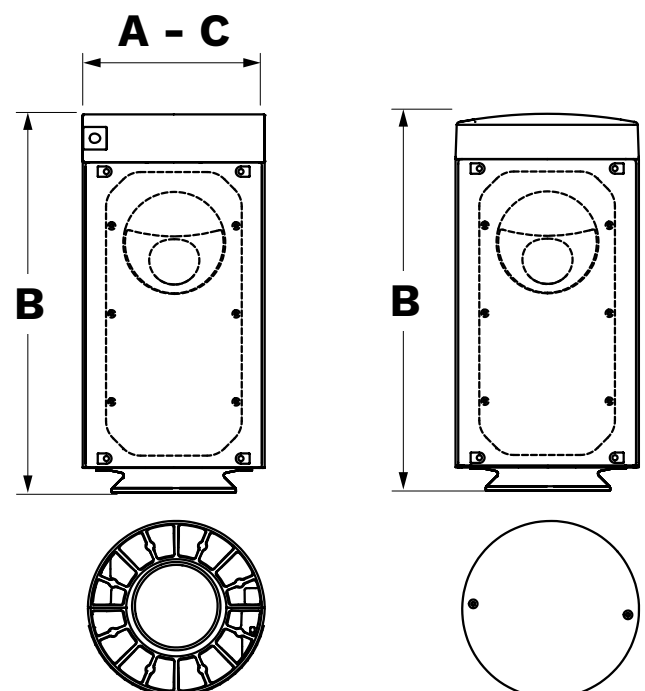> **Data optimisation: selected and/or delayed transmission, on-site recording (SD memory slot)**

COMPARISON TABLE

	SH18C2-HK	SH18C2-GB	SH18C2-JH
Smart features	No	Yes	Yes
Security features	★ ☆ ☆	★ ★ ☆	★ ★ ★
Angular field of view	Horizontal: 108° Vertical: 60°	Horizontal: 110° Vertical: 62°	Horizontal: 108° Vertical: 59.3°
IR	15m	No	30m
Power consumption	3W	6.4W	7.5W
ETL Mark	Yes	No	No

DIMENSIONS AND MOUNTING

AxBxC (mm | inch)	194x403x194 | 7.6x15.9x7.6
Weight (kg | lbs)	6.4 | 14.1
Aerodynamic resistance (CxS)	0.08
Mounting possiblilities	Clamps

180 CAMERA INTERNAL SH18C2-HK | CHARACTERISTICS

GENERAL

Recommended installation height	2.3m to 6.8m | 7.5' to 22.3'
CE mark	Yes
UL mark	Yes
ROHS compliant	Yes

HOUSING AND FINISH

Housing	Aluminum
Protector	Polycarbonate
Housing finish	Polyester powder coating
Standard colour	AKZO grey 900 sanded
Tightness level	IP 66
Impact resistance	IK 09
Ta	-30°C to +50°C -22°F to +122°F

ELECTRICAL

Electrical class	Class I EU, Class II EU, Class I US
Power consumption	3.8W

SHUFFLE

SHUFFLE pole versions	2 doors same side | 3 doors
SHUFFLE components	Mains box | Beyond light supply box
	Support plate network
	Network cable
Location on pole	Any position

CAMERA

Resolution H.265/ H.264 JPEG (MJPEG)	2 mega pixel [16:9] (30/60 fps) 1920x1080 / 1280x720 / 640x360 / 320x180 3 mega pixel [4:3] (30 fps) 2048x1536 / 1280x960 / 800x600 / 640x480 / 400x300 / 320x240
Lens digital zoom	Choose from 3 levels of x1, x2, x4
Focal length	2.8 mm {1/8 inches
Angular field of view	[16 : 9 mode] Horizontal : 108° | Vertical : 60° [4:3 mode] Horizontal: 89° | Vertical: 66°
Maximum aperture ratio	1:2.3
Minimum Illumination	Colour: 0.03lx, BW: 0.015lx (F2.3, Maximum shutter: Off (1/30s), AGC : 11) BW: 0lx (F2.3, Maximum shutter: Off (1/30 s), AGC : 11, when the IR LED is lit) Colour: 0.0019lx, BW: 0.0009lx (F2.3, Maximum shutter: max. 16/30s, AGC: 11)
Focus range	0.5 m {19-11/16 inches} - ∞
Adjusting angle	Horizontal (PAN) angle: ±45° Vertical (TILT) angle: 0 to +90° Azimuth (YAW) angle: ±90°
Memory card	microSDXC / microSDHC / microSD
Power source	PoE (IEEE 802.3af)
No. of simultaneous users	Up to 14 users (depends on network conditions)
Network protocol	IPv6 : TCP/IP, UDP/IP, HTTP, HTTPS, RTP, FTP, SMTP, DNS, NTP, SNMP, DHCPv6, MLD, ICMP, ARP, IEEE 802.1X, DiffServ IPv4 : TCP/IP, UDP/IP, HTTP, HTTPS, RTSP, RTP, RTP/RTCP, FTP, SMTP, DHCP, DNS, DDNS, NTP, SNMP, UPnP, IGMP, ICMP, ARP, IEEE 802.1X, DiffServ
Network connector	RJ45
Image sensor	Approx. 1/3 type CMOS image sensor
Image optimisation	Backlight, contrasts, night vision, high luminosity
Smart features	No

180 CAMERA INTERNAL SH18C2-GB | CHARACTERISTICS

GENERAL

Recommended installation height	2.3m to 6.8m	7.5' to 22.3'
CE mark	Yes
UL mark	No
ROHS compliant	Yes

HOUSING AND FINISH

Housing	Aluminum
Protector	Polycarbonate
Housing finish	Polyester powder coating
Standard colour	AKZO grey 900 sanded
Tightness level	IP 66
Impact resistance	IK 09
Ta	-40°C to 55°C -40°F to 131°F

ELECTRICAL

Electrical class	Class I EU, Class II EU
Power consumption	6.4W

SHUFFLE

SHUFFLE pole versions	2 doors same side	3 doors
SHUFFLE components	Mains box	Beyond light supply box
	Support plate network
	Network cable
Location on pole	Any position

CAMERA

Resolution H.265/ H.264 JPEG (MJPEG)	2 mega pixel [16:9] (25/30 fps) 1,920x1,080
	1 mega pixel [16:9] (45 fps) 1,280x720
Focal length	2.8mm {1/8 inches
Angular field of view	[16:9 mode] Horizontal: 110°	Vertical: 62°
Maximum aperture ratio	2.8mm F1.6
Minimum Illumination	Colour: 0.06 lux at 30 IRE F1.6 B/W: 0.01 lux at 30 IRE F1.6 Colour: 0.12 lux at 50 IRE F1.6 B/W: 0.02 lux at 50 IRE F1.6
Adjusting angle	Horizontal (PAN) angle: ±30° Vertical (TILT) angle: 15 to +90° Azimuth (YAW) angle: ±175°
Memory card	microSDXC / microSDHC / microSD
Power source	PoE (IEEE 802.3af)
Multi-view streaming	Up to 8 individually cropped out view areas
Network protocol	IPv4, IPv6 USGv6, HTTP, HTTPSb, SSL/TLSb, QoS Layer 3 DiffServ,FTP, SFTP, CIFS/SMB, SMTP, Bonjour, UPnP®, SNMP v1/v2c/v3(MIB-II), DNS, DynDNS, NTP, RTSP, RTP, SRTP, TCP, UDP, IGMP,RTCP, ICMP, DHCP, ARP, SOCKS, SSH, LLDP, MQTT
Network connector	RJ45
Image sensor	1/2.9" Progressive scan RGB CMOS
Image optimisation	WDR mode
Smart features	Included AXIS Video Motion Detection, active tampering alarm, blocked view detection, shock detection Supported AXIS Motion Guard, AXIS Loitering Guard, AXIS Fence Guard Support for AXIS Camera Application platform enabling installation of third-party applications

180 CAMERA INTERNAL SH18C2-JH | CHARACTERISTICS

GENERAL

Recommended installation height	2.3m to 6.8m | 7.5' to 22.3'
CE mark	Yes
UL mark	No
ROHS compliant	Yes

HOUSING AND FINISH

Housing	Aluminum
Protector	Polycarbonate
Housing finish	Polyester powder coating
Standard colour	AKZO grey 900 sanded
Tightness level	IP 66
Impact resistance	IK 09
Ta	-30°C to 60°C -22°F to 140°F

ELECTRICAL

Electrical class	Class I EU, Class II EU
Power consumption	7.5W

SHUFFLE

SHUFFLE pole versions	2 doors same side | 3 doors
SHUFFLE components	Mains box | Beyond light supply box
	Support plate network
	Network cable
Location on pole	Any position

CAMERA

Resolution H.265/ H.264 JPEG (MJPEG)	2 mega pixel [16:9] (30 fps) 1,920x1,080
Lens type	Fixed lens, 2/2.8/4/6/8 mm
Angular field of view	2mm, horizontal: 132.8° | vertical: 77.6° 2.8mm, horizontal: 108° | vertical: 59.3° 4mm, horizontal: 82.8° | vertical: 45.1° 6mm, horizontal: 52.7° | vertical: 30.3° 8mm, horizontal: 40.9° | vertical: 22.5°
Maximum aperture ratio	2mm, F2.25, 2.8/4/6mm, F2.0 8mm, F1.6
Minimum illumination	Colour: 0.002 Lux @ (F1.6, AGC ON)
Adjusting angle	Horizontal (PAN) angle: -30° to +30° Vertical (TILT) angle: 0° to 75° Azimuth (YAW) angle: 0° to 360°
Memory card	Support for microSD/microSDHC/ microSDXC card and encryption Support for SD card with UHS Speed Class U1 Support for recording to network-attached storage (NAS)
Power source	PoE (IEEE 802.3af)
Simultaneous live view	Up to 6 channels
User/Host	Up to 32 users. 3 user levels: administrator, operator and user
Network protocol	TCP/IP, ICMP, HTTP, HTTPS, FTP, DHCP, DNS, DDNS, RTP, RTSP, RTCP, PPPoE, NTP, UPnP, SMTP, SNMP, IGMP, 802.1X, QoS, IPv6, UDP, Bonjour, SSL/TLS
Network connector	RJ45
Image sensor	1/2.8" Progressive scan RGB CMOS
Image optimisation	WDR mode
Smart features	Motion detection, video tampering alarm Line crossing detection Configurable intrusion detection Unattended baggage detection Object removal detection Face detection