


LIST OF ACCESSORIES FOR SPV CCTV SYSTEM

ANNEXURE - I

Slno	Description	Qty
1	Power Adapter (24VAC, 4AMPS)	24
2	24 port Switch(POE)- Make CISCO	1
3	Single Mode Optical Cable 6 core - Finolex (mtrs)	200
4	HDPE Pipe(mtrs)	200
5	SM Media Converters - Dlink	20
6	24 port liu Box	1
7	4 Port liu box	20
8	SC Pigtails	20
9	Pig tail Adapters	20
10	OFC Patch Cords	20
11	Cat 6 Cable - Dlink(mtrs)	1000
12	RJ 45 Connectors -Dlink	50
13	Power cable , Armoured ,1.5 sq mm, cu,3 core -Finolex (mtrs)	150

Note : Any other item required for completeness of the system to be Quoted in additon to the above list


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EPD - BANGALORE

**Purchase Specification for
Network IR Dome Camera**

**SPECIFICATION NO.
EP-WEX-SPV/CCTV/01
/2016-17**

Technical specification for Network IR Dome Camera

1080p Indoor IR HD Dome Camera:
Technical Specifications

Power	
Input voltage	+12 VDC or Power-over-Ethernet
Power consumption	6.3 W max.
PoE	IEEE 802.3af (802.3at Type 1), Power level: Class 2

Sensor	
Sensor type	1/2.7-inch CMOS
Total sensor pixels	1952 x 1092 (2MP)


Video performance – Sensitivity	
Sensitivity – (3200K, reflectivity 89%, F1.5, 30IRE)	
Color	0.24 lx
Mono	0.05 lx
With IR	0.0 lx

Video streaming	
Video compression	H.264 (MP); M-JPEG
Overall IP Delay	Min. 120 ms, Max. 340 ms
GOP structure	IP, IBP, IBBP
Encoding interval	1 to 30 [25] fps
Encoder regions	Up to 8 areas with encoder quality settings per area

Video resolution (H x V)	
• 1080p HD	1920 X 1080
• 720p HD	1280 x 720
• D1 4:3 (cropped)	704 x 480
• SD upright (cropped)	400 x 720
• 480p SD	Encoding: 704 x 480;
• 432p SD	768 x 432
• 288p SD	512 x 288
• 240p SD	Encoding: 352 x 240;
• 144p SD	256 x 144

Video functions	
Day/Night	Color, Monochrome, Auto
Adjustable picture settings	Contrast, Saturation, Brightness
White Balance	4 automatic modes, manual mode and measure
Shutter	Automatic Electronic Shutter (AES); Fixed shutter (1/25[30] to 1/15000) selectable; Default shutter
Backlight compensation	On/off

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Night vision	
Distance	15 m (50 ft)
LED	10 LED high efficiency array, 850 nm

Optical	
Lens type	Varifocal 3 to 10 mm, DC Iris F1.5 – 360, IR corrected
Lens mount	Board mounted
Day/Night	Switched mechanical IR filter
Horizontal field of view	36° - 117°
Vertical field of view	20° - 61°

Local storage	
Internal RAM	10 s pre-alarm recording
Memory card slot	Supports up to 32 GB microSDHC / 2 TB microSDXC card. (An SD card of Class 6 or higher is recommended for HD recording)
Recording	Continuous recording, ring recording, alarm/events/schedule recording

Network	
Protocols	IPv4, IPv6, UDP, TCP, HTTP, HTTPS, RTP/RTCP, IGMP V2/V3, ICMP, ICMPv6, RTSP, FTP, Telnet, ARP, DHCP, NTP, SNMP (V1, MIB-II), 802.1x, DNS, DNSv6, DDNS (DynDNS.org, selfHOST.de, no-ip.com), SMTP, iSCSI, UPnP, DiffServ (QoS), LLDP, SOAP, Dropbox, CHAP, digest authentication
Encryption	TLS 1.0, SSL, DES, 3DES, AES (optional)
Ethernet	10/100 Base-T, auto-sensing, half/full duplex
Interoperability	ONVIF Profile S; GB/T 28181

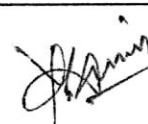
Mechanical	
3-axis adjustment (pan/tilt/rotation)	350° / 130° / 330°
Dimensions	Diameter: 135 mm (5.32 in), Height: 102 mm (4 in)
Weight	450 g (0.99 lb) approx.
Color	RAL 9004, RAL 9010


Environmental	
Operating temperature	-20 °C to +50 °C (-4 °F to +122 °F)
Storage temperature	-30 °C to +70 °C (-22 °F to +158 °F)

Certifications:
CE, FCC, UL, cUL, RCM, CB, VCCI(Copy of certificate to be submitted along with offer)

Approved Makes:
PELCO/ ORION/ BOSCH






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 EPD - BANGALORE	Purchase Specification for Network IR Bullet Camera	SPECIFICATION NO. EP-WEX-SPV/CCTV/02 /2016-17
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Technical Specification for IR Bullet Camera	
HD 1080p IR Bullet Camera	
General Characteristics:	
The camera shall offer 1080p resolution at 16:9 aspect ratio.	
The camera shall offer tamper and intelligent motion detection.	
The camera shall offer two-way full duplex audio communication.	
The camera shall have a built-in active infrared illuminator with 30 m (98 ft) viewing distance	
The camera shall be easy to install with auto zoom/focus lens, wizard and pre-configured modes	
The camera shall utilize Intelligent Dynamic Noise Reduction (iDNR) technology to reduce the bit rate and storage requirements by removing noise artifacts.	
The camera shall have hybrid functionality which offers an easy migration path from legacy CCTV to a modern IP-based system	
The camera shall have a micro SD card slot	
The camera shall accept power via Power over Ethernet (IEEE 802.3af compliant).	
The camera shall provide Eight independent, fully programmable privacy masks.	
The camera shall provide a user-defined Region-of-Interest (ROI) with electronic pan, tilt and zoom controls	
Technical Specifications:	
Video:	
Sensor type	1/2.9-inch CMOS
Total sensor pixels	1936 (H) x 1097 (V); 2.12MP (approx.)
Sensitivity (3200 K, reflectivity 89%, 30IRE, F1.3)	Color 0.07 lx Mono 0.05 lx With IR 0.0 lx
Dynamic range	76 dB WDR
True Day/Night	Auto, Color, Monochrome
Noise reduction	Intelligent Dynamic Noise Reduction with separate temporal and spatial adjustments
Intelligent defog	Intelligent Defog automatically adjusts parameters for best picture in foggy or misty scenes (switchable)
Shutter speed	Automatic Electronic Shutter (AES) Fixed (1/30 [1/25] to 1/15000)
Video resolution	1080p, 720p, 480p, 432p, 288p, 240p, 144p
Video compression	H.264 MP (Main Profile); M-JPEG
Max. frame rate	30 ips
Distance	30 m (98 ft)
LED	4 LED high efficiency array, 850 nm
Lens type	Automatic Varifocal 2.7 to 12 mm, DC Iris F1.4 – 360, IR corrected
Lens mount	Board mounted
Audio communication	Two-way, full duplex
Unit Configuration	Via web browser or Configuration Manager






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Ethernet	10/100 Base-T, auto-sensing, half/full duplex
Ethernet connector	RJ45
Connectivity	ONVIF Profile S, Auto-MDIX
Other functions	Sharpness, Backlight compensation, Contrast enhancement, Video authentication, Display stamping, Pixel counter
Memory card slot	Supports up to 32 GB microSDHC / 2 TB microSDXC card
Mechanical:	
3-axis adjustment (pan/tilt/rotation)	360° / 90° / 360°
Color	RAL 9006
Environmental:	
Operating temperature	-30 °C to +60 °C (-22 °F to +148 °F)
Storage temperature	-30 °C to +70 °C (-22 °F to +158 °F)
Humidity	20% to 90% relative humidity (non condensing)
Ingress protection	IP66
Impact protection	IK08
Certifications: CE, FCC, UL, cUL, C-tick, CB, VCCI (Copy of certificate to be submitted along with offer)	
Approved Makes: PELCO/ ORION/ BOSCH	

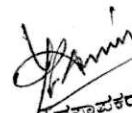



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Qualification criterion:

Sl. No	BHEL Standard Terms & Conditions	Documentary Evidence to be provided for Compliance
1	The vendor / Supplier must be either the original manufacturer of channel partener of OEM engaged in the business of providing CCTV surveillance system	
2	The scope of work is supply and integration to the existing CCTV surveillance system for which the vendor shall have adequate qualified personnel to undertake E&C, details of the same to be furnished.	
3	The vendor shold have supplied and installed 3 numbers of CCTV systems of similar type in a large undertakings, defence establishments /Govt of India institutions / public utilities viz., airport, railway station etc., in India and working satisfactorily for a minimum of 3 years. Performance certificate from 3 users must be submitted	
4	The vendor shall submit audited balance sheet or tax returns or profit loss account for the last 3 years	


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Price Format for CCTV System


Annexure -II

Sno	Description	Units	Qty	Rate(Rs)	Tax %	Amount(Rs)
A Cameras						
i	IR DOME CAMERA	Nos	15			
ii	IR BULLET CAMERA	Nos	9			
B ACCESSORIES FOR SPV CCTV SYSTEM						
1	Power Adapter (24VAC, 4AMPS)	Nos	24			
2	24 port Switch(POE)- Make CISCO	Nos	1			
3	Single Mode Optical Cable 6 core - Finolex(mtrs)	Mtrs	200			
4	HDPE Pipe(mtrs)	Mtrs	200			
5	SM Media Converters - Dlink	Nos	20			
6	24 port liu Box	Nos	1			
7	4 Port liu box	Nos	20			
8	SC Pigtails	Nos	20			
9	Pig tail Adapters	Nos	20			
10	OFC Patch Cords	Nos	20			
11	Cat 6 Cable - Dlink(mtrs)	Mtrs	1000			
12	RJ 45 Connectors -Dlink	Nos	50			
14	Power cable , Armoured ,1.5 sq mm, cu,3 core -Finolex (mtrs)	Mtrs	150			
				Sub Total 1		
					Total 1	
C Erection and commissioning						
Sno	Description	Units	Qty	Rate(Rs)	Tax %	Amount(Rs)
i	Fiber Optic Cable Laying	mtrs	200			
ii	Power Cable Laying	mtrs	150			
iii	25 MM HDPE Pipe Laying	mtrs	200			
iv	Fiber Optic Cable Splicing	nos	40			
v	liu Fixing, Fiber Testing & Communication	lot	1			
vi	Cat 6 Cable Laying	mtrs	1000			
vii	Camera Fixing	nos	24			
viii	Testing and Commissioning	lot	1			
ix	Taxes					
				Sub Total 2		
					Total 2	

Grand total

Grand total in words :

Signature of the Vendor with Seal


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