

/By Reg. Post/

**POLICE DEPARTMENT**

**From**

**To**

**Joint Commissioner of Police,**  
Traffic (South),  
Vepery, Chennai-7.

All firms at Annexure

**RC.No.Tr.Imp-I /196/33184/2019,**

**Dated: 18.05.2022**

**Sir,**

**Sub:-** Chennai Traffic Police – Greater Chennai Corporation – contributed Rs. 9,50,000/-.(Rupees nine lakh fifty thousand only) for the procurement of ANPR Camera to be fixing on traffic signals - Through Limited Tender – Sealed Quotations Called for – Reg.

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The Chennai Traffic Police has proposed to procure ANPR (Automatic Number Plate Recognise) Camera to fix on traffic signals through “Limited Tender” for the tune of Rs. 9,50,000/- (Rupees Nine Lakh fifty thousand only).

2) In this connection, companies willing to participate in the tender are requested to furnish quotation for the tune of Rs.9,50,000/- in a sealed cover along with the documents fulfilling the conditions mentioned hereunder. Tender inviting Committee meeting to be convened **on 31.05.2022 at 15.00 hrs.** The sealed cover should be addressed to the Joint Commissioner of Police, Traffic South, Vepery, Chennai-07 with the name of the equipment / product for which quotation is submitted superscripted on the top of the cover. The sealed cover will be opened in the presence of the tenderers. If any test certificate needed as per the specification, the tenderer should submit the test certificate obtained prior to two years of date of tender, at the time of evaluation from the authorized Government test lab or equal and the testing expenditure shall be bear by the tenderers. The quotation should be submitted mentioning rates (Inclusive all taxes) as follows:-


Sl.No.	Items	Rate per unit
1.	ANPR Camera (Mountable on traffic signals)	
<b>Conditions:</b>		
1.	Scope of work such as warranty, servicing, storage back-up in number of days, installation, etc. Should be mentioned in the quotation notice.	
2.	The participants should be an Original Equipment Manufacturer (OEM)/eligible vendors.	
3.	Should submit undertaking that the vendor has not blacklisted company.	

4.	The vendors should have paid IT for the last 3 financial years i.e 2018-19 2019-20 & 2020-21.
5.	Should be a GST Registered Firm.
6.	The vendor/company should be registered as per the Companies Act, 1956 or equivalent.
7.	2 % TDS on GST shall be recovered from the vendor.
8.	Any bidder from such countries sharing a land border have to comply with amended Rule 144(xi) in the General Financial Rules (GFRS), 2017 dated: 23.07.2020.

3. The tenderer are requested to attend the meeting at chamber of the Joint Commissioner of Police, Traffic (South), 7<sup>th</sup> floor, New Commissioner of Police building, Vepery, Chennai-07.

**Encl :** Specification.

Yours Sincerely,

  
for Joint Commissioner of Police,  
Traffic (South), Chennai.

  
19/5/22



# **AUTOMATIC NUMBER PLATE RECOGNITION (ANPR)**

## **I) SPECIFICATION FOR 2 MP IP BOX LPR CAMERA WITH EXTERNAL / INTERNAL IR CUM HOUSING**

<b>S.No</b>	<b>Parameter</b>	<b>Specification</b>
1	Image Sensor	<b>1/1.9" Progressive CMOS</b>
2	Resolution	2048 x 1536 (3 Megapixel) 2688 x 1520 (4 Megapixel)
3	Lens Type	Motorised zoom and focus 5-50 mm, (CS mount)
4	Focal Length	f=5-50 mm or better
5	Aperture	F2.0
6	Auto-iris	P-iris/DC-iris
7	Shutter Time	1/5 sec. to 1/30,000 sec. or better
8	Day/Night	Removable IR-cut filter for day & night function
8a	Exposure and sensitivity	Adjustable exposure and sensitivity level depending on lighting condition.
9	Minimum Illumination	0.5 Lux @ F2.0 (Color) or better
10		0.05 Lux @ F2.0 (B/W) or better
11	On-board Storage	SD/SDHC/SDXC card slot
	Video Compression	H.265, H.264 & MJPEG
13	Frame Rate	30fps @ 1920 x1080 or more
14	Maximum Streams	<b>2 simultaneous streams or better</b>
15	S/N Ratio	50 dB or better
16	Dynamic Range	Maximum upto 120 dB
17	Video Streaming	Adjustable resolution, quality and bitrates
18	Image Settings	Date and Time stamp, text overlay, flip & mirror
19		Configurable brightness, contrast, saturation, sharpness, white balance, exposure control, gain, backlight compensation, privacy masks
20		3D noise reduction, EIS, video rotation, snapshot focus White Balance (Manual and Auto) Pan & Tilt
21	Audio Capability	Two-way audio (full duplex)
22	Compression	AAC, G.711, G.726
23	Interface	External microphone input
24		Audio output
25	Network Users	Live viewing for up to 10 clients
26	<b>LPR Model</b>	<b>Camera shutter speed should be adjustable so that license plates of vehicles with speed of upto 100 KM per hour, should be captured. Environment brightness adjustable.</b>
27	Protocols	<b>IPv4, TCP/IP, HTTP, HTTPS, UPnP, RTSP/RTP/RTCP, IGMP, SMTP, FTP, DHCP, NTP, DNS, DDNS, PPPoE, SNMP, 802.1X, UDP, ICMP</b>
28	Interface	10Base-T / 100BaseTX Ethernet (RJ-45)
29	ONVIF	Supported
30	Intelligent Video Motion Detection	Triple-window video motion detection
31	Alarm and Event & Alarm Triggers	Video motion detection, manual trigger, digital input, periodical trigger, system boot, recording notification, camera tampering detection, audio detection



32	General Alarm Events	Event notification using digital output, HTTP, SMTP, FTP and NAS server, SD Card
33	Smart Focus System	File upload via HTTP, SMTP, FTP, NAS server and SD card
34	Connectors	RBF (Remote Back Focus)
		RJ-45 for Network/PoE connection
		Audio input/output
		DC 12V power input
		Digital input*2
		Digital output*2
		RS485
		USB also included
		Display Field of View (DFOV)
		Electronic Rolling Shutter or any other
		Fixed focus
		Sensor Active Area – 2048(H) x 1280 (V)
		OS – Windows, Linux, Android and MAC
		Anti Flicker Mode (50/60 Hz) – Auto mode / Manual mode
35	LED Indicator	System power and status indicator
36	Power Input	DC12V
		IEEE 802.3af PoE Class 0
37	Power Consumption	DC Max. 11W
		PoE Max.15W
38	Safety Certifications	CE, LVD, FCC Class B, VCCI, C-Tick, UL any one
39	Operating Temperature	Starting Temperature: 0°C ~ 60°C
		Working Temperature: -10°C ~ 60°C
<b>Housing</b>		
40	Input Voltage	PoE at 30W 50-57VDC or 230 VAC
41	Max Output Power Budget	30W
42	Power Consumption	Window Heater: 10W Blower: 2W Camera: 6 ~ 8W Others: 2W
43	Operating Temperature	-20°C ~ 65°C (-4°F ~ 149°F)
44	Waterproof IP Rating	IP66 or Better
45	Vandal Proof	IK10 Impact Rated on Cast Aluminium Housing
<b>IR Illuminator</b>		
46	Beam Angle	80W, 20° ~ 40° adjustable
47	Max. Distance	100 meters
48	Input Power	24VCD +or-10%
		24VAC(50/60) +or-10%
49	Power Consumption	80W
50	Housing	Weather-proof IP66-rated housing
		Vandal-proof IK10-rated housing
51	Operating Temperature	-10°C ~ 55°C
52	Wavelength	850nm
53	Integrated Control	Built-in photocell for automatic IR on/off
54	CyberSecuirty	Embedded
55	Warranty	3 Years onsite warranty



### SPECIFICATION FOR NVR AND STORAGE HDD 4TB

S.No	Parameter	Specification
1	<b>NVR</b>	<b>16 CH or higher, . h264/.h265 supported high bandwidth</b>
2	Hard disk type	<b>Video &amp; Snapshot capture</b>
3	Capacity	24*7 Surveillance HDD
4	Interface	4TB
5	Form factor	SATA
6	Cache memory	3.5"
7	Reliability – load/ unload cycles	64 MB or Better
8	MTBF	3,00,000
9	Operation Temperature	1 million hours
10	Emissions & Safety certification	0°C to 60°C
11	ISO Certificate for OEM	1 million hours
12	Warranty	ISO 9001:2008 and ISO 14001:2004
		3 Years onsite warranty

### SPECIFICATION FOR 1 KVA ONLINE UPS WITH 1 HR BACK UP

S.No	PARAMETER	REQUIREMENT
1.	Type	1 KVA Online UPS, Transformer based output.
2.	AC input voltage	170 – 260 V or better
3.	Output Voltage	AC 230v (+/- 5%)
4.	Output wave form	Pure sine wave output
5.	Backup time	Minimum 1 hour or more
6.	Battery Type and capacity	Battery type and capacity will be calculated by the tenderer depend upon the requirement of 1 hour back up for full load of 1 KVA UPS for 0.6 power factor
7.	Protection	Over load, output short circuits
8.	Audible alarm	required for EB supply ON/ OFF
9.	Visual Indicators	Mains on, low battery, over load
10	Certification	The quoted UPS model should have IEC 62040 compliance test certificate or equivalent from accredited laboratories of International organizations or Indian Government (BIS or NABL or ETDC)
11	certification for OEM	The OEM should have ISO 9001:2008 and ISO 14001:2004 certificate.
12	Stand	Suitable Acid proof Stand for Battery and UPS
13	Installations	As per site requirement. Trippers and EB change Over Should be provided as per the site requirement
14	Warranty	3 Years Onsite Warranty



### SPECIFICATION FOR 16 PORT PoE L2 MANAGEABLE SWITCH

S.No	PARAMETER	REQUIRMENT
1	Port Density	16 port 10/100/1000 Base-T PoE+ ports and additional 2 numbers of 100/1000X SFP PORTS (loaded with 2x 1 G Single mode fiber module)
2	Resiliency	ITU G.8032/equivalent for less than 100ms ring protection.
3	PoE+	PoE+ Standards should be in accordance with IEEE 802.3af and IEEE 802.3at. Switch should support minimum 120W PoE budget
4	Operating Temperature	0°C to 50°C or higher
5	L2 Features	L2 Features: Should support STP, RSTP, MSTP, IGMP v1/v2/v3 snooping, STP root guard, Voice VLAN, MLD snooping (MLDv1 and v2), IEEE 802.3ac VLAN tagging
6	Security	Should support Access Control List- L2/L3, DHCP snooping, IP Source guard, DAI, Private VLAN, Authentication( MAC, Web and IEEE 802.3x), flow, TACACS+, LAG and port mirroring , Loop protection and loop detection, Dynamic VLAN assignment
7	Management	CLI, GUI, Digital optical monitoring, fault detection in copper cables, DHCPv6, DNSv6, Telnetv6 and SSHv6, NTPv6, IEEE802.3az, RMON 4 groups, SNMPv3, LLDP-MED, IEEE 802.3az, USB interface for taking backup of software release files configurations, SSLv2 and SSLv3. Should support Open Flow v1.3 or higher
8	Certification	CE/ FCC with RoHS & UL ISO 9001 and ISO 14001
9	General	For ease of integration all switches, copper and fiber modules should be from same OEM
10	Warranty	3 years onsite and replaceable warranty

### SPECIFICATION FOR 22.5" LED MONITOR DISPLAY

Sl. No	Specification parameter	Requirements
1.	Screen Size	43" or better
2.	Type	LED or better
3	Panel	IPS or better
4	Aspect Ratio	16:9
5	Resolution	1920 X 1080 Full HD
6.	Brightness	450 Cd/m <sup>2</sup> or better
7.	Orientation	Portrait and Landscape
8.	Contrast Ratio	1200:1 or better
9	Connectors	DVI, HDMI , VGA,
10	Colour Depth	18-bit colour (16 Million)
11	Input Voltage	150-240v, 50 Hz
12	Operating temperature	0°- 40°C or better
13	Viewing angle	178 degree x 178 degree
14	Response	12ms or better
15	Bezel width	3.2mm(left/top) / 1.7mm (right / bottom)
16	Power supply	Inbuilt or external
17	Certification	CE or FCC with RoHS
18	Warranty	3 Years Onsite Warranty



**SPECIFICATION FOR 4 U Rack**

Sl.No.	Specification parameter	Requirements
1	Rack	4U rack with tempered glass front door with lock and 2 fans patch panel Should be provided
		GND and Earthling kit should be available as default
		The firm should provide necessary accessories
		The OEM should have ISO 9001:2008 and ISO 14001:2004 certificate.
2	Warranty	3 Years Onsite Warranty

**SPECIFICATION FOR CONNECTING CABLE AND ACCESSORIES (AS PER SITE REQUIREMENT)**

SL. No.	SPECIFICATION PARAMETER	REQUIREMENTS
1	Category	CAT6(4Pair) outdoor type
2	Type of Conductors and Grade	Outdoor (Armored type) 4 Pair Twisted Cable For Underground laying support for fast and gigabit Ethernet, IEEE standard. Physical Specification: Conductor: 23 AWG Annealed bare solid copper Insulation: High Density Polyethylene Sheath: Fire Retardant PVC Compound (FRPVC) The firm should provide necessary accessories like RJ 45 Patch chord, cable ties etc along with Indoor type cable.
3	Standard	ETL Verified or UL listed.
4	ISO Certifications	The OEM should have ISO 9001:2008 and ISO 14001:2004 Certifications certificate.
5	Other	Suitable Wooden extension box with required power sockets

**SPECIFICATION FOR 6 METERS GI POLE**

S.No.	PARAMETER	REQUIREMENT
1.	General	6 mtr GI hexagonal or octagonal pole for camera fixing Should be supplied. The pole will be erected with Proper civil works. Suitable extension for camera mount Focusing the lane. Should be provided at the top or Suitable place as per the requirement. The camera should be installed to withstand the Cyclones (up to 170 km/h) and storms/heavy rains since Chennai beaches are prone to heavy winds.
2	Mechanical	The Pole and its construction camera withstand wind speeds Strength up to 170 km/h Should be rust proof for a period of minimum 3 years.
3	Accessories	Suitable nuts, bolts, clamps for camera fixing should be provided. Earth and lightning rod should be provided to The poles. Separate earthling should be given for camera and for pole



**SPECIFICATION FOR OUTDOOR CAT 6 CABLES**

S.No.	PARAMETER	SPECIFICATION
1.	Type	23 AWG Solid bare copper, unshielded twisted Twisted 4 pair Category 6A, confirming to TIA 568 .c.2, class EA-Channel verified To TIA/EIA-568-C.2, Category 6A
2.	Conductors	solid Bare Copper 23 AWG
3.	Insulation	polyolefin
4.	Pair separator	X-spline central member
5.	Filling Compound	Jelly filled
6.	Barrier material	Barrier Tape – Tri –Laminate-
7.	Inner and Outer Jacket	polyolefin/LLDPE and polyolefin respectively
8.	Applicable standards	Category 6a – TIA 568.c.2 ANSI/ICEA S-99-689 ANS/ICEA S-99-689 ANSI/CEA S-107-704 Paragraph 8.2.1 water Penetration ANSI/ICEA S-56-434 Outdoor Use POE Per IEEE 802. 3af & POE +Per IEEE 802.3at-229 ISO/IEC 11801 ed 2 Amendment 2:2010 Class EA -40c Cold Bend Compliance per UL1581 Water penetration per g r 421 – CORE para 4.3.5.1 And ANSI/ICEA S- 107-704 Para.8.2.1
9	General (applications)	OSP Cable, 10Gigabit Ethernet, outdoor, Aerial burial, sunlight resistant, Noisy Environments, POE, POE
10.	Bandwidth	500 Mhz or better
11.	Cable outer Diameter	9.2 MM OR BETTER
12.	Delay outer	45 ns @ 100 M or better
13.	Bend radius (Installation)	92mm or better
14.	maximum conductor DC Resistance:	DCR @20 C (OHM/ 100 M)=7.9
15.	Maximum Delay:	Delay (ns / 100 m)=534 or better
16.	Mutual capacitance	Capacitance (PF/M) <56 or better
17.	Temperature Range Operation	-20 Deg C to +75 Deg C or better
18.	Performance Characteristics @ 500 MHZ	Max. Attenuation: 45.4 dB/100m or better Min .PS NEXT :31.8 Db or better Min Return Loss: 15.2 bD or better Min . PSACR:0.9Db @300 MHZ or better Min PS ANEXT: 52.0Db or better Min. PS AACRF: 24.2Db or better
19	PoE Compatibility	PoE Type 1 ( 15 w), Type 2 (30 w)
20.	Compliance	It should be RoHS, WEEE & BFR Complied
21.	Jacket Color	Black (Sunlight Resistant)

for Joint Commissioner of Police,  
Traffic (South), Chennai-7.

19/05/22