

NOTICE INVITING BUDGETORY OFFERS

Name of Work	NAME OF WORK : “Supply, Installation, Testing and Commissioning and Handing Over of 06 Nos. IP Based 4MP Outdoor Type IR Dome Camera, 02 Nos. IP based 4MP Outdoor Type bullet camera complete with all accessories along with Comprehensive Annual Maintenance Contract for 05 years after Completion of 01 Year Guarantee Period at TPC, Mumbai.”
Date of submission of budgetary quotation	On or Before 21.09.2022 at 11:00 Hrs.
Address for communication:	Executive Engineer (E-HL), Mechanical Engineering Department, Mormugao Port Authority, Electrical Section, 1st Floor, Admin. Building, Headland sada Vasco-da-Gama Goa - 403804
Contact Details	Phone : (0832) 2594241, 2594215/42 Email : xene.mgpt@gmail.com
Website	www.mptgoa.gov.in

**EXECUTIVE ENGINEER (E-HL)
MORMUGAO PORT AUTHORITY**

MORMUGAO PORT AUTHORITY
ENGINEERING MECHANICAL DEPARTMENT

CME/XEN(E-HL)/

Date: .08.2022

Sub: Supply, Installation, Testing and Commissioning and Handing Over of 06 Nos. IP Based 4MP Outdoor Type IR Dome Camera, 02 Nos. IP based 4MP Outdoor Type bullet camera complete with all accessories along with Comprehensive Annual Maintenance Contract for 05 years after completion of 01 Year Guarantee Period at TPC, Mumbai

Ref: Budgetary Quotation No. CME/XEN(E)/HL/

Mormugao Port Authority intends to carry out the work of Supply, Installation, Testing and Commissioning and Handing Over of 06 Nos. IP Based 4MP Indoor Type IR Dome Camera, 02 Nos. IP based 4MP Outdoor Type bullet camera complete with all accessories along with Comprehensive Annual Maintenance Contract for 05 years after Completion of 01 Year Guarantee Period at TPC, Mumbai.

As such, kindly furnish the budgetary quotation for the same (Technical specification enclosed as Annexure-I and Price Schedule enclosed as Annexure-II):-

Your budgetary quotation should reach to this office on 21.09.2022

Thanking you,

Yours sincerely,

EXECUTIVE ENGINEER (E-HL)

Technical specification

1.0 Introduction

Mormugao Port Authority intends to take up the work of installing new CCTV surveillance system in Trade Promotion Centre (TPC) at Mumbai which is under Mormugao Port Authority at Goa. The work involves supply, installation, testing and commissioning of complete CCTV surveillance system with provision of installing the monitoring equipments in Goa office. The contractor also needs to take into consideration installation of mobile app for monitoring the above CCTV system from designated mobile phones of officials in Goa. The entire system will be under guarantee period for 01 year after handing over the system to Port, and thereafter under Comprehensive Annual Maintenance Contract for 05 years.

1.1 Scope Of Work

Part-A:

- i) Supply, Installation testing, commissioning and handing over of 06 numbers IP based 4MP, Indoor type Day & Night Colour IR Dome Camera complete with Camera housing and camera mounting kit and all other accessories including Camera Mounting structures. The cameras are to be provided at the following locations at TPC Mumbai.
 - i. Reception
 - ii. 1st Floor- facing corridor
 - iii. 2nd Floor- facing corridor
 - iv. 3rd Floor- facing corridor
 - v. 4th Floor- facing elevator & staircase
 - vi. 4th Floor- facing corridor

- ii) Supply, Installation testing, commissioning and handing over of 02 numbers IP based 4MP(Minimum) Outdoor type Day & Night Colour, bullet IR camera complete with Camera housing and camera mounting kit and all other accessories Including Camera Mounting structures. The cameras to be provided at the following locations.
 - i. Entrance
 - ii. 5th Floor- on roof top

- iii) Supply, Installation, testing, commissioning and handing over Network Video Recorder of 16 Channel, complete with all accessories.
- iv) Supply, Installation, testing, commissioning and handing over of 4TB Hard disk for recording and storage.
- v) Supply, Installation, testing, commissioning and handing over of 16 port POE network switch.
- vi) Supply, Installation, testing, commissioning and handing over of 2 Nos. 24 inches LED Monitor complete with all accessories(to be installed at Goa Office).
- vii) Supply, Installation, testing, commissioning and handing over of 4U network rack.
- viii) Supply, Installation, testing, commissioning and handing over of 1 No. UPS.
- ix) Supply and laying CAT 6 Network Cable, power cable, OFC and PVC heavy duty conduit pipes.
- x) Supply, Installation, testing of commissioning of mobile app for monitoring and retrieving of the CCTV footage.

Part-B:

Comprehensive Maintenance Contract

- i) The Tenderer should enter into Comprehensive Annual maintenance contract for the period of 05 years after the completion of 01 year guarantee period. The Tenderer shall quote for maintaining the entire system offered for a period of 05 years including replacing of spares as necessary after the 01 year guarantee period.
- ii) Port shall not bear any cost pertaining to any kind of repairs or maintenance which may include replacement of any defective equipment's and hence the contractor may visit the site before submitting the offer.

1.2 STANDARDS and CODES

The Fixed Cameras and Network Video Recorders shall comply with ONVIF standards and shall be UL/CE and FCC Certified. The Cameras, NVR and the Software shall be of the same make. Each Camera shall be supplied along with accessories like Camera mounting GI Fixture with suitable base for Grouting.

2.0 Detailed Technical Specification:

Tenderers shall furnish Offers for all the item as per the detailed technical specification mentioned below.

2.1. Cameras With Mounting Structures

Port proposes to install 06 numbers IP Based 4MP Outdoor Type IR Dome Camera, 02 numbers IP based 4MP Outdoor Type bullet camera complete with all accessories at TPC, Mumbai as per the technical specification given below.

i) IP Based Dome IR Camera(Indoor)

Total sensor pixels	4 Megapixel
Sensor Type	1/2.7" (+/- 10%), Progressive Scan CMOS,
Lens	Automatic Vari-focal Lens
Frame Rate	25/30fps (1920x1080)
Minimum Illumination(Color/Monochrome)	0.08Lux@F2.0@1/25s
Video functions	Digital zoom
	3DNR(Dynamic Noise Reduction)
	HLC and Backlight Compensation
	ICR (Auto Day night)
IR distance	30 meter
Input Voltage	12V DC and PoE with IEEE standard
Ingress Protection	IP66 by default without any adaptation
Video compression	H.264/MJPEG
Streaming Capacity	Two-Stream
Memory	Card of 64GB
ONVIF	ONVIF compliant
Certifications	UL/CE and FCC

ii) IP based bullet IR Camera(Outdoor)

Total sensor pixels	4 Megapixel
Sensor Type	1/2.7" (+/- 10%), Progressive Scan CMOS,
Lens	Automatic Vari-focal Lens
Frame Rate	25/30fps (1920x1080)
Minimum Illumination(Color/Monochrome)	0.08Lux@F2.0@1/25s
Video functions	Digital zoom
	3DNR(Dynamic Noise Reduction)
	HLC and Backlight Compensation
	ICR (Auto Day night)
IR distance	50 meter
Input Voltage	12V DC and PoE with IEEE standard
Ingress Protection	IP67 by default without any adaptation
Video compression	H.264/MJPEG
Streaming Capacity	Two-Stream
Memory	Card of 64GB
ONVIF	ONVIF compliant
Certifications	UL/CE and FCC

Note:

- a) The offered camera model must be listed in the ONVIF websites.
- b) Cameras shall be supplied with its suitable Power supply and its mounting

arrangements as per site conditions i.e. wall, pole mount any with all required accessories & fitments.

- c) Each Cameras shall be provided with necessary additional circuits as Surge Protectors to protect the units from High Voltages.

2.2. **Network Video Recorder 16 Channel**

The proposed system shall be supplied with one number suitable 16 channel NVR with 4 TB Hard disk to view the camera image and shall be ONVIF compliant and shall have following specifications.

No of Channels supported	16 channels
Power Input	12DC, 5A
Storage	Enterprise class Hard disk, 4 HDD slots and loaded 4 TB HDD expandable upto12TB (Multiples of 4TB, 6TB)
Support Image Format	H.264/MJPEG
Max number of cameras	16
Supported browser	OS windows 7/8/10
Alarm	Input- 16, Output - 4
External storage	USB port
Output	2 HDMI port
Network Interface	2 number of 10M/100M/1000M
ONVIF	ONVIF compliant
Certifications	UL/CE and FCC

The system shall be supplied with power cord, Audio/Video cables, necessary software etc.,

2.3. **Colour LED Monitor, 24 inches:**

The supply of 24 inches Colour LED Monitor includes all materials required for the installation and commissioning of the monitors at MPA office for viewing the camera live feed. The display unit shall comply with following specifications.

Type of Monitor	Table Top Colour full HD LED Flat Monitor for Viewing CCTV Pictures.
Size of Monitor	24 inch
Colour System	PAL / NTSC
Compatibility	To work along with the CCTV System and shall display live/recorded pictures as required.
Display Resolution	1920 x 1080 pixels (min.)
Contrast Ratio	800 : 1 g) Brightness : 500 TV Lines (Min.) h) Video Inputs : VIDEO1,VIDEO2,S-VIDEO,RGB,DVI,VGA & HDMI, Audio: Stereo mini jack
Connectors	BNC (One IN and One Out)
Power supply	230 volts +/- 10%,50 Hz+/- 1% ,Single Phase AC.

The system shall be designed for higher endurance life and it shall be designed for 24x7 operation. The Scope of work includes all necessary Connectors, Wall Mounting Kit, suitable TV Tuner unit for each system, AC power adapter etc. If any civil work has to be carried out of the installation the same has to be executed along with the materials by the tenderer.

2.4. Supply and installation of 16 Port POE network switch

Supply and Installation of 16- port GbE Fast and Smart Managed PoE Switch with 16 Nos. of 10/100/1000 Mbps Ethernet PoE Ports, 4 combo (RJ-45/SFP), PoE ports 130 watt or better, Switching 20 Gbs or better, Operating Temperature- 0 degree centigrade to 50 degree centigrade or better.

2.5. Supply and installation of 4U surface mounting network rack

Supply and installation of 4U surface mounting network rack, complete with power strip, one fan, front glass door & rear perforated MS body with lock and key arrangement.

2.6. Supply & installation of 1 KVA UPS

Phase	Single
Voltage	230V AC
Voltage Range	160- 300V AC
Power factor	0.99%
Current THD	Less than 5%
Battery	12V
Battery charging	Constant current & constant voltage
Nominal O/P voltage	230V +/- 1%
Frequency	50Hz
Communication	RS 232/USB port for software interface
Display	LCD/LED display
certification	CE /UL

- UPS shall deliver 100% power without de-rating Battery, backup provided shall be for minimum one hour.

2.7. Supply and laying of CAT-6 cable

Supply and Laying of CAT-6 UTP weather proof cable for outdoor cameras (CCTVs), CAT 6 UTP Cable Transmission frequency of 250 MHz (Minimum).

2.8. Supply and laying of PVC pipe

Supply and Laying of PVC pipe of suitable size to be fixed on wall (including with saddle, Gitti at sufficient distance with junction box, bend etc.). Cost is inclusive the laying cost fiber, CAT-6, Power cable in PVC pipe.

2.9. Supply and Laying of Power cable

Supply and Laying of 3 core, 1.5 sq. mm copper conductor power cable (ISI approved). The contractor shall provide 1 no. 5A switch & socket assembly for powering the network rack which is also included in the scope.

2.10. SYSTEM OVERVIEW/ GENERAL FEATURES:

- System capable to work for Day & Night operations (Automatic)
- System in Central Control Room should work on its Power back up mode automatically in case of Power failure.
- All such locations where mounting structures and related accessories are required should be provided by the contractor within the cost quoted. Site survey should be undertaken.
- All equipment's should be heavy duty for 24 Hours operations.
- All required equipment's mentioned/not-mentioned but required for smooth running of system is to be in outdoor weatherproof enclosure.
- **Recording & Viewing features:**
 - Event recording
 - Motion Detection (sequential recording)
 - Scheduled recording
 - Adjust brightness, Contrast, Saturation & hue for a clearer view
 - Support digital zoom in to view specific areas
 - 24hours/day, 7days/week unmonitored surveillance recording
- **Play back and search**
 - Playback 20 video records simultaneously
 - Search video records by camera, date, event types and time segments
 - Remote viewing and control, Non-stop recording
 - Backup video records manually or by schedule and directly backup recording files to CD/DVD/USB.

2.11. Installation and Commissioning:

- a) The Contractor shall commence and complete the work within 45 days from date of issue of LOA to the satisfaction of the Chief Mechanical Engineer or his representative. Necessary scaffolding and safety measures for entire erection shall be done by the contractor.
- b) The Cameras, NVR and all the other equipments supplied shall be Installed, tested, commissioned and handed over. The special tools instruments needed for regular servicing / maintenance working shall be supplied free of cost by the Contractor. All the materials required for the installation and commissioning at site including the materials for civil works required for Installation and commissioning of camera mounting structures shall be supplied by the Contractor. Misc items, like saddles, fitting materials, switch, sockets, screws, nuts, fasteners, jointers, sealants, accessories, etc as required to run the system included in quote.

- c) The installation of the various equipment's shall be carried as per the site condition and as directed by the EIC. The Contractor shall carry out the works in co-ordination with the on-going AMC Contractor.
 - d) Special care may be taken to prevent any damage to the Port's property during installation and commissioning. The system as also the sub system shall be elegant asthetic in appearance and painting of brackets etc. to be done to withstand saline atmosphere prevailing in the area.
 - e) All the quantities indicated in the price schedule/BoQ are indicative. However, the work shall be carried out as per site conditions. Payment will be released as per actual executed quantities after completion of work.
 - f) **Technical brochures/ data sheets of Cameras, wireless and NVR should be submitted with the tender specifically for models the tenderer intends to supply.**
- Note:** Change in the location of cameras will be at the discretion of the Engineer.
- g) Power and water will be provided by the Port free of cost.

h) Manuals, Drawings

On completion of the work the Contractor shall supply 3 sets of operation and maintenance manuals after commissioning. The soft copy of all the drawings and manuals should also be provided which shall include General arrangement with principal details, Schematic line diagrams (SLD) of electric, electronic and programmable controller details and any other special features implemented in the system.

2.12. Remote Viewing facility

Contractor shall make arrangement so that live streaming of cameras shall be made available on web browser and on Mobile App to designated Mormugao Port officials at Goa. Minimum 03 Nos. of users shall be able to view live remote streaming simultaneously on monitor.

The Contractor shall suitably train the Port's officials as mentioned above, to view the live streaming of cameras as well as retrieve the CCTV footages from the back-up.

2.13. Guarantee Period

1. The contractor shall provide 01 year guarantee for the equipment's installed from the date of acceptance. The maintenance during guarantee period shall include replacement of all defective components of the system including the cameras.
2. During the one year guarantee period, the Port shall not bear any charges incurred by the contractor for deputing the skilled manpower or materials to carry out any form of repairs etc.
3. During warranty period if any of the equipment supplied by the Contractor i.e camera, NVR, wireless transmitters and receivers, etc. are found defective /Damaged, same has to be replaced by the Contractor at their cost. Therefore Bidders shall access the

environmental conditions, wind speed etc in respect to the supply of quality of equipment's and workman ship so as to ensure continual stability in running of system successfully. The bidder shall maintain basic inventory of required spares for upkeep of the CCTV Camera Surveillance systems.

4. The Contractor shall arrange his own tools and tackles including ladder for carrying out the works during the installation and guarantee period.
5. In case need arises, the technicians should be present after office hours and during holidays without any additional cost and liability to the Port. The tenderer shall provide contact telephone number/ mobile and E-mail address to also register complaints at his office.

2.14. Comprehensive Annual Maintenance Contract:

1. a) **Contract Period:** The contractor shall provide five-year Comprehensive AMC for the equipment's installed from the date of completion of guarantee period. The maintenance during Comprehensive AMC shall include replacement of all defective components of the system including the cameras.

- b) **Terms of Payment:** On satisfactory completion of monthly servicing and on certification by the Care taker, TPC Mumbai, Quarterly payment will be recommended on pro-rata basis on production of pre-receipted bill in the Port format. The Contractor shall furnish their Bank details/Account No. and PAN in order to effect payment thro' ECS.

- c) **Security Deposit For CAMC:** The Security deposit paid by the successful Tenderer will be kept as Security Deposit for the Comprehensive Annual maintenance contract for a period of five years and the same will be refunded after successful completion of 5 years AMC period.

- d) **Penalty Clause (For CAMC)**
 - 1) 70% of the contract value pertains towards the cost of spare parts for the maintenance of the Video Surveillance System and the balance 30% is for the labour cost. Hence if the minimum servicing once in a month is not carried out, 30% of the contract value for the respective month will be deducted from the bill towards the labour cost alone.
 - 2) Breakdown calls shall be attended by the Contractor within 24 hours from the time of receipt of breakdown message from the Port. In case the Contractor is not responding to Port's urgent calls, 0.5% of the total contract value per week (a week is defined as 7 days inclusive of holidays) or part thereof subject to a maximum of 10% of the total AMC value for the year will be deducted from the Contractor's bill.
 - 3) Advance information of at least 24 hours shall be given by the Contractor before undertaking maintenance and servicing works. The successful Tenderer after completion of the Guarantee period will enter into 05 years Comprehensive Annual Maintenance

Contract with Port which will include supply of all spares for the replacement .The AMC will cover all the materials supplied by the Tenderer in the subject project.

2.15. Other Conditions:

- 1) The Contractor is required to offer rates as per Port's format "Schedule-A1" without fail and mention taxes and duties. Port will not produce Form C or D.
- 2) Technical and Commercial condition shall be clearly furnish in the quotation. The offer shall mention the make and model of the equipment and shall accompany with the relevant technical leaflet.
- 3) The rate should be quoted as per unit.
- 4) The rate quoted should be maintained till the completion of supply and no upward price revision will be agreed to.
- 5) CME can accept or delete any of the items mentioned in Schedule-A1 and also the quantity mentioned is only provisional and it may either increased and decreased by 10%.
- 6) GATE PASS: Necessary Entry Permits shall be obtained by the Contractor at their own cost with the approval of Caretaker of Guest House.
- 7) The Contractor must comply with the Safety aspects as governed by the relevant edition of Indian Electricity Rules and Industrial Safety., the contractor shall be responsible for overall safety.
- 8) ADDITION & DELETIONS: CME reserves the right to add or delete the above mentioned quantities of CCTV cameras by around 20% of the quantity during the currency of the contract and his decision is final and binding upon the contractor.
- 9) The Tenderer shall inspect the site and assess the requirement before furnishing their offered.

PRICE SCHEDULE (BILL OF QUANTITIES)**Part-A**

Sr No	Description	HSN/S AC Code	Unit	Qty	Rate (Rs)		Applicable GST (%)	Amount (Rs)
					In Fig.	In Words		
1.	Supply, Installation, testing and commissioning of IP based 4MP(Minimum) Indoor type Day & Night Colour IR Dome Camera as per technical specification at Annexure-I							
	a) Supply		No.	6				
	b) Installation, testing and commissioning		No.	6				
2.	Supply, Installation, testing and commissioning of IP based 4MP(Minimum) Outdoor type Day & Night Colour, bullet IR camera as per technical specification at Annexure-I							
	a) Supply		No.	2				
	b) Installation, testing and commissioning		No.	2				
3.	Supply, Installation, testing and commissioning of Network Video Recorder of minimum 16 Channel as per technical specification at Annexure-I							
	a) Supply		No.	1				
	b) Installation, testing and commissioning		No.	1				
4.	Supply, Installation, testing and commissioning of 4TB hard disk for storage as per technical specification at Annexure-I							
	a) Supply		No.	1				
	b) Installation, testing and commissioning		No.	1				
5.	Supply, Installation, testing and commissioning of 24 inches(min) Colour LED Monitor as per technical							

	specification at Annexure-I						
	a) Supply		No.	1			
	b) Installation, testing and commissioning		No.	1			
6.	Supply, Installation, testing and commissioning of 16 port POE network switch as per technical specification at Annexure-I						
	a) Supply		No.	1			
	b) Installation, testing and commissioning		No.	1			
7.	Supply, Installation, testing and commissioning of 4U surface mounting network rack as per technical specification at Annexure-I						
	a) Supply		No.	1			
	b) Installation, testing and commissioning		No.	1			
8.	Supply, Installation, testing & commissioning of 1 KVA UPS as per technical specification at Annexure-I						
	a) Supply		No.	1			
	b) Installation, testing and commissioning		No.	1			
9.	Supply and laying of CAT 6 Network Cable as per technical specification at Annexure-I						
	a) Supply		Mtr.	310			
	b) Laying		Mtr.	310			
10.	Supply and laying of PVC heavy duty conduit pipes as per technical specification at Annexure-I						
	a) Supply		Mtr.	160			
	b) Laying		Mtr.	160			
11.	Supply and laying of 3 core, 1.5 sq. mm copper conductor power cable as per technical specification at Annexure-I						
	a) Supply		Mtr.	100			
	b) Laying		Mtr.	100			

12.	Configuration of remote viewing facility as per technical specification at Annexure-I		LS	1			
					TOTAL(in Fig.)		

Total (In Words)

Rupees _____ only.

COMPREHENSIVE ANNUAL MAINTENANCE CONTRACT

PART - B

Sr. No.	Description of work	Unit	Qty.	Rate/Unit		Amount (Rs.)
				In figure	In words	
1.	Comprehensive Annual Maintenance Contract (CAMC) with full responsibility of carrying out repair and supply of required original spare parts to keep the CCTV in fully operational condition for a period of 5 years, after expiry of one year Guarantee period.					
a.	1 st year CAMC	LS	1			
b.	2 nd year CAMC	LS	1			
c.	3 rd year CAMC	LS	1			
d.	4 th year CAMC	LS	1			
e.	5 th year CAMC	LS	1			
TOTAL AMOUNT 'PART B'						
GRAND TOTAL AMOUNT (PART A + PART B)						

Total (In Words)

Rupees _____ only.

Note: The rates quoted shall be inclusive of transportation, lodging and boarding, but exclusive of GST. Applicable GST shall be paid extra as applicable.