

MORMUGAO PORT TRUST
ENGINEERING MECHANICAL DEPARTMENT

NOTICE INVITING BUDGETORY OFFERS

Name of Work	NAME OF WORK "Supply, Installation, Testing & Commissioning of IP Based HD Surveillance CCTV System complete with all accessories guaranteed for two years followed by three years Comprehensive AMC" as replacement of the existing analogue system at Mormugao Port Trust
Date of submission of budgetary quotation	on or before 31/08/2016 at 1430 Hrs.
Address for communication:	Executive Engineer(E-HL), Mechanical Engineering Department, Mormugao Port Trust, Electrical Section, 1st Floor, Admin. Building, Headland sada Vasco-de-Gama Goa - 403804
Contact Details	Phone : (0832) 2594241 Email : trevor,silveira@mptgoa.com
Website	www.mptgoa.com

CHIEF MECHANICAL ENGINEER
MORMUGAO PORT TRUST

1.0 **INTRODUCTION**

Mormugao Port has largely an analogue CCTV system installed in the year 2010 and working satisfactorily for the past seven years. It is now proposed to upgrade the system with IP based HD Surveillance Cameras.

2.0 **SCOPE OF WORK :**

Presently, there are 20 Nos. cameras in the Port, of which 9 are fixed cameras, 9 Non-PTZ Dome cameras and 2 IP cameras. 18 of these cameras are located in the Operational area from which all video feeds are transmitted to the Port Administrative Building where the Central Control Centre is located on its first floor. The distances of the cameras to the Central Control Centre ranges from 2 to 5 kms. Video feeds from the Central Control Centre are provided for viewing purpose only to the Chairman's Office and Residence, Dy.Chairman's Office, Commdt/CISF Office, Signal-Station and Gate No.9. There are two Digital Video Recorders for the fixed and Non-IP Cameras, each having 2 TB storage capacity.

The Video recorder back-up capacity for all Cameras is one month following which recorders will start overwriting. Following the installation of the system, an AMC of the System is presently underway where two Technicians have been posted permanently at the Port premises in order to maintain camera uptime of 97%, below which penalty is applicable.

Now the System has to be upgraded by installation of 11 fixed cameras and 10 PTZ Dome Cameras. The detailed Bill of Quantities is annexed. Entire system will be replaced and only camera mounting poles, Junction Boxes housing the wireless and cables from camera to wireless will be retained. The scheme will remain the same as before. A drawing of location of cameras is attached at Annexure 1 .Guarantee offered on the Digital Video Surveillance System shall be for a period of 2 years, following which an AMC of three years duration will be in place wherein two personnel will have to be permanently posted at the Port premises.

The Bidder shall take care of existing running wireless frequencies in circulating areas of installations and tune-up their radios accordingly so as to avoid any interferences or channel clashing with others i.e. to ensure system run trouble free.

All cameras will be connected on wireless network license free band, 6 Nos. cameras will be installed on existing High masts, Power supply will be provided at base of high mast from which connectivity to be established for cameras and wireless devices and fixed Cameras will be installed at the Gates.

Cameras will be centrally connected with help of wireless radios point to point and by using repeaters for NON LOS (LINE OF SIGHT) using multipoint to point system areas.

All cameras will be terminated at Admin Building Sada control room. A parallel monitoring will also be established at Signal station, Gate No:9, Commandant/CISF, Chairman's Office, Chairman Residence and Dy. Chairman's Office.

Important Note: During warranty and AMC period if any antennas, connectors or any related cctv installed materials got rusted the same has to be replaced by the vendor free of cost therefore Bidders shall access the environmental conditions, wind speed etc in respect to the supply of quality of equipments and workman ship so as to ensure stability in running of system successfully because Port will not pay extra amount towards such damages.

Vendor shall insure its systems with insurance agency for restoration of its damaged equipments if any during warranty and AMC periods. However damages due to natural disasters, climatic attacks

Vendor shall keep minimum staff of two personnel during warranty period and AMC period

Replacement batteries for UPS will be supplied by the Port and are not to be considered under AMC.

One of the criteria for selection of bidder shall require that a successful demonstration be done for viewing PTZ dome camera feed at Central Control Centre, Admin. Bldg, MPT from High Mast 45 located aerially about 3-4 Kms

BUDGETARY OFFER:

The firm should submit their budgetary offer along with all technical details. However, it may please be noted that this is a request for a budgetary quotation only. Subsequently within a period of 30days the work shall be contracted out through an open tender under two cover systems, which shall be published on the Port website www.mptgoa.com.

The budgetary offer shall be submitted on or before 31/08/2016 by 1430 Hrs. along with technical details and terms and conditions .The document may be send either by hand or Post or by E-mail.

The budgetary offer shall be addressed to:

Executive Engineer(E-HL),
Mechanical Engineering Department,
Mormugao Port Trust,
Electrical Section, 1st Floor,
Admin. Building, Goa - 403804

3. 0 TECHNICAL DETAILS:

Technical Specifications.

Item No: 1 Fixed camera with varifocal lens and IP66 Housing.

Make: Pelco/Panasonic/Honeywell.

Supply of Outdoor 2 Megapixel Camera 1/2.8" Progressive Scan CMOS ICR, 0.005Lux/F1.2 colour, 0 lux with IR, Slow shutter, (1920x1080 : 25/30fps, Full HD, WDR, 3D DNR, HLC. H.264/MJPEG/MPEG4, Triple-Stream. camera shall be supplied & fitted with compatible IR Illuminator of 120 Meter. Camera shall be with Motorised Vari-focal , auto focus Lens of 4MM-94MM. camera shall Support and loaded with SD/SDXC Card of 64GB. camera shall be housed in IP66. camera 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. Camera shall be UL certified, CE Certified, FCC Certified

Item No: 2 Integrated speed dome camera

Make: Pelco/Panasonic/Honeywell.

Supply of Integrated speed dome camera of minimum 2 Megapixel 1/2" Progressive Scan CMOS, 50Hz: 25fps (1920x1080), Color: 0.002 lux/F1.6, B/W:0.0002 lux/F1.6, 0 lux, 3D DNR, ICR, Optical Zoom: 36x, Pan Speed: 0.1° -240°/s, Tilt Speed: 0.1° -200°/s. shall be fitted with 200m IR. smart tracking, defog, HLC, ROI, smart IR. camera shall be IP66. camera 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. Camera shall be UL certified, CE Certified, FCC Certified.

Item No:3. Surge Protectors.

Suitable for outdoor applications.

Shielded RJ45, 2KA discharge capability.

MAX Dc supply 60V DC-650mA.

Nominal discharge: <500A@8/20s

IP65, IEC 802, IEC 61000-4-5 (surge), UL

Item No:4

High Power Wireless Transmitters & receivers 23dbi.

Make: Engenius/ Motorola/UBNT

High data rate up to 300 Mbps, Range: 10Km. (expandable upto 15kms)

· Integrated Solution – Out Door Unit (ODU) with radio, POE support

· IEEE 802.11n standard base product with Multiple spectrum bands:

5.8 n Ghz bands.

Item No:5**High Power Wireless Transmitters & receivers 28dbi.**

Make: Engenius/ Motorola/UBNT

High data rate up to 300 Mbps, Range: 10Km. (expandable upto 15kms)

- Integrated Solution – Out Door Unit (ODU) with radio, POE support
- IEEE 802.11n standard base product with Multiple spectrum bands: 5.8 n Ghz bands.

Item No:6 Network Video Recorder 16 channel

Make: Panasonic/Pelco/Honeywell.

Linux based shall support 2 e-SATA interfaces. shall be loaded with 16TB HDD. shall have capacity of storage expansion upto 64TB, shall support alarm I/O: 16/4, shall be able to support RAID0,1,5,10, shall be 19" rack mountable. 2 number of 10M/100M/1000M network interfaces, N+1 redundancy supportable with two port HDMI

Item No:7: Display Monitor 40" LED 24/7 operations.

Make: Samsung/Sony/ Panasonic

Resolution: 1,920 x 1,080 (16:9)

Type: 60 Hz LED BLU :1920x1080(16:9)

Pixel Pitch(mm/in):

0.15x0.46

Active display(mm/in):

885.6x498.1

Brightness (Typ):450nit.

Contrast Ratio: 5,000 : 1

Display Colours: 1.07 billion

Dynamic C/R : 50,000 : 1 (AV Mode)

High scanning Freq:30~81kHz. Vertical scanning Freq:48~75Hz

Max Pixel Freq: 148.5MHz.

RGB	Analog D-SUB, DVI-D
Video	CVBS, Component, HDMI
Audio	Stereo mini jack
Output	

Item No:8: Client PC with viewer software with 32” LED Monitor

Make: HP/Dell/

Used for parallel monitoring of pictures of all connected cameras with max capacity of 32 cameras. Able to view LIVE and Playback. PC with below specifications and CCTV software shall be loaded.

Intel® Intel® Core™ i7 (LATEST)
Windows® 7/8 Professional 64 bit
8GB (1x2GB) 1600MHz DDR3
2GB, Graphic card loaded Nvidia/Geforce.
HDD 1TB
4USB Ports external
Antivirus loaded

I/O Ports: 2 external USB 3.0 ports (rear) and 6 external USB 2.0 ports (2 front, 4 rear); 1 Serial port (optional); 1 PS/2 (optional); 1 RJ-45; 1 VGA; 1 Display Port 1.2; 1 Mic-in & 1 Headphone out (front); 1 Mic-in/Line-in & 1 Line-out(rear)

Item no:9 Network switch 4 POE Port 10/100/1000 GBPS switch

Make :TP-link/D-link./Cisco

8 port 10/100/1000Mbps.(4Port POE & 4 Port LAN)

Item no:10

Network switch 24 Port 10/100/1000 GBPS switch

Make :TP-link/D-link./Cisco

24 port 10/100/1000Mbps and 4 SFP.

Item No:11 Racks 4U

Wall /pole mounts

Dimensions: 550x400x230

Powered coated

Fabricated out of high strength steel sheets.

Made of high quality metal sheet .8mm

- ☐ 1mm mounting angle with clear ‘U’ marking
- ☐ Front with toughened glass door & lock
- ☐ Cable entry provision at top & bottom with rubber protection at edges
- ☐ Cooling fan fitting option at top
- ☐ Sufficient perforation provided at side & front for ventilation
- ☐ Finished with 7 process pre-treated powder coating
- ☐ Attractive color design- off white- grey combination

- Wall mounting hardware provided with rack

Cooling Fan with Lead
ACD- 6 Socket 5 Amp
ACD- 5 Socket 5/15 Amp
Cable Manager 1U MS/PVC
Cantilever Tray
Hardware Packet

Item No:12 Miscellaneous Items:

Misc items, like saddles, fitting materials, switch, sockets, screws, nuts, fasteners, jointers, sealents, accessories. Etc as required to run the system included in quote.

Item No:13.

UPS 5KVA.

Make: Numeric /Emerson/APC

Single phase.

110V AC-300VAC, Power factor: >0.99.

THDi<5% with full load.

Crest factor: 3:1.

DC:240V DC

Display: LCD display.

RS 232/USB port for software interface

Galvanic isolation to provide highest level of protection against faulty neutral ground electrical installations.

UPS shall deliver 100% power without derating

Item no: 14. Power cable

Make: Finolex / Polycab

CORE IDENTIFICATION

Power cables and Control cables upto 3 coresx1.5 Sq MM, the cores are identified by different colours as per IS standards un-armoured flexible.

Copper conductor.

Item No:15 CAT6 cable.

Make: D-link/Finolx/HFCL

- Mutual Capacitance: 5.6nF/100m nominal
- Characteristic Impedance: 100±15%
- Nominal Velocity of Propagation: 69%
- Conductor Resistance: < 9.38/100m
- Mutual Capacitance: < 5.6nF/100m
- Resistance Unbalance: 5% Max
- Capacitance Unbalance: 330pF/100m
- Delay Skew: < 45nS
- Conductor Diameter : 0.520mm Nominal
- Insulation Diameter: 0.940mm Nominal
- Insulation Material: HD-PE

Item No:16 PVC Heavy Duty conduit.

PVC conduit dia 25mm

Heavy duty.

As per ISI standards.

Item No:17. IP66 Junction Box.

Junction Box to keep all camera accessories such as power supply units, media convertors etc. Junction Box Inside Dimensions : 250x200x100,
Outside Dimensions : 295x255x120.
Shall be IP66 standard.

4.0 BUDGETARY OFFER

SCHEDULE OF PRICES & QUANTITIES

Name of work: Supply, Installation, Testing & Commissioning of IP Based HD Surveillance CCTV System complete with all accessories guaranteed for two years followed by three years Comprehensive AMC” as replacement of the existing analogue system at Mormugao Port Trust					
Sr. Nos	Description of Items	Qty.	Unit	Unit rate (Rs)	Amount (Rs.)
1	Supply of Out-door type IP Based fixed Cameras complete with Camera housing and camera mounting structures, as per given Technical Specifications.	11	Nos.		
2	Supply of Out-door type IP Based PTZ type Dome Cameras complete with Camera housing and camera mounting structures, as per given Technical Specifications.	10	Nos.		
3	Supply of Surge Protectors for cameras protections against surges and wireless units. as per given Technical Specifications	13	Nos.		
4	Supply of High Power Wireless Transmitters & receivers with complete accessories, antennas etc, Power supply units, fitting arrangements as per site locations workable range of minimum 10kms LOS in wind pressure area. as per given Technical Specifications.	12	Pairs.		
5	Supply of High Power Wireless Transmitters & receivers with complete accessories, antennas etc Power supply units, fitting arrangements as per site locations workable range of minimum 15kms LOS in wind pressure area. as per given Technical Specifications.	2	Pairs.		
6	Supply of Network Video Recorder 16CH NVR. as per given Technical Specifications	2	Nos.		
7	Supply of 40" Colour LED professional monitor as per given Technical Specifications	2	Nos.		
8	Supply of Client PC, as per given Technical Specifications	4	Nos.		
9	Supply of 4 POE Port Network switch. as per given Technical Specifications .	4	Nos.		

10	Supply of 24 Port Network switch. as per given Technical Specifications	1	Nos.		
11	Supply of Racks 4U IP66 , as per given Technical Specifications	2	Nos.		
12	Supply of misc items, like saddles, fitting materials, switch, sockets, screws, nuts, fasteners, jointers, sealants, accessories. Etc.	1	lot		
13	Supply of 5 KVA UPS , as per given Technical Specifications	1	No.		
14	Supply of Power Cable 3 core x 1.5sq.mm. as per given Technical Specifications .	200	Mts.		
15	Supply of CAT6 cable. as per given Technical Specifications	3	Coils		
16	Supply of Conduit pipe heavy duty to lay cables. as per given Technical Specifications	100	Mts.		
17	Supply of IP66 Junction Box, as per given Technical Specifications.	6	Nos.		
	Total for supply part				
	Part B- Installation part				
	Installation, testing & commissioning of entire IP CCTV System.	1	Job		
	Total for installations part				
	Grand Total for supply & installations.				
C	Comprehensive AMC Charges for 3 years				
	CAMC Charges for 1st year with on site manning of three persons	Job			
	CAMC Charges for 2nd year with on site manning of three persons	Job			
	CAMC Charges for 3rd year with on site manning of three persons	Job			
	Total for AMC				
	Service Taxes 15%				
	TOTAL-B AMC Charges for 3 years	Job			
	TOTAL (A+B)				

	MPT GOA EXISTING SYSTEM DETAILS FOR BUYBACK				
1	SAMSUNG ANALOG PTZ DOME CAMERA,S MODEL : SPD 3300 SERIES :	9	Nos.		
2	SAMSUNG ANALOG FIXED CAM MODEL SDC-425	9	Nos.		
3	SAMSUNG IP BASED DOME CAMERA MODEL : SPD 3750	2	Nos.		
4	SAMSUNG DVR 16 CH EACH MODEL : SVR 1680-C	2	Nos.		
5	WIRELESS SETS 2.4 GHZ	8	Sets.		
6	WIRELESS SETS 5.8 GHZ	6	Sets.		
7	CLIENT SYSTEM PC with 23"	4	Nos.		
8	SAMSUNG PTZ CONTROLLER MAKE SPC-600	2	Nos.		
9	CAMERA MATRIX SWITCHER OF 32 ch ANALOG	1	Nos.		
10	MATRIX SWITCHERS FOR VIEWING	3	Nos.		
	Total for Buyback(reduced from bid value)				
	Amount of Tender				