



PARADIP PORT TRUST  
INVITATION OF BUDGETARY OFFER  
FOR

SUPPLY, INSTALLATION & COMMISSIONING OF CCTV SECURITY  
SURVEILLANCE SYSTEM AT SECTOR-21 OF PARADIP PORT TRUST.

SUBMISSION OF BUDGETARY OFFER  
ON OR BEFORE Dt.04/11/2018

EXECUTIVE ENGINEER (ELECT.)  
PORT ELECTRICAL DIVISION – III  
PARADIP PORT TRUST,  
PARADIP, JAGATSINGHPUR,  
ODISHA – 754142

Contact No. 98612-44414

Email Id: [skbhoippt@gmail.com](mailto:skbhoippt@gmail.com)

## **REQUEST FOR BUDGETARY OFFER**

### **(A) GENERAL INFORMATIONS:**

<b>Sl. No.</b>	<b>Item</b>	<b>Details</b>
1.	Name of Work	Supply, Installation & Commissioning of CCTV Security Surveillance System at Sector-21 of Paradip Port Trust.
2.	Department / Organization	ELECTRICAL & MECHANICAL DEPARTMENT / PARADIP PORT TRUST
3.	Executive Division	Port Electrical Division.
4.	Officer Inviting the Offer	Executive Engineer.
5.	Immediate Next Authority	Superintending Engineer
6.	Sanctioning Authority	Dy. Chairman, PPT
7.	Executing Authority	Executive Engineer

### **(B) OTHER INFORMATIONS:**

<b>Sl. No.</b>	<b>Item</b>	<b>Date</b>	<b>Time</b>
1	Publication date	25/10/2018	17:00 Hrs.
2.a)	Document download start date	25/10/2018	17:00 Hrs.
b)	Document download end date	04/11/2018	17:00 Hrs.
3.a)	Start date for seeking Clarification on-line	25/10/2018	17:00 Hrs.
b)	Last date for seeking Clarification on-line	30/10/2018	17:00 Hrs.
4.	Date of uploading response to Clarifications sought	01/11/2018	17:00 Hrs.
5.	Offer Submission end date	04/11/2018	17:00 Hrs.
6.	Offer Validity period	120 days	
7.	Currency of Offer	Indian Rupee	
8.	Language of Offer	English	

Budgetary offer for the work “Supply, Installation & Commissioning of CCTV Security Surveillance System at Sector-21 of Paradip Port Trust”.

### **Scope of Work**

Paradip Port Trust intends to install the CCTV Surveillance system at Sector-21 of Paradip Port Trust with new PTZ Cameras and fixed cameras at different locations for monitoring crowd / traffic as well as incidents in the locality.

The scope includes supply, installation & commissioning of IP based night vision (IR) PTZ dome Cameras, fixed cameras and Network Video Recorder for 24 hours live monitoring & recording, Viewer Software for supporting 18 Cameras, 48” Colour LFD professional display monitor and other accessories as specified in the Bill of Quantity (BOQ).

#### **1. Important Conditions:**

- 1.1 The Contractor has to carry out Supply, Installation & Commissioning of the entire security system. The Contractor has to supply all the material as per the BOQ and transport to the site as per the requirement. The Contractor shall plan of execution of the work discussing with Engineer-In-Charge (EIC) prior to commencement of installation work.
- 1.2 The Contractor shall supply PTZ Cameras and fixed cameras as per the specification mentioned in the Bill of Quantity (BOQ). The different Cameras at various locations shall have to be integrated with Optic Fibre cable networking so as to instantly make available the video signals captured by the cameras for viewing at the monitor installed at the Marine Police Station at any point of time. The Contractor has to supply and install LINUX based NVR with license free software as per the specification mentioned in Bill of Quantity (BOQ) for recording & live monitoring of each CCTV footage.

The brand & model of camera and NVR offered by the contractor shall be available on respective website (UL website, ONVIF website and manufacturer’s website) with model number and not the series number. The Contractor shall submit the above certificate of compliance along with supply of camera and NVR.

- 1.3 The video captured by all the cameras shall be made available to the CCTV Control Room located at Marine Police Station. One LED Display Monitor shall be installed at Marine Police Station. The Contractor should ensure that no disturbance or interferences should occur in any of the surveillance zone.
- 1.4 The contractor shall supply and install one 1 KVA UPS for smooth operation of total system.
- 1.5 All the civil works, supporting accessories required for installation and commissioning of total system including pole erection, camera fixing to be taken care during submission of bid and no extra payment shall be made at later stage.

#### **2. MISCELLANEOUS SERVICES:**

- (i) The Contractor shall obtain approval from various statutory authorities as required. In this case, PPT would render all administrative assistance towards applying for the necessary approvals and would reimburse the statutory fees paid by the Contractor on such account against production of documentary evidence.

- (ii) The Contractor shall carry out any other work required for successful completion of work but not specifically mentioned in tender document. The Contractor has to supply miscellaneous items like clamps / saddles, nut & bolts network switches, connectors, mounting accessories, etc. to take up installation of CCTV equipments / accessories.

### **3. GENERAL SPECIFICATIONS:**

#### **CAMERA:**

- 3.1 There shall be IP based PTZ dome type (minimum image resolution-1920 x 1080 P) night vision HD Cameras with IR distance 140 mtr. and above (with 360° revolving ability having 20X optical zoom or better, pan & tilt facilities).The Camera shall be IP66 with IK 10 ingress protection. The Camera shall be UL-60950-1, CE, FCC, ROHS and ONVIF certified.
- 3.2 There shall be IP based fixed camera (minimum image resolution-1920 x 1080 P) night vision HD Cameras with minimum 50 mtr. IR distance (4.7 ~ 94 mm) lens. The Camera shall be IP66 protection, UL-60950-1, CE, FCC, ROHS and ONVIF certified.
- 3.3 All the cameras must be day/night type. The cameras must be operative in automatic mode for switching from day mode to night mode without having to manually operate.
- 3.4 All cameras shall be fully controllable from the main control room, i.e. left, right, up, down, zooming in, zooming out, programming, etc.
- 3.5 All cameras shall IP based and fully digital and having different protection (surge, lightning, voltage transient etc).
- 3.6 All the camera features must be quickly and easily accessible by provision of on-screen displays.

### **4. LOCAL NETWORK:**

- 4.1 The cameras in the CCTV System shall have to be integrated through the FOC network to make the video signals as well as the data signals captured by each camera available at the Control Room located at Marine Police Station. The Contractor shall also supply and fix 24 port network Giga byte manage switch in control room, 8 port switch in each pole, High quality waterproof pigtail patch cord each 3 mtr length and other accessories for connection of FOC cable with equipments for low attenuation and little return loss in signal.
- 4.2 The Contractor shall supply & install 32 channel Network Video Recorder (NVR) with LINUX based operating system and minimum 12 TB HDD capacity. The NVR shall be UL-60950-I, CE, FCC, ROHS and ONVIF Certified. For 24 hours live & recording facilities the contractor shall supply 48” LFD professional Display Monitors and shall be installed in Marine Police Station.
- 4.3 The Contractor shall supply and connect Cat-6 LAN cable, pigtail patch cord for networking of camera with FOC as per the site requirement. The Contractor shall also supply media converter for data transfer of CCTV signals.
- 4.4 The Contractor shall supply and install rack of required size to house the NVR with all accessories like power distribution unit, sockets, switches etc and also to house the 24 port switch.

**5. JUNCTION BOX & INSTALLATION:**

- i) The Contractor shall supply IP 66 junction boxes with required size as per BOQ to keep all camera accessories, i.e. network switch, adaptor, switch board and media convertor etc.
- ii) The Contractor shall supply IP 66 distribution boxes totally enclosed and vermin proof having 16 ampere 4 Pole MCB for connection of power cable.
- iii) The contractor shall supply all the box totally enclosed and vermin proof & shall made of 2mm thickness CRCA steel with provision of rubber gasket to the doors.
- iv) The contractor shall install all these boxes in the GI pole with supply of all accessories such as suitable GI clamps, GI nuts & bolts etc and as per direction of EIC.

**6. EARTHING:**

The Contractor shall execute earthing with 50 mm dia 3 mtr. long heavy gauge GI pipe with supply of all materials such as sweet earth, salt, charcoal etc. The connection shall be done in 50 mm x 05 mm GI flat complete with earth pit at the system of control room and lightning arrestor in accordance with IE rule. The Contractor shall supply all the materials required for execution of the earthing.

**7. Pole for fixing up camera :**

- 7.1 The Contractor shall supply 09 mtr long, straight tubular, Hot dip galvanized with minimum thickness of 85 microns GI pole. The top section of the pole shall have 90mm dia with 3.25mm thickness & bottom step of the pole shall have 140mm dia with 4.5mm thickness and having base plate.
- 7.2 The Contractor shall supply all supporting materials required for fixing of camera/distribution box/junction box/conduit pipe in the pole such as brackets/GI clamps/nuts & bolts/supporting arm, etc. in his own cost and arrangement.
- 7.3 The contractor shall install the 09 Mtr. G.I Poles by opening of pole pit. After installation the contractor shall construct coping by supply of all materials as per direction of EIC.

**8. SUPPLY & LAYING OF CABLES:**

The required 4 core x 1.5 sq mm copper flexible cable, Fibre optical cable, different types of aluminium armoured cable, 50 mm HDPE pipe shall be supplied by the contractor as specified in the Bill of Quantity (BOQ). The Contractor shall also take up laying of the required cables including preparation of cable trench and clamping if required, as per the direction of EIC. Cutting of road and laying of 75mm Heavy gauge GI pipe is to be done for passing of cable through HDPE pipe and the cutting road shall be made good as before by the Contractor. For carrying out road cutting, the Contractor must obtain prior approval of Paradip Port Trust. All the materials and manpower required for execute this shall be arranged by contractor in his own cost and arrangement.

**9. TRAINING:**

The Contractor shall train the police personnel / department staff for smooth operation of the CCTV System after installation & commissioning of the same.

**10. Maintenance:**

The Contractor shall provide technical support & maintenance of CCTV system under the warranty period of 01 year from the date of acceptance of the system. After completion of warranty period, the Contractor shall take up AMC of the CCTV system for a period of 02 (two) years with supply of all spares/materials required to make the system operational.

- i) The price quoted for maintenance purposes shall be inclusive of all materials / spares. No separate payment for any spares supplied during the maintenance period will be made by PPT. Payment towards maintenance charges during AMC & Warranty period shall be made on monthly basis. The overall performance of the system during the month shall be certified by the Inspector – in Charge (IIC), Marine Police Station, sector-21, without which the monthly bill shall not be released for payment.
- ii) The Contractor has to ensure 100% availability of the entire security system during the period of maintenance. For this purpose, the Contractor is advised to always maintain adequate stock of various spares that might be required for making good the defects in the system.
- iii) During operation & maintenance contract, a defect cropping up in the system has to be attended to and rectified by the Contractor within 24 (twenty-four) hours of receipt of communication (i.e., written or telephonic or verbal) from the Purchaser failing which a deduction up to Rs.1000/- (Rupees One Thousand) only per day of delay or part thereof, will be effected from the Contractor's bills. In any case, if the total deduction for default exceeds Rs.10,000/- (Rupees Ten Thousand) only in any month, it will be regarded as a failure on the part of the Contractor to discharge their obligations under the contract and the contract may then be terminated in accordance with the relevant provisions of the contract.
- iv) Maintenance includes repairs / replacement of CCTV cameras & NVR duly replacing defective components, electronic PCBs, power supply, interface units, display units/monitors, network switches, media converters, surge protectors, lighting arrestors, aviation lights and other accessories like cable connectors etc.
- v) The Contractor has to take up periodical maintenance of CCTV camera and other accessories, i.e. cleaning of lenses / cameras, adjustment of cameras for proper line of sight so as to achieve clear CCTV visuals at Control Room and parallel monitoring stations.
- vi) In order to avoid delay in replacement of components, accessories, sufficient spares which are very essential in nature like critical spares to be made available locally with dealer / system integrator all times.

## **Other Commercial Conditions:**

### **1. Payment Terms:**

The payment will be made as follows:

- (i) 70% of material cost will be paid on supply and delivery of materials at Paradip Port in good condition and verification & acceptance thereof by the Engineer-In-charge (EIC). However, the Contractor must ensure that the materials are delivered to site in time with the progress of site activities are at par to the approved BAR chart failing which payment shall not be released.
- (ii) Balance 20% of material cost and 90% of installation and commissioning charges will be paid after successful commissioning of CCTV Security Surveillance System & acceptance thereof by the Engineer-In-charge (EIC).
- i) Balance 10% of the total contract value shall be retained by PPT towards Performance Security Deposit. The Performance Security Deposit shall be released after successful completion of the warranty period only. The Contractor may furnish a Bank Guarantee of equal value valid till one month after expiry of the warranty period in which case the balance 10% money will be released for payment.

### **2. Security Deposit:**

A sum of 10% of accepted value of the tender shall be deposited by the successful bidder (Contractor) as Security Deposit (SD). This will be deposited initially 1% value of the contract as initial security deposit (ISD) in shape of a Bank Guarantee or Demand Draft (DD) / Banker's Cheque drawn in favour of FA&CAO, Paradip Port Trust (DD/ Banker's cheque shall be payable at Paradip) within 15 days of issue of Letter of Intent (LOI). After deducting the EMD and ISD from the stipulated security deposit, the balance amount will be recovered in instalment through deduction at the rate of 10% of the value of each running account bill subject to attaining the required amount by the last running bill. In case of exemption of EMD, the successful bidder has to deposit initially 3% of the contract value as ISD instead of 1% of contract value.

The Contractor may submit Bank Guarantee for the balance amount after deducting the EMD and ISD from the stipulated security deposit in which case there will be no deduction from the running bills towards security deposit.

EMD of the successful bidder may be refunded to the bidder after receiving an equivalent amount of Bank Guarantee only after issue of work order and signing of agreement.

The Contractor may also submit Bank Guarantee for a sum of 10% of accepted value of tender as Security Deposit (SD) within 15 days of issue of Letter of Intent (LOI) in which case (i) deposit of 1% ISD will not be required; (ii) there will be no deduction from the running bills towards security deposit; and (iii) EMD of the successful bidder will be refunded to the bidder after issue of work order and signing of agreement.

The security deposits shall be returned to the Contractor within 45 days of successful execution and acceptance of the work. The BG shall be valid till 45 days after the scheduled date of completion of the work.

**3. Completion Period :**

The Contractor shall complete the entire work “Supply, Installation & Commissioning of CCTV Security Surveillance System at Sector-21 of Paradip Port Trust” in all respect within 60 (Sixty) Calendar days from the date of issue of work order.

**4. Warranty:**

The warranty period for the entire work including supplied items is 12 months from the date of acceptance of the work. All other conditions of Cl. # 8 of GCC (Warranty) are also applicable.

**5. Liquidated Damage:**

In case of delay in completing the work, liquidated damage shall be charged to the Contractor at the rate 0.1% of the contract price for a delay of one week or part thereof subject to a maximum of 5% of the contract price. Where the Liquidated Damage amount exceeds the maximum limit, Paradip Port Trust reserves the right to :- i) Terminate the contract and / or ii) Forfeit the Initial Security Deposit (ISD).

**NOTE:**

1. GST will be paid as extra as applicable.
2. Any query in this regard may be raised to the following email id prior to dt.30/10/2018 (up to 17:00 hrs.) which will be clarified by dt.01/11/2018 by uploading in the website for facilitating submission of a competitive budgetary offer.
3. Budgetary offers shall be submitted to the following address (through email or by Registered Post):

Executive Engineer (Elect),  
Port Electrical Division – III,  
Paradip Port Trust.  
PO:- Paradip,  
Dist:- Jagatsighpur  
Odisha – 754142  
Contact No. 9861244414  
Email Id: [skbhoipt@gmail.com](mailto:skbhoipt@gmail.com)



## BILL OF QUANTITY

Sub.: Supply, Installation & Commissioning of CCTV Security Surveillance System at Sector-21 of Paradip Port Trust.

Sl. No.	Description	Qty.	Unit	Rate (Rs.)	Amount (Rs.)	Remarks
<b><u>(A) SUPPLY PART:</u></b>						
1	Supply of IR PTZ camera 2MP, (1920x1080P) 1/2.8" progressive scan CMOS, ICR, 3D DNR Min. Illumination of 0.005 lux @ F1.6, 0 lux with IR, 50/60fps, 20x motorized optical zoom (4.7 mm ~ 94 mm) with auto Focus, defog, up to 140 m and above IR range smart image processing, 360 deg endless pan range, IP66 & IK10 housing, lightning protection, surge protection and voltage transient protection, ONVIF (PROFILE S/ PROFILE G), FCC, UL, RoHS, CE certified with all accessories and N/W switch required for installation & commissioning.	2	Nos.			
2	Supply of Fixed outdoor camera 2 MP (1920 x 1080 P) CMOS, ICR, Min. Illumination of 0.002 lux @ F1.2, 50/60fps, 20x motorized optical zoom lens with auto Focus, up to 50m and above IR range, IP 66 ONVIF(PROFILE S/ PROFILE G), FCC, UL, RoHS, CE certified with all accessories and N/W switch required for installation & commissioning.	16	Nos.			
3	Supply of 32 channel Network Video Recorder Linux based shall support 1 e-SATA interfaces, shall be loaded with 8 SATA HDD with Hot swappable facility with 1E-SATA for Video back up. HDD loaded with 12 TB. shall be able to support RAID 0,1,5,10, shall be 19" rack mountable. 10M/100M/1000M network interface (4 LAN Ports), support N+1 redundancy, should support third party ONVIF cameras as per specification. The Network Video Recorder shall be UL 60950-1, CE, FCC and ONVIF certified.	1	No.			
4	Supply of Fiber Optical Cable, 12 core single mode, 1330 nm wave length, steel armouring conform to ITU-T recommendations G.652 D.	2,600	Mtrs.			
5	Supply of 48" LFD professional display monitor.	1	No.			

Sl. No.	Description	Qty.	Unit	Rate (Rs.)	Amount (Rs.)	Remarks
6	Supply of weather proof IP 66 pole mounted junction box to keep all camera accessories such as power supply units, adopters, switch board, media convertors etc having dimension 295x255x120 mm with suitable GI clamp for fixing in pole as per scope of work.	7	Nos.			
7	Supply of 38 mm PVC Heavy duty conduit pipe, ISI Certified with all accessories for fixing in pole.	100	Mtrs.			
8	Supply of 50 mm (outer dia) heavy duty HDPE pipe as per ISI Mark.	2,600	Mtrs.			
9	Supply of 4 Core x 1.5 sq.mm ISI certified copper cable.	100	Mtrs.			
10	Supply of 4 x 25 sq mm aluminium Armoured cable, XLPE insulated, 1.1 KV grade, extruded PVC inner sheathed, confirming to IS: 7098(part-1),1988.	950	Mtrs.			
11	Supply of 4 x 6 sq mm aluminium Armoured cable, XLPE insulated, 1.1 KV grade, extruded PVC inner sheathed, confirming to IS: 7098(part-1),1988.	1,650	Mtrs.			
12	Supply of pole mounted distribution box, IP 66 protection, incoming 16 ampere 4pole MCB, with suitable GI clamp, nuts & bolts for fixing in the pole as per direction of EIC.	7	Nos.			
13	Supply of 1 KVA ON line UPS, 01 hr. power back up.	1	No.			
14	Supply of 9 meter hot dip galvanised GI pole with base plate with nuts & bolts and arrangement for fixing camera & lightning arrestor as per scope of work.	7	Nos.			
15	Supply of lightning arrestor with all the accessories as per scope of work.	2	Nos.			
<b><u>(B) INSTALLATION PART:</u></b>						
16	Road cutting and laying 75mm heavy gauge GI pipe for passage of power cable & fibre optic cable and finishing as per scope of work.	55	Mtrs.			
17	Laying of 50 mm (outer dia) heavy duty HDPE pipe as per ISI Mark	2,600	Mtrs.			
18	Installation of lightning arrestor with all the accessories as per scope of work.	2	Nos.			
19	Laying of Fiber Optical Cable through HDPE pipe as per scope of work.	2,600	Mtrs.			

Sl. No.	Description	Qty.	Unit	Rate (Rs.)	Amount (Rs.)	Remarks
20	Laying of 4 x 25 sq mm aluminium Armoured cable as per scope of work.	950	Mtrs.			
21	Laying of 4 x 6 sq mm aluminium Armoured cable as per scope of work	1,650	Mtrs.			
22	Execution of Earthing in 40 mm dia heavy gauge GI pipe with construction of earth pit for each pole as per scope of work.	2	Nos.			
23	Installation of 9 meter GI pole by constructing concrete foundation with supply of all materials as per scope of work.	7	Nos.			
24	Construction of coping for 9 Mtr. GI pole as per scope of work.	7	Nos.			
25	Excavation of cable trench of size 750 mm depth x 300 mm width and refilling the trench after laying the cables through HDPE pipe as per scope of work.	2,420	Mtrs.			
26	Installation & Commissioning Charges of CCTV camera's with system.	LS				
<b><u>(C) AMC PART:</u></b>						
27	Technical support & maintenance of CCTV system with all camera for a period of 01 year under warranty period.	12	Months			
28	AMC of the CCTV system for a period of 02 years with supply of all spares/materials after completion of warranty period.	24	Months			
<b>TOTAL:</b>						

**NB.: GST shall be paid as extra.**