



PARADIP PORT TRUST

BUDGETARY OFFER

FOR

Audio & Video system, lighting arrangement of Marine Aquarium at
Paradip Port.

SUBMISSION ON OR BEFORE 27/12/2017

THE EXECUTIVE ENGINEER (ELECT.)

PORT ELECTRICAL DIVISION – III

PARADIP PORT TRUST,

PARADIP, JAGATSINGHPUR,

ODISHA – 754142

Contact No. 98612-44414

Email Id: skbhoippt@gmail.com

REQUEST FOR BUDGETARY OFFER

(A) GENERAL INFORMATIONS:

Sl. No.	Item	Details
1.	Name of Work	Audio & Video system, lighting arrangement of Marine Aquarium at Paradip Port.
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:

Sl. No.	Item	Date	Time
1	Publication date	07/12/2017	13:00 Hrs.
2.a)	Document download start date	07/12/2017	13:00 Hrs.
b)	Document download end date	27/12/2017	17:00 Hrs.
3.a)	Start date for seeking Clarification on-line	07/12/2017	13:00 Hrs.
b)	Last date for seeking Clarification on-line	18/12/2017	17:00 Hrs.
4.	Date of uploading response to Clarifications sought	21/12/2017	17:00 Hrs.
5.	Offer Submission end date	27/12/2017	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 “Audio & Video system, lighting arrangement of Marine Aquarium at Paradip Port”.

Scope of Work:

- 1) The Contractor shall have to supply the audio & video digital display system and install the same at Paradip Aquarium for showing trilingual (Odiya, English & Hindi perfectly) audio & video relating to data / information of each category of fish available in aquarium.
- 2) The Contractor shall have to supply the items / materials required for audio & video system as specified in the BoQ. The Contractor has to carry out programming of the system, integrating to all display monitor & headphone jack and commissioning the system. The Contractor has to supply & install server and software as required for this audio & video system and upload the data, i.e. script, audio, video display items showing information of each category of species available in the aquarium. The Contractor has to collect the above data and video & upload in the system.
- 3) The Contractor shall execute wiring of Cat-6 cable and electrical power supply for functioning of professional display monitor. The wiring shall be routed through PVC conduit pipes & done with 2.5 sq.mm, single core copper wire, 5 Amp. switches and plugs with board as required.
- 4) The Contractor shall install all the items as mentioned in BOQ with supply of all mounting materials like screw, clamps, bolt, nut & hardware etc.
- 5) The Contractor shall supply & install the underwater LED lights with due care in each species tank so that the water tank should be uniformly illuminated. Necessary electrical wiring is to be done by the Contractor with supply of 1.5 sq.mm single core copper wire and all accessories. The Contractor shall also supply the voltage controller / driver to feed required voltage power supply to underwater lights.
- 6) The Contractor shall supply & install surface LED panel and shall execute electrical wiring to these lights with supply of copper wire, conduits, switches, switchboards, clamp & other accessories.
- 7) The Contractor shall commission & test the audio / video system successfully and train PPT's representative for operation of system.
- 8) The Contractor shall carry out AMC of audio & video system for the period of 02 years after warranty period with supply of all spare and consumables at his own cost.

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 parallel with the progress of site activities and approved BAR chart otherwise the 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 Audio & Video system, lighting arrangement of Marine aquarium & acceptance thereof by the Engineer-In-charge (EIC).
- iii) 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) Execution Period:

The execution period of the work shall be 60 days from the date of issue of work order.

4) Warranty:

The warranty period shall be valid up to 01 (One) year on the entire work inclusive of the supply items with effective from date of acceptance of the work.

- The Contractor shall warrant the Board that the goods and services under this contract will comply strictly with the contract, shall be first class in every particular case and, shall be free from defects. The Contractor shall further warrant the Board that all materials, equipment and the supplies furnished by him/her will be new and fit for their intended purposes.
- The Board shall promptly notify the Contractor in writing of any claim arising under this Warranty. Upon receipt of such notice, the Contractor shall promptly repair or replace the defective goods and/or services at no cost to the Board.
- If the Contractor, having been notified, fails to remedy the defects in accordance with the contract, the Board may proceed to take such remedial action as may be necessary, at the Contractor's risk and cost.

- 5)** Any query in this regard may be raised to the following email id prior to dt.18/12/2017 (up to 17:00 hrs.) which will be clarified by dt.21/12/2017 by uploading in the website for facilitating submission of a competitive budgetary offer.

Note: 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. 98612-44414

Email Id: skbhoippt@gmail.com

DISPLAY	Screen Size	32-inch
	Aspect Ratio	16:9
	Backlight Scanning	100Hz
	Resolution	1366 x 768 pixels
	Viewing Angle	178 ⁰ /178 ⁰
TERMINAL	VIDEO IN	RCA X 1
	AUDIO IN (L/R)	RCA Pin Type X 2
	HDMI IN	HDMI 1.4 X 2
	USB Input	USB 2.0 X 1
	RS232C	Yes
	HDMI CEC	Yes
	VGA IN	Yes
	PC AUDIO IN	Yes (1) (Share with AC)
GENERAL	Power Requirements	AC 110~240V, 50/60Hz
	Rated Power Consumption	50W
	Stand By condition	< 0.5W
	Built -in Speakers	Full range 20W (10W+10W)(10% THD)
	Dimensions (WXDXH) W Pedestal	733.4 X 193.2 X 474mm
	Dimensions(WXDXH) W/O Pedestal	733.4 X 85.1 X 438.5mm
	Weight (w Pedestal)	4.0 Kg
	Gross Weight	5.9 Kg
	Cabinet Color	Black
	VESA Mount	100 X 100 mm
	Operating Environment	Operating Temperature : 0 ⁰ C to 40 ⁰ C
		Operating Humidity : 20% to 80%
	Storage Environment	Temperature : up to 60 ⁰ C
		Humidity : 20% to 80% (non-condensation)
SAFETY REGULATIONS	IS 13252:2010	
INCLUDED ACCESSORIES	AC cord	Yes
	Operating Manual	Yes
	Remote	Yes
	Batteries	Yes
	Table Mount	Yes

Specifications :: Computing Device

Parameters	Specifications
CPU, Memory	Minimum CPU / Memory required for meeting the required parameters as mentioned below.
Display Resolutions	(24 bit color) @60Hz 1280 x720, 1280 x 800, 1360 x 768, 1366 x 768, 1440 x 900, 1600 x 900, 1680 x 1050, 1920 x 1080, 1920x1200 (24 bit color) @60Hz 640 x 480, 800 x 600, 1024 x 768, 1280 x 1024 and 1600 x 1200
Display Interface	DVI-D digital video output / HDMI
Network	10/100 Mbps Switched Ethernet
Audio	16-bit/22kHz high quality digital audio with support for USB2.0 audio devices or via 3.5mm stereo audio jacks for headphone/microphone.
Hardware Design	All solid-state design. No moving parts, no fans, no local user storage. Embedded Operating Firmware.
Graphics	Hardware-accelerated 2D graphics, hardware-accelerated video support for most media formats on stand-alone media player applications and browser-based video support.
Certifications	FCC Class B, CE, KCC, RoHS
Accessories	VESA-compliant monitor mounting bracket should be included.
Software	Should be shipped with Virtualization Software.

Specifications :: Trackball Mouse

Parameters	Specifications
Sensor technology	Optical
Sensor Resolution	300
Number of buttons	4
Software	Set Point, LCC
Interface	USB / PS2
Supported OS	Windows Vista, Windows 7, Windows 8, Windows 10 Mac OS X 10.5 or later Chrome OS

Specifications :: HD Headphone

Parameters	Specifications
General	Plug3.5 mm Dynamic driver32mm Frequency response20Hz – 20kHz

Specifications :: Switch

Parameters	Specifications
Switching Capacity	48 Gbps
Max. Packet Forwarding Rate	1.488 Mpps
MAC Address Table	8K
Power Supply	Internal AC Power Supply
No. of Queues	2 queues
Traffic Prioritization 802.1p	yes
Strict Priority	yes
802.3x flow control	yes
Auto MDI/MDIX	yes
Power Saving (Green)	yes
Jumbo Frame	9,600 Bytes

Specifications :: Server

Parameters	Specifications
CPU	Intel® Xeon® E3-1220v5 (3.0GHz 4 cores 8M Cache 80W)
Memory (RAM)	8 GB DDR3-1600 Memory (RAM)
Hard Disk	2 (TWO) X 1TB 6G SATA 7.2K rpm LFF (3.5in) Non-hot Plug HDD.
RAID Controller	Hardware RAID Controller
Optical Drive	SATA 9.5 JB Optical HDWR
Power Supply	Non Hot Plug 290W PSU HP
Remote Management	Yes
Operating System	Windows 2012 Std Server 64 Bit (License must be provided)
Monitor	18.5" TFT Monitor
Keyboard	104 Keys Standard Keyboard (English)
Mouse	USB Optical Scroll Mouse

Specifications :: Server Rack

Parameters	Specifications
Size	24 U
Rack Standard	Should conform to DIN 41494 or equivalent standard
Construction	Welded or CKD (knockdown)
Front Door	Lockable Double Toughened Glass Door or Perforated
Basic Frame	Steel
Equipment Mounting	DIN Standard 10mm Sq. Slots / Direct M6 Tap
Mounting Angle	19" Mounting angles made of formed steel
Standard Finish	Powder Coated
Top and Bottom Cover	Welded to Frame, Vented and Cable entry/exit cut outs from Top & Bottom.
Standard Mounting Option	Castor wheels (Front 2 wheels with Break and rear without break) Or Levellers.
Equipment Tray	Shipped with Standard Equipment Tray (1U) 1 No
PDU	Indian Standard PDU with 10 Sockets 2 No

Specifications :: 6 KVA UPS

Parameters	Specifications
<u>OUTPUT PARAMETER</u>	
Capacity	2kVA/1600W
Power Factor	0.8
Waveform	Pure sine wave (On line double conversion)
Nominal Voltage	230V
Vthd	2% max Full linear load, 5% max on Nonlinear load
Frequency regulation	+f-0.5%
Frequency	50Hz
Creast Factor	03:01
AC-AC Efficiency	89% or better
Transfer time Mains-Battery	0
Transfer time Inverter- Bypass	4msec
<u>INPUT PARAMETER</u>	
Configuration	1 Ph, 1-N +PE
Nominal Voltage	230Vrms
Voltage range	170 V to 290 V at 100% load,100 V to 290 V at 60% load
Frequency	50Hz
Freq range	40 to 70 Hz,+ 1-0.2 Hz
PF	>=0.99
<u>BATTERYCHARGER</u>	
Nominal Voltage	48V
Max charging current	8 Amp or better
<u>BATTERY PARAMETER</u>	
Type	SMF
Battery make	Exide/Amararaja/Rocket
Rating	12AH

<u>ENVIRONMENTAL PARAMETER</u>	
Operating temperature	Oto40 deg
Storage temperature	-20to50deg
Humidity	20% to 90% non condensing
Noise level	50dBAmx
<u>MECHANICAL PARAMETER</u>	
Product type	Rack mountable
Product size (D x W x H)	2U
Colour	RAL7001
Protection	IP20
Commuport	RS232,USB
EPO	Yes
MONITORING SOFTWARE	SNMP UPSiion 2000, View power 2.0 support
<u>STANDARDS</u>	
EMI	EN 62040-2 :2006
SAFETY	EN 62040-1-1 :2003
PERFORMANCE	IEC I EN 62040- 3

Specifications :: Software

Parameters	Specifications
General	Web Based
Platform	Windows Server 2012
CMS	CMS for Text / Pictures / Audio / Videos
Audio Support	Yes
Screen Size	The application should run in full screen mode (1366 x 768).
Other Information	Please contact the undersigned for detailed information.

Specifications :: CAT6 UTP Cable

Parameters	Specifications
General	CAT6 4-pair unshielded twisted pair (UTP) cable
	It should comply to CAT6 Specifications
	Pairs should be braided in aluminium foil with drain wire
	It should have 23 AWG solid copper conductor for superior conductivity
	It should have PE insulation
	It should have PE central cross
	It should have FR PVC/LSZH Jacket
	It should have Verified compliance with EIA/TIA standards by ETL
	It should be CUL-listed
	It should be packaged in an easy-to-pull box for easier installation
	Insulation Material should be of HD-PE
	Outer Diameter should be 6mm \pm 0.2
	Jacket hardness should be 45P (90A \pm 2A, Shore)
	It should be Heat-resistant : 75 degree C minimum (Temperature limited)
	Characteristic Impedance should be 100 Ω \pm 15 Ω
	Conductor resistance should be \leq 9.38 Ω /100m
	Insulation resistance should be 100M Ω
	Mutual capacitance should be less than 5.6nF/100m
	Resistance Unbalance should not exceed 5%
	Capacitance Unbalance: 330pF/100m
	Delay Skew: <45nS
	NVP: 69%
	Operating Voltage: 72V
	Dielectric Strength: 1.0KV DC or 0.75KV AC for a period of 1Min
	Bending Radius: <25.4nm at -20 $^{\circ}$ C \pm 1 $^{\circ}$ C
	It should be compatible with all common systems according to TIA/EIA 568-C.2 and ISO/IEC 11801 Class E.

UNDERWATER LIGHTS

- | | | |
|----------------------------|---|--|
| 1) Front cover & Housing | : | Moulding shaped stainless steel grade 316 |
| 2) Gasket | : | EPDM gasket |
| 3) Lens | : | Optical lens, efficiency $\geq 85\%$ |
| 4) Protection | : | IP-68 |
| 5) Cable gland | : | PG-II copper with nickel-coated |
| 6) External driver | : | Constant current output
Single colour LED = I-circuit output |
| 7) Application environment | : | Temperature of water between - 20°C ~ 40°C less than 1 mtr. depth. |

ANNEXURE – XII

SURFACE LED PANEL

- | | | |
|--------------------------|---|---|
| 1) Source of LED | : | Cree / Nichia / Osram / Lumileds |
| 2) Efficacy | : | >110 lumens per watt |
| 3) Driver | : | SMPS based constant current supply with surge protection 10 kV. |
| 4) Certification | : | LM 79 and LM 80 certified LED. |
| 5) Operating Temperature | : | 10°C to 45°C |
| 6) Operating Voltage | : | 140 Volt – 270 Volt |
| 7) Life | : | 50000 hrs. |
| 8) Optics | : | High transmittance polystyrene opal diffuser for glare-free symmetric light distribution. |
| 9) Housing & finish | : | CRCA powder coated white after phosphochromate treatment. |
| 10) Mounting | : | Provision of surface mounting through 4 holes. |

BILL OF QUANTITY

Sub.: Audio & Video system, lighting arrangement of Marine Aquarium at Paradip Port.

Sl. No.	Description of Work	Qty.	Unit	Rate (in Rs.)	Amount (in Rs.)	Remarks
(A) SUPPLY PART:						
1	Supply of 32" Professional LED Display as per specification at Annexure - I.	14	Nos.			
2	Supply of Computing Devices as per specification at Annexure - II.	14	Nos.			
3	Supply of Trackball Mouse as per specification at Annexure - III.	14	Nos.			
4	Supply of HD Headphone as per specification at Annexure - IV.	14	Nos.			
5	Supply of 24 Port Gigabit Switch as per specification at Annexure - V.	1	No.			
6	Supply of Intel Xeon based server as per specification at Annexure - VI.	1	No.			
7	Supply of Server Rack as per specification at Annexure - VII.	1	No.			
8	Supply of 6 KVA online UPS with battery backup 30 mins. and isolation transformer as per specification at Annexure - VIII.	1	Set			
9	Supply of Software Design as per specification at Annexure - IX.	1	Job			
10	Supply of Cat 6 UTP Cable (Roll of 305 mtr.) as per specification at Annexure - X.	2	Roll			
11	Supply of Supply of 6 way BDB box with MCB.	1	No.			
12	Supply of 12 Watt LED underwater light with mounting clamp with voltage controller.	100	Nos.			
13	Supply of Surface LED panel (15 Watt).	18	Nos.			
14	Supply of RJ 45 Connectors (Box of 100).	1	Box			
				TOTAL:		

Sl. No.	Description of Work	Qty.	Unit	Rate (in Rs.)	Amount (in Rs.)	Remarks
(B) EXECUTION PART:						
15	Installation of LED Display Monitors, HD Headphone and Trackball Mouse on the wall with necessary fixing bolt & nut, clamps and rack.	14	Nos.			
16	Installation of Computing Devices.	14	Nos.			
17	Installation of Online UPS system with batteries.	1	Set			
18	Installation of server with server rack.	1	Set			
19	Electrical wiring to LED Display Monitor with supply of copper wirers & all accessories.	14	Nos.			
20	Laying of Cat 6 cable through PVC conduit by clamping on wall (server switch to each display monitor separately).	600	Mtrs.			
21	Wiring to Display Monitor using 24 Port Gigabit Switch and RJ 45 Connectors.	14	Nos.			
22	Electrical wiring to each Species tank with fixing of switchboard (5 Amp. capacity, 4 nos. switch & 4 nos. plug socket for each board) with supply of 2.5 mm ² copper wire, PVC pipe & accessories.	70	Nos.			
23	Fixing of 15 Watt surface LED panel.	18	Nos.			
24	Fixing of 12 Watt under water light with bolt & nut, screw.	100	Nos.			
25	Electrical wiring to surface LED panel.	18	Nos.			
26	Electrical wiring to 12 watt underwater light (from switchboard to light point) with 1.5 mm ² copper wire & accessories.	100	Nos.			

Sl. No.	Description of Work	Qty.	Unit	Rate (in Rs.)	Amount (in Rs.)	Remarks
27	Fixing of 8 way BDB and electrical wiring to all points including of supply of materials (Copper Wire, PVC Pipe, Clamps, etc.	1	Set.			
28	Programming, Integration, Testing & commissioning of Audio & Video system and Training charges.	1	System			
29	Annual Maintenance Contract (AMC) for above audio & video system after warranty period of 01 year.	2	Years			
TOTAL:						
GRAND TOTAL (A + B):						

Note: GST percentage to be mentioned extra against each item.