

Ref:-GEM/2024/B/5639583-Corrigendum/ Amendment to tender document as per Pre-Bid meeting held on 11-12-2024

Tender for Supply, installation, testing and commissioning of 35 nos. of IP CCTV security cameras at various locations of CoPA including 2 years guarantee and 5 years comprehensive AMC



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No. GEM/2024/B/5639583

**OFFICE OF THE
CHIEF MECHANICAL ENGINEER**
Willington Island, Cochin 682 009.

Dated: 13/01/2025

CORRIGENDUM 3 – CLARIFICATIONS TO PRE-BID QUERIES

Sub: Tender for “Supply, installation, testing and commissioning of 35 nos. of IP CCTV security cameras at various locations of CoPA including 2 years guarantee and 5 years comprehensive AMC” – **Clarifications to pre-bid queries/Amendment to Bid Document** – Reg.

Ref: This office GEM BID No. **GEM/2024/B/5639583** Dated 25/11/2024.

The replies to pre-bid queries/ addendum/ amendments to Tender Document are attached. For further details, please log on to www.cochinport.gov.in / www.eprocure.gov.in / www.gem.gov.in portal. The bidders are requested to submit their bids after going through the Corrigendum/ Amendment and also upload copies of the corrigendum duly signed on all the pages to ensure that the bid is as per the corrigendum/ amendment.

Please note that the last date of submission & due date of opening of subject tender has been extended up to **27/01/2025 at 15.00hrs. & 15.30hrs.** respectively.

This corrigendum will form the part of the Tender document.

Sd/-

DY. CHIEF MECHANICAL ENGINEER (ELE.)

1. BIDDER 1					
No.	RFP Reference(s) (Volume, Clause no., Page)	Page No.	Content of RFP requiring clarification	Amendment/Clarification required	CoPA Response
1	Section I Minimum Qualification Criteria(MQC): Item 2.4	3	2.4. The Bidder/OEM shall have own/authorized service centre in South India for the past 5 years. The address of the Authorized service centre shall be furnished in the Bid, failing which the Bid will not be considered for evaluation.	We request you to consider the Service Centre in India. Hence please amend the criteria as <i>2.4. The Bidder/OEM shall have own/ authorized service centre in India for the past 5 years. The address of the Authorized service centre shall be furnished in the Bid, failing which the Bid will not be considered for evaluation.</i>	Tender Condition Prevails
2	SECTION IV TECHNICAL SPECIFICATIONS I. SCOPE OF WORK A. General Item 2	31	2. At present, Cochin Port has a comprehensive network of NVR based IP cameras (47 Nos.) spread all over W. Island (8 sq. km). List and type of existing cameras with locations provided is given below for reference. These 47 Nos. cameras (10 Nos. in CFS) are of HANWHA make and installed after 2016 and are under AMC/ Guarantee. These cameras are NVR based with HDD's capable of recording upto 90 days and visuals available in the CISF control room on the 7th floor of the New Ad. Bldg. The data is being transmitted through CoPA's OFC cables where available and thro' BSNL Leased lines.	Because the existing camera will be moved in the new VMS software, therefore please provide the recording parameter details for existing, as these cameras are very old and don't support latest H.265 codec. Hence to calculate the required storage size, please confirm the recording parameter.	Existing cameras support H.264, Recording parameter of existing cameras is annexed.
3	SECTION IV TECHNICAL SPECIFICATIONS	31	3. In the present proposal we intend to install additional 35 Nos. cameras at various locations of CoPA including CFS.	We understand that the new VMS Software and Hardware will be designed for 200 cameras only. However the VMS shall be	The new VMS Software and Hardware is to be designed for 200 cameras with adequate capacity video

	<p>I. SCOPE OF WORK A. General Item 3</p>	<p>Our existing CCTV surveillance is based on NVR. We propose to switch over from NVR to VMS which provides more control over the video data and allows for more efficient management of video surveillance networks. The VMS offered shall support upto 500 cameras with adequate capacity video management server, camera recording server and hard disks for recording live videos upto 90 days. In the estimated rates, license for 200 cameras for 5 years is included. No failover for Servers is considered but provision for providing failover is there in the Server. The Tenderer shall consider all the above and quote accordingly.</p>	<p>capability to support 500 camera in future by increase of hardware, license and storage component. Please confirm</p>	<p>management server, camera recording server / NVR for recording live videos up to 90 days. The video footages shall be flicker free, lag free, glitter free, quick capturing etc.</p> <p>Minimum specification of VMS is specified in the Bid Document. In case the quantity of hardware, server, storage etc. are not sufficient, the Bidder shall provide at his own cost, additional hardware, server, storage based on the VMS OEM requirement.</p> <p>Presently, license for 100 cameras lifelong need be considered in the Bid.</p> <p>However the VMS chosen shall have the capability to support 500 cameras in future by increase of hardware, license, storage components etc.</p> <p>No failover for VMS is envisaged but provision for providing failover must be there in the Server.</p> <p>Following Para regarding Backup mentioned in Scope of work, clause 9, Page 33 of Bid document may also be noted. <i>“Back up should be in full resolution at 20 fps at minimum 3000 kbps available for 90 days at all locations, after installation of new CCTV cameras. The BoQ specifies 18 nos. of 18TB Hard</i></p>
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					<i>disk. If the solution provided by the bidder does not satisfy the requirement, additional hardware and storage should be considered. The system should provide 99.99 % uptime and no data should be lost. Suitable provision for disaster recovery mechanism should be available”.</i>
4	SECTION IV TECHNICAL SPECIFICATIONS I. SCOPE OF WORK A. General Item 7	31	7. The tenderer may visit the location and assess the present network & cameras and new requirements before submission of the offer for total CCTV solutions. The ANPR cameras are proposed to be installed at the two entry Toll Gates(IG Road Toll Gate and Bristow Road Toll Gate) of CoPA. The ANPR cameras shall identify the registration numbers of vehicles entering / exiting through the toll gates(24 hours). There are 2 lanes for INCOMING and 2 lanes for OUTGOING in each Toll Gate. The CCTV footages shall be viewable in the CISF control room on the 7th floor of the New Administrative Building of CoPA. The Bidder shall ensure that the CCTV visuals and number plates of vehicles are captured in the entire 24 hours. The Capacity of the cameras, poles etc. shall be designed accordingly. The ANPR Cameras will be accepted only after all images are seen to the satisfaction of the Engineer-in-charge. Presently we have installed ordinary IP cameras and remote	Considering the BOQ and tender requirement we understand that Bidder has to provide ANPR camera with ANPR software license for 9 cameras. However we did not find any Software specifications and Hardware requirement for ANPR camera. Hence please provide the clarity on ANPR software	4 Nos. Zoom type Box cameras, intended to be provided at the 2 toll gates should have the facility to activate ANPR analytics through VMS. Functionally the VMS has to provide the List of the Vehicle with the type of vehicle and its License plate details along with the time and date. The Bid specification is minimum. If additional software or hardware is required to activate ANPR analytics, the same shall be provided by the Bidder at his own cost as per VMS OEM requirement. Please see the location of cameras given in Page 34 & 35 of the tender document. The other 5 zoom type box cameras are proposed for the Container Freight Station and ANPR facility need not be activated for these cameras.

			surveillance is being done with BSNL LL facility. We intend to lay OFC cable from the OFC point near Mattancherry Wharf to IG Road Toll Gate and Bristow Road Toll Gate and surrender the existing P2P connection availed from BSNL. Also OFC is proposed to be laid from IG Road Toll Gate to existing CCTV cameras in A2-A3 area near Avenue walk way. Wireless communication is also intended from the cameras at two locations, viz. Cochin Oil Terminal and North Tanker Berth to CISF control room on the 7th floor of New Administrative Building.		
5	SECTION VII BILL OF QUANTITIES Item I.2	68	2 MP Outdoor ANPR / Zoom type box Camera - 9 No.		
6	SECTION IV TECHNICAL SPECIFICATIONS I. SCOPE OF WORK A. General Item 8	32	8. In the Container Freight station (CFS), we propose to install 6 Nos. new IP cameras. Presently there are 10 Nos. (Infinova make) box type cameras, 8 Nos. Zoom type box camera (Hanwha make) and 2 Nos. Fish Eye Cameras (Hanwha make) inside CFS. The existing Hanwha/ Infinova cameras are to be re-positioned and fixed along with the new cameras inside CFS for effective surveillance of CFS. The successful bidder has to do the site study and submit the detailed layout positioning cameras and its accessories in any latest	Currently "Back up of existing cameras is available for 90 days at CISF CONTROL ROOM. At CFS only 30 days". Please provide the clarity on the Backup requirement for Existing cameras with recording parameter (Resolution, fps, days), also confirm that the recording will be done at only single centralised location not at multiple locations	Our existing CCTV surveillance system is based on NVR and all the existing CCTV cameras except that at Container Freight Station (CFS) are now viewed in the CISF control room in the 7th floor of the New Ad. Bldg and the connected HDD's for 90 days storage are placed in the CISF control room. Presently, for the existing cameras in CFS, one NVR is kept in CFS itself and connected HDD's are for 30 days storage only.

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			format. All cameras should be integrated in the as built layouts and the same should be configured to display for easy location identification. All cameras should be positioned according to the Cochin Port requirement and the vendor should ensure the coverage and quality footages of each area as a part of commissioning. The new cameras, VMS etc. shall be compatible with the existing systems and images shall be viewable locally at the ATM's room inside CFS and at the 7th floor of the New Administrative Building.		In the proposed system, VMS is envisaged. So the entire storage HDD's shall be kept in the CISF control room on the 7 th floor of the New Ad. Bldg. and the same shall have capacity for 90 days storage of video footages. Recording will be done at a single location.
7	SECTION IV TECH. SPEC. III. - Tech Spec. for cctv cameras 5. VIDEO MANAGEMENT SOFTWARE Item 1	41	The Video Management System (VMS) software shall be used to view live and recorded video from capture cards and IP devices connected to local and wide area networks. The VMS software shall have a client/server based architecture that can be configured as a standalone VMS system with the client software running on the server hardware and/or the client running on any network-connected TCP/IP workstation. Multiple client workstations shall be capable of simultaneously viewing live and/or recorded video from one or more servers. Multiple servers shall also be able to simultaneously provide live and/or recorded video to one or more workstations.	Please describe the meaning of capture cards. Does it mean SD card?	Capture card may be read as Encoder.

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8	SECTION IV TECH. SPEC. III. Tech Spec. for cctv cameras 5. VIDEO MANAGEMENT SOFTWARE Item 5.5.3	42	5.5.3 The web application should support HLS and MJPEG streaming.	Please amend the compliance requirement as: 5.5.3 The web application should support H.265, H.264, HLS and MJPEG streaming.	Amended as required. The web application should support H.265, H.264, HLS and MJPEG streaming.
9	SECTION IV TECH. SPEC. III. Tech Spec. for CCTV cameras 5. VIDEO MANAGEMENT SOFTWARE Item 5.8	42	5.8 The VMS server software shall have the ability to be installed on an IP edge device—such as an IP camera or encoder that allows for 3rd party applications—allowing the device to serve as both a server and IP video recording device	Technical Installation of VMS Server in an IP edge device—such as an IP camera or encoder is not feasible until or unless the Proper Core, ram, Operating system is not available. Every Enterprise VMS software run on COTS server hence please delete this specification for the VMS.	The clause may be read as VMS Server software shall support for edge-based analytics. The VMS must be chosen to get the required analytics, ANPR functionalities and if required additional hardware/servers/storage should be provided by the Bidder at his own cost.
10	SECTION IV TECHNICAL SPECIFICATIONS III. Tech Spec. for CCTV cameras 6. Recording Server Specification	47	• ONVIF Profile S or better	All latest VMS software support ONVIF Profile S, G, M, T which help VMS to integrate with any 3rd part system over ONVIF and also get the meta data such as analytics data, edge recording from device. So please consider the ONVIF S, G, M, T for the VMS software	VMS software shall support ONVIF Profile S, G, M, T or better and shall be an ONVIF member at the "Full" membership level. The ONVIF website shall have a certificate to this effect.
11	TECHNICAL SPECIFICATIONS III. Tech Spec. for CCTV cameras 8. Specification for Rack Mount Recorder	48	Bidder shall consider camera edge based analytics or separate server based analytics for delivering proper events & alarms with respect to the VA required (Bidder shall consider all VA mentioned in the camera specification).	Please confirm the Server Based Analytics required from VMS OEM.	Tender specification is generic and minimum, but the Bidder shall comply with the VMS OEM recommendations in addition. The VMS must be chosen to get the required analytics, ANPR functionalities and if required additional hardware/servers/storage should be provided by the Bidder at his own cost.

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12	SECTION IV TECHNICAL SPECIFICATIONS III. Tech Spec. for CCTV cameras 8. Specification for Rack Mount Recorder	48	The VMS Server shall support failover architecture & support automatic failover for recording.	We understand that fail over functionality is not required for this project only the support is required please confirm	Please see the clarification given against query No.3 above.
13	SECTION IV TECHNICAL SPECIFICATIONS III.Tech Spec. for cctv cameras 5. VIDEO MANAGEMENT SOFTWARE	42	Additional Specifications	Please add the below specification in the 2.1.2 Video Management System/Video Recording/Video Analysis- The Video Management Software should support RTSPS or SRTP or RTSP over TLS Encrypted Live Streaming from cameras (If Supported by Cameras) to VMS as well as support streaming of RTSPS or SRTP or RTSP over TLS Encrypted Live Streaming from VMS servers to clients. To prevent unauthorized access to the streamed video, Video Management Software should support CA certificate-based HTTPS encrypted data & stream communication between the camera and the recording server. However the CA certificate will be provided by end user but this feature is to be enabled during deployment.	Minimum specification of VMS and cameras are mentioned in Bid Document. You can offer higher specification VMS and cameras
14	SECTION IV TECHNICAL SPECIFICATIONS III. Tech Spec. for cctv cameras	42	Additional Specifications	Considering the Gazette Notification Public Procurement (Preference to Make in India) Order 2017-Notifying CCTV/ Video Surveillance System for Security in furtherance of the Order	Video Management Software and Video Analytics Software should be certified by STQC laboratory or any other agency notified by Meity.

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	5. VIDEO MANAGEMENT SOFTWARE			dated 6th March 2024 or its latest amendment. We request you to kindly please add Cyber security clause in the project Video Management Software and Video Analytics Software should be certified by STQC laboratory or any other agency notified by Meity.	
15	SECTION IV TECHNICAL SPECIFICATIONS III.Tech Spec. for cctv cameras 5. VIDEO MANAGEMENT SOFTWARE	42	Additional Specifications	Please add Certificate clause: The software OEM should have CMMI v2.0 Maturity Level - 3, FIPS 140-2, ISO 14001, ISO 90003, ISO 27701 Certificate	The VMS OEM should have at least the following certificates: ISO 9001, 27001, ISO 27017, 14001 and CMM I Level 3.
2. BIDDER 2					
No.	RFP Reference(s) (Volume, Clause no., Page)	Page No.	Content of RFP requiring clarification	Amendment/Clarification required	CoPA Response
1.	SECTION IV TECHNICAL SPECIFICATIONS III. Tech Spec. for cctv cameras 5. Video Management Software	41	The Video Management System (VMS) software shall be used to view live and recorded video from capture cards and IP devices connected to local and wide area networks. The VMS software shall have a client/server-based architecture that can be configured as a standalone VMS system with the client software running on the server hardware and/or the client running on any network-connected TCP/IP workstation. Multiple client workstations shall be capable of	Considering the criticality of the project, it is recommended to consider the VMS platform which is a proven platform to ensure robustness of the system. In the view of same , it is recommended to consider the project experience as follows 1) The VMS should be ONVIF compliant with support for profiles S, G, T and M to ensure interoperability with any camera brand. Proposed software OEM should have full membership of ONVIF. The information should be available on the	In addition to the minimum specification for the VMS given in the Bid Document Page 41-46, following points shall also be complied. 1) The VMS should be ONVIF compliant with support for profiles S, G, T and M to ensure interoperability with any camera brand. Proposed software OEM should have full membership of ONVIF. The information should be available on the ONVIF website for verification.

			<p>simultaneously viewing live and/or recorded video from one or more servers. Multiple servers shall also be able to simultaneously provide live and/or recorded video to one or more workstations.</p>	<p>ONVIF website for verification. 2) The VMS OEM should be in existence in India since last 15 years. 3) The OEM should have at least the following certificates: ISO 9001, 27001, ISO 27017, 14001 and CMM I Level 3. 4) The VMS Software must be certified with STQC certification. ONVIF Compliance: Ensures seamless integration with any camera brand, flexibility, and vendor neutrality. Full OEM membership guarantees adherence to global standards and future expansion. OEM Presence (15+ Years): Indicates reliability, local support, and experience with India's regulatory and operational landscape. Certifications: ISO 9001: Quality management. ISO 27001/27017: Data&cloud security. ISO 14001: Environmental compliance. CMMI Level 3: Reliable service delivery. Ensures robust, secure, and eco-friendly solutions. STQC Certification: Validates VMS for security and performance as per Indian standards, crucial for high-security operations.</p>	<p>2) The OEM should have at least the following certificates: ISO 9001, ISO 27001, ISO 27017, ISO 14001 and CMM I Level 3 3) The VMS Software must be certified with STQC certification.</p>
2	<p>SECTION IV TECHNICAL SPECIFICATIONS III. Tech Spec. for</p>	52	<p>Point No.1& 2 : Cable Type & Fiber Type</p>	<p>Using metal gel filled tube will experience low water crush. Please mention crush resistance & tensile strength.</p>	<p>Water penetration test method is already mentioned in the tender document. Please refer point No.17 Cable tensile load is already mentioned in the tender document. Please refer</p>

	cctv cameras 23. FIBER SPECIFICATIONS				point No.13
3.	SECTION IV TECHNICAL SPECIFICATIONS III. Tech Spec. for cctv cameras 24. CABLE SPECIFICATIONS	53	Point No. 12: Cable outer Diameter & Point No. 15: Anti - Rodent	Cables outer diameter is not matching with anti rodent properties.	Cable outer diameter and anti rodent properties have no connection. Mentioned cable outer diameter is only nominal
4	SECTION IV TECHNICAL SPECIFICATIONS III.Tech Spec. for cctv cameras 6. Recording Server	46	1. Recording server – a note given as per the server recommendation. Can we go with VMS OEM recommendation provided the VMS OEM comply to all the VMS feature mentioned as item No:5 Tender only mentioned about the failover provision but the BOQ ITEM NO:28 showing the recording servers as 2 Nos. Kindly clarify.		Yes. The Bid specification is minimum. The Bidders can go with the VMS OEM recommendation, provided the required analytics and other facilities are obtained. The bidder can also bid with a VMS solution along with the recorder option but the given specification for the recorder as well as the VMS has to be complied as per VMS OEM recommendation for recording, analytics, server and client specification If addtl. Software or hardware required, the same shall be provided by the Bidder at his own cost. It is the bidder as well as the VMS OEMs responsibility for the 90 days recording as well as the performance of the solution for the next 7 years. If the NVR Recorder option is opted,

					please consider the failover Machine as per the BOQ item No. 28
5	SECTION IV TECHNICAL SPECIFICATIONS III.Tech Spec. for cctv cameras 3.Outdoor Type 2 MP ANPR / Zoom Type Box Camera	39	Point No. 12: The built in analytics for Object Counting	We request to kindly remove object counting as it cannot be performed in the edge level.	Object counting facility must be available either at edge level or via. VMS
6	Kindly suggest preferable make for the line items (SL No. 1 to 16)				Tender condition prevails
7	We appreciate the specification mentioned for the compliance are prepared to best of the industry standards except to the fact to the networking active components as those are the back bone of the whole solution therefore Kindly do recommend stating the OEM should be in the business of networking for the past 25 years .				Bidder must be in Surveillance business for at least the last 5 Years. Documentary evidence for the same shall be submitted along with the technical bid.
3. BIDDER 3					
No.	RFP Reference(s) (Volume, Clause no., Page)	Page No.	Content of RFP requiring clarification	Amendment/Clarification required	CoPA Response
1	SECTION IV TECHNICAL SPECIFICATIONS 1. Scope of work	31	We propose to switch over from NVR to VMS which provides more control over the video data and allows for more efficient management of video surveillance networks. And in Page.46 support min 128 channel rack mountable NVR or recording server	We would request you to kindly clarify Whether we need to consider VMS Or NVR for the solution.	Please see the clarification given against Bidder 1, Item No.3

2	SECTION IV TECHNICAL SPECIFICATIONS 1. Scope of work	33	Suitable provision for disaster recovery mechanism should be available.	We would request you to kindly clarify If we go with NVR, whether we need to consider separate hardware for the DR	YES. Please see the clarification given against Bidder 1, Item No.3
3	SECTION IV Technical specifications for CCTV Cameras	37	Security : HTTPS(SSL) Login Authentication IP address filtering user access log 802.1X Authentication (EAP-TLS, EAP-PEAP MSCHAPv2) Device certificate secure by default certificate HTPM Secure OS/Boost/ Storage verify firmware forgery cyber security assurance program UL CAP (UL 2900-1)	We would request you to kindly amend the clause as below: HTTPS(SSL) Login Authentication IP Address filtering user access log 802.1X Authentication (EAP-TLS, EAP-LEAP, EAP-PEAP) Device certificate Secure by default certificate Secure OS/Boost/Storage verify firmware forgery cyber security assurance program UL CAP	Tender specification prevails. Higher security cameras can be offered
4	SECTION IV Tech. Spec. III. General Specifications Item 21	37	Analytics: Defocus detection, Directional detection, Fog detection, Face detection, Motion detection, Digital auto tracking, Appear/Disappear, enter/exit, Loitering, Tampering, Virtual line, Audio detection, Sound classification , Shock detection	We are requesting the removal of “Sound Classification” from camera analytics. Since the sound classification feature has shown limited usage and does not significantly contribute to camera analytics objectives. The change will help enhance system efficiency and focus on more relevant analytics features.	Amended as Analytics: Defocus detection, Directional detection, Fog detection, Face detection, Motion detection, Digital auto tracking, Removal/Added object, Enter/Exit, Loitering, Tampering, Line crossing
5	SECTION IV Technical Spec. Gen. Spec. -Item22	37	Cyber security: OEM shall have Global cyber security certifications-ETSI EN 303645	As the ESTI EN 303 645 is a consumer cyber security certification, we kindly request that the mandatory requirement for OEMs be removed.	Deleted clause 22 Cyber security of Page 37 of the Bid Document
6	SECTION IV Tech. spec. III. Tech. Spec. for CCTV Cameras 2) 2MP 30X	38	2 MP 30x Outdoor type PTZ Camera IR illumination 400Mtr or better	We would request you to kindly amend the clause as below: 2MP 30X Outdoor type PTZ Camera IR illumination: 200Mtr or better This adjustment is suggested as most	We need a minimum of 400 mtrs IR range to be covered in low light illumination as the location identified for the PTZ camera is to have long range visibility. Anything lesser than that will

	outdoor type PTZ Camera -Item 7			OEMs currently offer IR illumination for 2MP PTZ cameras that falls below 250 meters . By updating the specification, allow a wider range of bidders to participate in this tender.	not suffice our requirement. Hence tender conditions prevail
7	SECTION IV Tech. Spec. III. Tech. Spec. for CCTV Cameras 1) 5MP Outdoor box type Motorised VF IR Camera Item no.9	38	5 MP Outdoor Box type Motorised VF IR Camera Image settings: Vivid, traffic overview	We are requesting the removal of VIVID, traffic overview from the image setting since VIVID traffic overview is specific brand or software feature	Agreed, VIVID traffic overview deleted from Camera Image Settings.
8	SECTION IV Tech. Spec. III. Tech. Spec. for CCTV Cameras 9) 4/8-port POE+ Switch with 2 SF PORT- Certifications	49	4/8-port POE+Switch with 2 SF PORT <ul style="list-style-type: none">• Certifications: UL, CE/FCC, BIS, IS Flash memory:32MB	Please amend the clause as below: <ul style="list-style-type: none">• Certification: UL/CE/FCC, BIS IS 13252: 2010/TEC Since UL and FCC certificate are from USA and not required in make in India product. Flash memory:16MB	Amended the clause as below: <ul style="list-style-type: none">• Certification: UL/CE/FCC, BIS IS 13252: 2010/TEC Flash memory:32MB
9	SECTION IV Tech. Spec. III. Tech. Spec. for CCTV Cameras 11&12) 24-Port 1000 base-T Gigabit PoE + Smart switch & 24-port 1000 base- T Gigabit Smart switch Certifications	50	24-Port 1000 base-T Gigabit PoE + Smart switch & 24-port 1000 base-T Gigabit Smart switch <ul style="list-style-type: none">• Certifications: UL, CE/FCC, BIS, IS Packet buffer:2MB or above	Please amend the clause as below: Since UL and FCC certificate are from USA and not required in make in India product.	Amended the clause as below: <ul style="list-style-type: none">• Certification: UL/CE/FCC, BIS IS 13252: 2010/TEC
10	SECTION IV Tech. Spec.	50	24-port 1/10G Base-X Layer-3 stackable managed switch.	Please amend the clause as below: Certification Packet buffer:1.5MB or	Amended the clause as below: <ul style="list-style-type: none">• Certification: UL/CE/FCC, BIS IS

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	III. Tech. Spec. for CCTV Cameras 10) 24-port 1/10G Base-X Layer-3 stackable managed switch.		:UL, CE/FCC, BIS, IS And Physical Interfaces Ethernet: Out of band 1G port, Console: RJ 45, Console: Mini USB, Storage: USB	above a50tion: UL/CE/FCC, BIS IS 13252: 2010/TEC Since UL and FCC certificate are from USA and not required in make in India product. And Please amend the text to state that Ethernet: Out of band 1G port, Console: RJ45/Mini USB, Storage: USB: UL/CE/FCC, BIS IS 13252: 2010/TEC	13252: 2010/TEC Amended Console: RJ 45/Mini USB All other specification in TD prevails
11	Section VII BILL OF QUANTITIES Item 12	68	Network surge protector APC/DHEN/ CAPE ELECTRIC/ OBO BETTERMANN/ L&T/Any other make with approval of CoPA.	We would request you to kindly add CITEL Product also for this clause	If any new brands are to be included, credentials are to be submitted to EIC and got approved before taking procurement action
12	Section VII BILL OF QUANTITIES Item 23	69	Pole Structure with Foundation which could stand the conditions of the installation area (COT)	We would request you to kindly help with sharing drawing for the same	The successful bidder shall submit drawings or technical specifications to CoPA and get approval before installing
13	Section VII BILL OF QUANTITIES Item 36	69	PTZ Joy Stick Controller	The PTZ Joystick Controller is no longer required, as it is an outdated option. We can effectively operate the PTZ system using a mouse in VMS. Therefore, we suggest removing the PTZ Joystick Controller from the Bill of Quantities	BOQ is prepared based on the requirement of CISF, the User. Hence, tender condition prevails
14	Section IV Tech. Spec. III. Tech. Spec. for CCTV Cameras 6) Recording Server Item 17 Approval	47	Recording Server: Approval: FCC, BIS, UL	We would request you to kindly amend the clause as below: Approval: FCC/ BIS/ UL/CE	Amended as FCC/ BIS/ UL/CE

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15	Section VII BILL OF QUANTITIES Item 6,7& 35	68 & 69	Specification for RACK's	<p>Requesting to kindly provide detailed specification for below racks :</p> <p>Outdoor wall mount Rack- How much U required for Outdoor wall mount Rack and provide detailed specification for the same. 6U indoor Rack with Tray- Please provide Detailed specification. 32 u rack with all accessories- Please provide Detailed specification.</p>	<p>Outdoor racks(9U) shall be IP 65 and indoor racks(6U) shall be IP 56 as mentioned in BOQ item No.6 & 7(Page 68 of TD) and with minimum specifications mentioned under item 20(Page 52 of TD). Mounting of rack shall be decided as per site survey. Depth of the rack depends upon the depth of the equipments supplied by the Bidder like switch, ups etc. Outdoor racks shall be suitable for marine environment. 32U rack is indoor. The sample shall be got approved from EIC before procurement.</p>
16	Section VII BILL OF QUANTITIES AMC Page 56, Clause 5	56, 70	Rates for the Comprehensive Annual Maintenance Contract of the 35 nos. of IP CCTV security cameras & accessories for five years after 2-year guarantee period	<p>We would request you to kindly Clarify. Resource is required/considered during AMC Tenure</p>	<p>Page 56, Clause 5, first line is amended as "Upon written intimation/ intimation over telephone/ mail/ whatsapp of a complaint/ defect (during the guarantee/ warranty/ AMC period), the contractor should send representative(s) to attend the defects immediately, but not later than 12 hours"</p>
17	Section VII BILL OF QUANTITIES Item 24	69	P2P link for the wireless communication 3 Nos.	<p>Kindly clarify on Quantity of P2P, Since for P2P we need to consider in even count (For Receive and send)</p>	<p>P2P connections are intended for the cameras at 2 locations, viz. Cochin Oil Terminal and North Tanker Berth. The receiving end will be on the 7th floor of the New Ad. Bldg. of CoPA, so quantity of BOQ item no.24 may be read as 3 pairs instead of 3 Nos.</p>
18	Section VII BILL OF QUANTITIES Item 22	69	UPS for the requirement	<p>The considered UPS are online or Offline kindly confirm. Can we provide an external battery for UPS's?</p>	<p>ONLINE UPS is required. For 800 VA UPS, inbuilt battery is specified in BOQ. For 2 KVA UPS external battery can be provided</p>

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19	Section VII BILL OF QUANTITIES Item 14	69	Earthing Strip with RequiredLinks and Earthing Compound	Any specific/certified earthing required kindly confirm	Earthing as per IS 3043 shall be provided
20	Section VII BILL OF QUANTITIES Item 28 a.	69	VMS Server	What is the processer speed and generation of the server- kindly confirm	Minimum specification for the VMS is mentioned in Pages 41-49 of Bid Document. The specification varies depending on the VMS chosen
21	Section VII BILL OF QUANTITIES Item 28 a,b &c	69	VMS Server/NVR and Rack Mount Recorder: Warranty 5 years & Software support with upgrades for 5 more years	If we go with NVR which RAID to be considered And As per requirement of RFP is 7 year for the contract (2-year Warranty +5 CAMC) but in this clauses, asking for 10 year of support –kindly clarify on this	Refer page 50 of TD. Rates may be taken for the VMS Soft ware support for 7 years only, but support shall be extended if required by CoPA
22	Section VII BILL OF QUANTITIES Item 30	69	Work Stations	What is the processer speed and generation of the Work station — Kindly clarify	Minimum specifications for the work station given in page 47 of TD
23	Section IV TECHNICAL SPECIFICATIONS III. Tech. Spec. for CCTV Cameras Item 14	51	P2P link for the wireless communication - Omani directional	When considering (P2P) communication with low bandwidth (Omani directional) , you might want to optimize your system by choosing a more appropriate antenna type. While an omni directional antenna could work for basic use cases , there are better antenna options for P2P systems that can improve performance even with low bandwidth	Minimum specification is mentioned in TD, which prevails. You can offer advanced systems which suit the purpose.
24	Section VII BILL OF QUANTITIES Item I.2	30	ANPR Camera	Since ANPR analytics required separate server, do we need to consider one more (Hardware)server for the same.?	Yes. Please refer the clarification given against query No.3 &4 of Bidder 1

25	Section II Instruction to tenderers 13.1.5. Bid Submission	10	MAF may be submitted for all the items with 5 year warranty viz. All the CCTV cameras, Racks, Network switches, POE switches, SFP switch, UPS, P2P link, Rack Mount Recorder, HDD, High End work station, professional display PTZ joy stick controller	We would request you to kindly amend the clause as below: All the CCTV cameras, Racks, Network switches, POE switches,P2P link, Rack Mount Recorder, since smaller quantities/ items may not support for MAF issuance from the OEM, Please consider providing the MAF solely for major equipment, as mentioned above.	Tender Condition prevails
26	Section IV Tech. Spec. III. Tech. Spec. for CCTV Cameras 6) Recording Server	46	Recording Server Specification	As per the VMS specification considered 200 camera licenses, and the server specifications have been designed based on the current requirement of 83 cameras. Could you please confirm how to proceed with this?	Please refer the clarification given against query No.3 &4 of Bidder 1
27	SECTION IV TECHNICAL SPECIFICATIONS I. SCOPE OF WORK A. General Item 2	31	2. At present, Cochin Port has a comprehensive network of NVR based IP cameras (47 Nos.) spread all over Willingdon Island (8 sq. km). List and type of existing cameras with locations provided is given below for reference. These 47 Nos. cameras (10 Nos. in CFS) are of HANWHA make and installed after 2016 and are under AMC/ Guarantee. These cameras are NVR based with HDD's capable of recording upto 90 days and visuals available in the CISF control room on the 7th floor of the New Ad. Bldg. The data is being transmitted through CoPA's OFC cables where available and through BSNL Leased lines.	Because the Existing camera will be mode in the new VMS software, therefore please provide the recording parameter details for existing as theses camera are very old and don't support latest H.265 codec, Hence to calculate the required storage size please confirm the recording parameter.	Existing cameras support H.264. Existing camera and recording parameter details attached
28	SECTION IV TECHNICAL SPECIFICATIONS	31	3. In the present proposal we intend to install additional 35 Nos. cameras at various locations of CoPA including CFS.	We understand that the new VMS Software and Hardware will be designed for 200 camera only, However the VMS shall be	Please refer the clarification given against query No.3 &4 of Bidder 1

	I. SCOPE OF WORK A. General Item 3		<p>Our existing CCTV surveillance is based on NVR. We propose to switch over from NVR to VMS which provides more control over the video data and allows for more efficient management of video surveillance networks.</p> <p>The VMS offered shall support up to 500 cameras with adequate capacity video management server, camera recording server and hard disks for recording live videos up to 90 days. In the estimated rates, license for 200 cameras for 5 years is included. No failover for Servers considered but provision for providing failover is there in the Server. The Tenderer shall consider all the above and quote accordingly.</p>	<p>capability to support 500 camera in future by increase of hardware, license and storage component . Please confirm</p>	
29	SECTION IV TECHNICAL SPECIFICATIONS I. SCOPE OF WORK A. General Item 7	32	<p>7. The tenderer may visit the location and assess the present network & cameras and new requirements before submission of the offer for total CCTV solutions. The ANPR cameras are proposed to be installed at the two entry Toll Gates(IG Road Toll Gate and Bristow Road Toll Gate) of CoPA. The ANPR cameras shall identify the registration numbers of vehicles entering / exiting through the toll gates(24 hours). There are 2 lanes for INCOMING and 2 lanes for OUTGOING in each Toll Gate. The CCTV footages shall be viewable in the CISF control room on the 7th floor of the New Administrative Building of CoPA. The Bidder shall ensure that the CCTV visuals</p>	<p>Considering the BOQ and tender requirement we understand that Bidder has to provide ANPR camera with ANPR software license for 9 camera, However we did not find any Software specifications and Hardware requirement ANPR camera. Hence please provide the clarity on ANPR software to</p>	<p>Please refer the clarification given against query No.3 &4 of Bidder 1</p>

			<p>and number plates of vehicles are captured in the entire 24 hours. The Capacity of the cameras, poles etc. shall be designed accordingly. The ANPR Cameras will be accepted only after all images are seen to the satisfaction of the Engineer-in-charge. Presently we have installed ordinary IP cameras and remote surveillance is being done with BSNL LL facility. We intend to lay OFC cable from the OFC point near Mattancherry Wharf to IG Road Toll Gate and Bristow Road Toll Gate and surrender the existing P2P connection availed from BSNL.</p> <p>Also OFC is proposed to be laid from IG Road Toll Gate to existing CCTV cameras in A2-A3 area near Avenue walk way. Wireless communication is also intended from the cameras at two locations, viz. Cochin Oil Terminal and North Tanker Berth to CISF control room on the 7th floor of New Administrative Building.</p> <p>2 MP Outdoor ANPR / Zoom type box Camera - 9 No.</p>		
30	<p>SECTION IV TECHNICAL SPECIFICATIONS I. SCOPE OF WORK A. General Item 8</p>	32	<p>8. In the Container Freight station (CFS), we propose to install 6 Nos. new IP cameras. Presently there are 10 Nos. (Infinova make) box type cameras, 8 Nos. Zoom type box camera (Hanwha make) and 2 Nos. Fish Eye Cameras (Hanwha make) inside CFS. The existing Hanwha/ Infinova cameras are to</p>	<p>Currently "Back up of existing cameras is available for 90 days at CISF CONTROL ROOM. At CFS only 30 days". Please provide the clarity on the Backup requirement for Existing cameras with recording parameter(Resolution, fps, days), also confirm that the recording will</p>	<p>Please refer the clarification given against query No.6 of Bidder 1</p>

			<p>be re-positioned and fixed along with the new cameras inside CFS for effective surveillance of CFS. The successful bidder has to do the site study and submit the detailed layout positioning cameras and its accessories in any latest format. All cameras should be integrated in the as built layouts and the same should be configured to display for easy location identification. All cameras should be positioned according to the Cochin Port requirement and the vendor should ensure the coverage and quality footages of each area as a part of commissioning. The new cameras, VMS etc. shall be compatible with the existing systems and images shall be viewable locally at the ATM's room inside CFS and at the 7th floor of the New Administrative Building.</p>	<p>be done at only single centralized location not at multiple locations</p>	
31	<p>SECTION IV TECH. SPEC. III.Tech Spec. for cctv cameras 5. VIDEO MANAGEMENT SOFTWARE</p>	41	<p>The Video Management System (VMS) software shall be used to view live and recorded video from capture cards and IP devices connected to local and wide area networks. The VMS software shall have a client/server-based architecture that can be configured as a standalone VMS system with the client software running on the server hardware and/or the client running on any network-connected TCP/IP workstation. Multiple client workstations shall be capable of simultaneously viewing live and/or recorded video from one or more servers. Multiple servers shall also be</p>	<p>Please describe the meaning of capture cards. Does it mean SD card?</p>	<p>Capture card may be read as encoder.</p>

			able to simultaneously provide live and/or recorded video to one or more workstations.		
32	SECTION IV TECH. SPEC. III.Tech Spec. for cctv cameras 5. VIDEO MANAGEMENT SOFTWARE Item 7.9	41	7.9 The VMS shall support configurable “at most” rules that will automatically delete video for a camera after a specified amount of time. The VMS also shall support configurable “at least” rules that will delete newer video on other cameras to preserve older video from cameras with an “at least” rule specified.	Seems like there is an ambiguity In second clause: and we can read it as below, kindly confirm: The VMS also shall support configurable — at least rules that will delete Older video on other cameras to preserve newer video from cameras with an —at least rule specified	Tender condition self explanatory and prevails
33	SECTION IV TECH. SPEC. III.Tech Spec. for cctv cameras 5. VIDEO MANAGEMENT SOFTWARE Item 8.2	43	8.2 The VMS shall support CIFS and NFS network shares for archive target locations. It shall be able to archive video to multiple locations and base the archive on camera, event type or an archive schedule.	We would request you to kindly amend the clause as : It shall be able to archive video to One locations	Amended as required “It shall be able to archive video to One location ”
34	SECTION IV TECH. SPEC. III.Tech Spec. for cctv cameras 5. VIDEO MANAGEMENT SOFTWARE Item 5.5.3	42	5.5.3 The web application should support HLS and MJPEG streaming	Please amend the compliance requirement as: 5.5.3 The web application should support H.265, H.264, HLS/ MJPEG streaming.	Amended. The web application should support H.265, H.264, HLS/ MJPEG streaming.
35	SECTION IV TECH. SPEC. III.Tech Spec. for cctv cameras	44	11.10 e) Time delta between server and camera	NTP is the most accurate and commonly used way to sync clocks between devices, we would rest you to kindly consider NTP server for the time synchronize	Minimum spec is mentioned in TD. Higher or more accurate versions meeting CoPA requirement is also acceptable.

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	5. VIDEO MANAGEMENT SOFTWARE Item 11.10.e				
36	SECTION IV TECH. SPEC. III.Tech Spec. for cctv cameras 5. VIDEO MANAGEMENT SOFTWARE Item 5.8	42	5.8 The VMS server software shall have the ability to be installed on an IP edge device—such as an IP camera or encoder that allows for 3rd party applications— allowing the device to serve as both a server and IP video recording device	Technical Installation of VMS Server in an IP edge device— such as an IP camera or encoder is not feasible until or unless the Proper Core, ram, Operating system is not available. Every Enterprise VMS software run on COTS server hence please delete this specification for the VMS.	Amended as “ VMS Software should control edge device/IP camera settings and support a server-client architecture”
37	SECTION IV TECH. SPEC. III.Tech Spec. for cctv cameras 8)Specification for Rack Mount Recorder -Item 1	48	The VMS Server shall support failover architecture &support automatic failover for recording.	We understand that failover functionalities not required for this project only the support is required please confirm	Please refer the clarification given against query No.3 &4 of Bidder 1
38	SECTION IV TECH. SPEC. III.Tech Spec. for cctv cameras Item 9,10,11&12) Specification for for Switches	49 to 51	Switches Specification	Upon reviewing the switches specification, it seems that highly specific to a particular OEM, rather than being general. We have approached multiple switch manufacturers, but unfortunately, none of them are able to comply with the requirements, particularly the certification aspects and other clauses In light of this, we kindly request that the specification be revised to a more general format to allow for broader compliance from multiple OEMs and broader range bidder participation.	Tender condition prevails

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39	SECTION IV TECH. SPEC. III.Tech Spec. for cctv cameras Item 14) P2PPoint to point Wireless Connectivity	51	P2P Point to point Wireless Connectivity Wind Survival: 200 km/h (124 mph)	We would request you to kindly amend the clause as below: P2P Point to point Wireless Connectivity Wind Survival: 180 km/h (124 mph)	Tender condition prevails
40	Section VII BILL OF QUANTITIES Item 30	69	High End Work station	We would request you to kindly provide detailed specification for the High-End Work station	Minimum specification for work station given in Page 47 of TD
4. BIDDER 4					
No.	RFP Reference(s) (Volume, Clause no., Page)	Page No.	Content of RFP requiring clarification	Amendment/Clarification required	CoPA Response
1.	SECTION III. TECHNICAL SPECIFICATIONS - GENERAL SPECIFICATIONS FOR CCTV CAMERAS – Item 14	36	Edge Storage - Support for Micro SD/SDHC/SDXC 512 GB or better -	The camera shall have a built-in encryption-supported SD card slot upto 1 TB of single slot. . OEM-approved and Speed Class 10, UHS Speed Class U3 of Surveillance Card 1TB card. Support for health status monitoring with cameras. Memory card to be supplied along with each camera. - To Increase on board storage of camera	Tender specification is minimum. Higher facility cameras can be offered
2	SECTION III. TECHNICAL SPECIFICATIONS - GENERAL SPECIFICATIONS FOR CCTV CAMERAS –	36	Memory- Minimum 2 GB RAM, 512 MB Flash	Minimum 1 GB RAM, 512 MB Flash – Request to consider. There is no clarity for the different types of cameras. Flash memory plays important role in performance of camera, better flash memory ensures better operational performance. Many OEMs supports	Amended as : Memory- Minimum 1 GB RAM, 512 MB Flash or better

	Item 15			mentioned specifications which will allow fair participation.	
3	SECTION III. TECHNICAL SPECIFICATIONS - GENERAL SPECIFICATIONS FOR CCTV CAMERAS – Item 18	36	Security - HTTPS(SSL) Login Authentication Digest Login Authentication IP Address Filtering User access log 802.1X Authentication (EAP-TLS, EAP-LEAP, EAP-PEAP MSCHAPv2) Device Certificate Secure by default certificate HTPM Secure OS/Boot/Storage Verify firmware forgery Cyber Security assurance program UL CAP(UL 2900-1)	HTTPS(SSL) Login Authentication Digest Login Authentication IP Address Filtering User access log 802.1X Authentication (EAP-TLS) Device Certificate Secure by default certificate cryptographic hardware: TPM/Secure element Secure OS/Boot/Storage Verify firmware forgery Cyber Security assurance program UL CAP(UL 2900-1/ULCAP_187) Request to consider. HTPM is from one particular OEM, specifications mentioned are pure reference from the particular brand. Please consider the general specifications as requested to allow fair participation.	Amended as Security – HTTPS(SSL) Login Authentication Digest Login Authentication IP Address Filtering User access log 802.1X Authentication (EAP-TLS, EAP-LEAP, EAP-PEAP MSCHAPv2) Device Certificate Secure by default certificate cryptographic hardware: TPM/Secure element Secure OS/Boot/Storage Verify firmware forgery Cyber Security assurance program UL CAP(UL 2900-1/ULCAP_187)
4	SECTION III. TECHNICAL SPECIFICATIONS - GENERAL SPECIFICATIONS FOR CCTV CAMERAS – Item 19	37	Essential features - Motion Detection, Loitering, Tampering, Electronic Image Stabilization, Built In Heater, FAN & Temperature Control, Defog, Auto tracking	Motion Detection, Loitering, Tampering, Electronic Image Stabilization, Built In Heater, FAN & Temperature Control, Defog, Auto tracking (PTZ camera) Auto tracking is a feature of PTZ camera and Defog/EIS is not functional requirement for the fish eye cameras. Request to provide the clarity for different types of cameras. Please consider the general specifications as requested to allow fair participation.	Auto Tracking need not be there for Fish Eye Camera. But Defog and EIS is required for Fish Eye Camera. For crisper image of the video, DIS is required. In coastal conditions, mist/moisture is prone to form. So Defog feature is also necessary.
5	SECTION III. TECHNICAL SPECIFICATIONS -	37	Analytics - Defocus detection, Directional detection, Fog detection, Face detection, Motion detection, Digital Auto tracking,	Directional detection, Fog detection, Face detection metadata, Motion detection, Appear/Disappear, Enter/Exit, Loitering,	Defocus detection not required for Fish Eye Camera

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	GENERAL SPECIFICATIONS FOR CCTV CAMERAS – Item 21		Appear/Disappear, Enter/Exit, Loitering, Tampering, Virtual line, Audio detection, Sound classification, Shock detection	Tampering, Virtual line, Audio detection, Sound classification, Shock detection Request to consider. All the mentioned analytics are not possible to achieve in all the types of camera. Eg: Defocus detection not applicable for fixed lens fisheye camera. The analytics asked in the tender are referred from specifically one brand which is not common for many other potential OEMs. Please consider the general specifications as requested to allow fair participation.	
6	SECTION III. TECHNICAL SPECIFICATIONS - GENERAL SPECIFICATIONS FOR CCTV CAMERAS – Item 27	37	Service Centre - Oem/Bidder should have own/authorised service centre in South India for past 5 years	OEM should have own service center in South India for past 5 years – Own RMA center provide better service. Authorized service centers are one more entity in the service which always may not provide efficient service and can increase the cost for service.	Tender Condition prevails
7	SECTION III. TECHNICAL SPECIFICATIONS - GENERAL SPECIFICATIONS FOR CCTV CAMERAS – Item 28	37	OEM Warranty- Minimum of 5 Years	Minimum of 5 years for all components of cameras, should provide the same in letter head – Some OEMs offers only 1 years or 2 years warranty on core components and claims 5 years on products by hiding warranty policy, which will create major service issues in future.	OEM Warranty for Minimum of 5 Years should be there for all components of Camera and it is the Contractor’s responsibility to maintain the CCTV surveillance system in all respects for 7 years.
Additional points to secure the surveillance system					
8	SECTION III. TECHNICAL SPECIFICATIONS -		System on Chip for cameras	Recommend to have system own chip from same Oem from all the cameras offering - To increase the cyber security and	Chipset/Processor from same OEM is required, to ensure that no Vulnerability is carried out through

				performance for cameras	Chipset.
9	SECTION III. TECHNICAL SPECIFICATIONS -		Video Streams	Minimum 4 Nos. individually configurable simultaneous streams in H.265 & 25 fps or better - For future evaluation and multiple streaming purpose	Specification given in TD is minimum. You can offer cameras with higher facilities
10	Section IV Tech. Spec. III. TECH. SPEC. for CCTV cameras 1) 5 MP OUTDOOR BOX TYPE MOTORISED VF IR CAMERA Item 3	38	Minimum Illumination - Colour: 0.04 lux(F1.3, 1/30 sec, 30 IRE) B/W: 0.004 lux(F1.3, 1/30 sec, 30 IRE), 0 lux(IR LED on) or better	Colour:0.15 lux, B/w: 0.05 lux, 0 lux with IR The specifications parameters are more specific and reference of particular brand and model number. Request to consider specification which is more general and required for functional requirements, to allow participation from potential brands.	Amended as : Minimum Illumination – Colour:0.15 lux, B/w: 0.05 lux, 0 lux with IR or better
11	Section IV Tech. Spec. III. TECH. SPEC. for CCTV cameras 2)2 MP 30 X OUTDOOR TYPE PTZ CAMERA	38,39	Additional points for early warning		
11.1	As item no.10- Integrated with IP Speaker		IP Horn speaker build in with Max sound pressure level >121 dB & Built-in 7 W Class D amplifier	According to specific site conditions of location, its recommended to provide the cameras with speaker in their system and the solutions to be updated to cater the upcoming requirements to address the unwanted entries through back water/ sea and warn them accordingly.	Specification mentioned is minimum. Higher facility cameras can be offered
11.2	As item no.11- Internal Memory of IP Speaker	39	Minimum 1 GB RAM, 512 MB Flash		
11.3	As item no.12- Casing for IP Speaker	39	IP66- and NEMA 4X-rated		
11.4	As item no.13- Power for IP Speaker	39	PoE IEEE 802.3af/802.3at Type 1 Class 3 with 13W		

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11.5	As item no.14- Communication allows with IP Speaker	39	Supports with SIP protocol. Compatibility with: Yealink, Cisco, Linphone, Grandstream, 2N. PBX/SIP servers: Cisco Call Manager, Cisco BroadWorks, Avaya, Asterix, Grandstream Cloud service providers: Webex, Zoom		
12	SECTION III. TECHNICAL SPECIFICATIONS - 4. 6 MP INDOOR TYPE FISH EYE CAMERA		Additional points for early warning		
12.1	Integarted with IP Speaker		Ip Horn speaker build in with Max sound pressure level >121 dB & Built-in 7 W Class D amplifier	According to specific site conditions of location, it is recommended to provide the cameras with speaker in their system and the solutions to be updated to cater the upcoming requirements to address the unwanted entries through back water/ sea and warn them accordingly.	
12.2	Internal Memory of IP Speaker		Minimum 1 GB RAM, 512 MB Flash		
12.3	Casing for IP Speaker		IP66- and NEMA 4X-rated		
12.4	Power for IP Speaker		PoE IEEE 802.3af/802.3at Type 1 Class 3 with 13W		
12.5	Communication allows with IP Speaker		Supports with SIP protocol. Compatibility with: Yealink, Cisco, Linphone, Grandstream, 2N. PBX/SIP servers: Cisco Call Manager, Cisco BroadWorks, Avaya, Asterix, Grandstream Cloud service providers: Webex, Zoom		
13.	Section IV Tech. Spec. III. TECH. SPEC. for CCTV cameras 5) VIDEO	41	Considering the criticality of the project , it is recommended to consider the VMS platform which is a proven platform to ensure robustness of the system. In the view of same , it is recommended to	ONVIF Compliance: Ensures seamless integration with any camera brand, flexibility, and vendor neutrality. Full OEM membership guarantees adherence to global standards and future expansion.	Please see the clarification given against query No.1 of Bidder 2 above

	MANAGEMENT SOFTWARE		<p>consider the project experience as follows:</p> <p>1) The VMS should be ONVIF compliant with support for profiles S, G, T and M to ensure interoperability with any camera brand. Proposed software OEM should have full membership of ONVIF. The information should be available on the ONVIF website for verification.</p> <p>2) The VMS OEM should be in existence in India since last 15 years.</p> <p>3) The OEM should have at least the following certificates: ISO 9001, 27001, ISO 27017, 14001 and CMM I Level 3.</p> <p>4) The VMS Software must be certified with STQC certification.</p> <p>5) Please specify the no of ANPR 2MP Camera License and also specify its features required</p>	<p>OEM Presence (15+ Years): Indicates reliability, local support, and experience with India's regulatory and operational landscape.</p> <p>Certifications: ISO 9001: Quality management. ISO 27001/27017: Data and cloud security. ISO 14001: Environmental compliance. CMMI Level 3: Reliable service delivery. Ensures robust, secure, and eco-friendly solutions.</p> <p>STQC Certification: Validates VMS for security and performance per Indian standards, crucial for high-security operations.</p>	
Docs Queries					
14	SECTION I Notice Inviting Tender Section VII BoQ Item 28 a,b&c	5&69	VMS & Server - VMS compatible with new and existing cameras, including database management and recording server.	Are licenses for both new and existing cameras included in the VMS scope?	Yes. Life long License for 100 cameras shall be included in the offer
15	Section VII BoQ Item 22	69	Power Solutions -UPS systems for CCTV, PoE switches, and network racks.	Confirm the backup duration and power rating requirements for UPS systems.	1 hour. Please see the specification for UPS given in Page 51 of TD
16	Section VII BoQ Item 24	69	P2P Links -Point-to-point wireless links for remote locations.	Provide details on distance, bandwidth, and environmental conditions for P2P links.	P2P link is intended for wireless communication of cameras from 2 locations ie. North Tanker Berth & Cochin Oil Terminal to the CCTV Control

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					room on the 7 th floor of the New Ad. Bldg. So Qty is 2 pair or 4 Nos. Aerial distance is 2500 Metres and 1500 Metres respectively. Minimum Band Width 150 mbps. For specification, please see TD Page 51.
17	Section VII BoQ Item 6,7,35	69	Racks - Network racks to house switches, servers, and other devices.	Confirm the size, type (wall/floor mount), and number of racks required for the project.	Outdoor racks shall be IP 65 and indoor racks IP 55. The type of mounting is to be decided based on site conditions and size is to be decided based on the number of cameras, with provision for spare in future. Before procurement, drawings and technical spec. shall be got approved from EIC.
18	Section I NIT Item2.4	3	Prequalification - Bidders must have a service center in South India operational for at least 5 years.	Please clarify its Bidder /OEM	Either Bidder or OEM shall have own/authorized service centre in South India for the past 5 years.
19	BILL OF QUANTITIES	6	Network Installation -Use of OTDR for fiber testing and certification.	Should OTDR test reports be submitted as part of the installation completion documents?	Yes
20	Section I NIT Item 6		Site Survey	Kindly provide the facility to do site survey and share the contact details to proceed the same	Already provided
21			Warranty for Existing Cameras	Please Specify "Bidder should consider Warranty only for newly Proposed hard wares "	Warranty for existing cameras is not envisaged in this bid. But the successful bidder shall maintain the existing cameras also and ensure the availability of footages in the control room
22	SECTION IV	49	4/8-port POE+ Switch With 2 SF PORT	Request you to replace the 4/8 Port	The existing specification switches are

	TECH. SPEC. III.Tech Spec. for cctv cameras Item 9 Switches			Switch with an industrial-grade switch that can withstand outdoor environmental conditions	sufficient, but Industrial grade switch may also be provided. It is the responsibility of the Contractor to maintain the entire system for 7 years without fail.
23	SECTION IV TECH. SPEC. III.Tech Spec. for cctv cameras Item 9 Switches	49	4/8-port POE+ Switch With 2 SF PORT-Flash Memory - 32MB	Request you to change the specification to "16MB or Above"	Tender condition prevails
24	SECTION IV TECH. SPEC. III.Tech Spec. for cctv cameras Item 9,10,11&12) Specification for for Switches	49 to 51	4/8-port POE+ Switch With 2 SF PORT, 24-port 1/10G Base-X Layer-3 Stackable Managed Switch, 24-port 1000base-T Gigabit PoE+ Smart Switch, 24-port 1000base-T Gigabit Smart Switch - Certifications - UL, CE/FCC, BIS, IS	Request you to add " OR TEC Certificate " instead of UL, CE/FCC, BIS, IS & MII	MII is already there in GEM. Certifications – UL/ CE/FCC / BIS/ IS/ TEC certificate .
5. BIDDER 5					
No.	RFP Reference(s) (Volume, Clause no., Page)	Page No.	Content of RFP requiring clarification	Amendment/Clarification required	CoPA Response
1	Section IV Tech. Spec. III. TECH. SPEC. for CCTV cameras 5) VIDEO MANAGEMENT SOFTWARE	41	Additional- Considering the criticality of the project, it is recommended to consider the VMS platform which is a proven platform to ensure robustness of the system. In the view of same , it is recommended to consider the project experience as follows : 1) The VMS should be ONVIF compliant with support for profiles S, G, T and M to ensure interoperability with any camera brand. Proposed software OEM should have	ONVIF Compliance: Ensures seamless integration with any camera brand, flexibility, and vendor neutrality. Full OEM membership guarantees adherence to global standards and future expansion. OEM Presence (15+ Years): Indicates reliability, local support, and experience with India's regulatory and operational landscape.	Please see the clarification given against query No.1 of Bidder 2 above

			<p>full membership of ONVIF. The information should be available on the ONVIF website for verification. 2) The VMS OEM should be in existence in India since last 15 years. 3) The OEM should have at least the following certificates: ISO 9001, 27001, ISO 27017, 14001 and CMM I Level 3. 4) The VMS Software must be certified with STQC certification.</p>	<p>Certifications: ISO 9001: Quality management. ISO 27001/27017: Data and cloud security. ISO 14001: Environmental compliance. CMMI Level 3: Reliable service delivery. Ensures robust, secure, and eco-friendly solutions.</p> <p>STQC Certification: Validates VMS for security and performance per Indian standards, crucial for high-security operations.</p>	
6. BIDDER 6					
No.	RFP Reference(s) (Volume, Clause no., Page)	Page No.	Content of RFP requiring clarification	Amendment/Clarification required	CoPA Response
1	Section-I Notice Inviting Tender CLAUSE 2.1 Minimum Qualification Criteria(MQC)	2	Financial Turnover: Average Annual Financial Turnover of the tenderer during the last three financial years, ending 31/03/2024 (viz. 2021-22, 2022-23 and 2023-24) shall not be less than Rs.53,28,327/-	We request to raise the Financial Turnover criteria to 150% of the contract amount	Financial Turn Over fixed as per CVC guidelines. Tender condition prevails
2	SECTION-II INSTRUCTIONS TO TENDERERS 19.2 Performance Security/Security	12	The value of Security Deposit shall be equivalent to 10% of the total contract value for the „SITC of 35 nos. of IP CCTV security cameras at various locations of CoPA“. Out of 10% of the Security Deposit, 5% is in the form of Account Payee Demand	The value of Security Deposit shall be equivalent to 5% of the total contract value for the „SITC of 35 nos. of IP CCTV security cameras at various locations of CoPA“. Out of 5% of the Security Deposit, 2.5% is in the form of Account Payee	Tender condition prevails

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	Deposit		Draft/ Banker's Cheque/ Bank Guarantee from a Commercial Bank in favour of –FA&CAO, Cochin Port Authority , encashable at Cochin or online payment in an acceptable form safeguarding the purchaser's interest in all respects and 5% in the form of retention money from the bill.	Demand Draft/ Banker's Cheque/ Bank Guarantee from a Commercial Bank in favour of –FA&CAO, Cochin Port Authority , encashable at Cochin or online payment in an acceptable form safeguarding the purchaser's interest in all respects and 2.5% in the form of retention money from the bill.	
3	SECTION-III GENERAL CONDITIONS OF CONTRACT (GCC). 10.2 10.8 Performance Security/Security Deposit:	19	The value of Security Deposit shall be equivalent to 10% of the total contract value for the „SITC of 35 nos. of IP CCTV security cameras at various locations of CoPA". Out of 10% of the Security Deposit, 5% is in the form of Account Payee Demand Draft/ Banker's Cheque/ Bank Guarantee from any Commercial Bank in India in favour of –FA&CAO, Cochin Port Authority , encashable at Cochin or online payment in an acceptable form safeguarding the purchaser's interest in all respects and 5% in the form of retention money from the bill	The value of Security Deposit shall be equivalent to 5% of the total contract value for the „SITC of 35 nos. of IP CCTV security cameras at various locations of CoPA". Out of 5% of the Security Deposit, 2.5% is in the form of Account Payee Demand Draft/ Banker's Cheque/ Bank Guarantee from a Commercial Bank in favour of –FA&CAO, Cochin Port Authority , encashable at Cochin or online payment in an acceptable form safeguarding the purchaser's interest in all respects and 2.5% in the form of retention money from the bill.	Tender condition prevails
7. BIDDER 7					
No.	RFP Reference(s) (Volume, Clause no., Page)	Page No.	Content of RFP requiring clarification	Amendment/Clarification required	CoPA Response
1	Section IV Tech. Spec. V. APPROVED MAKES	58	APPROVED MAKES	No particular makes are mentioned in tender & all makes are suitable for the system as per the specification. Evaluation will be a big challenge.	Makes are not be specified as per latest CVC guidelines
2	Section VII BoQ- Item 8,9 &10		Total Switches 8 Port 11 4 Port 16	Total switches mentioned are 27 only. But GBIC Module mentioned is 86 as per the BOM. Are you considering the same for	BOQ quantity remains unchanged.

			Module 86	spare or to be used in existing network?	
3	Section VII BoQ-Item 8&9	68	Power budget of Switch 55W	This is not matching with the camera numbers in the tender. Pls clarify	BOQ quantity remains unchanged.
4	SECTION IV TECHNICAL SPECIFICATIONS 6. Recording Server Specification Item 2	46	Storage calculation -324 TB as per BOM	This is not matching with calculation as per the number of cameras for 90(Ninety) days.	Please refer the clarification given against query No.3 &4 of Bidder 1. The Bidder shall provide required HDD for storage of footages for 90 days at all locations. If any addtl. Hardware/ software is required, the same shall be provided by the Bidder at his own cost as already explained against Bidder 1.
5	Section IV I Scope of work Item A. I	31	Make & Specification of wireless communication device.	Wireless spec is not mentioned in the BOM. Kindly furnish the same.	Please refer the clarification given against query No.17 of Bidder 3 and Page 51 of TD
8. BIDDER 8					
No.	RFP Reference(s) (Volume, Clause no., Page)	Page No.	Content of RFP requiring clarification	Amendment/Clarification required	CoPA Response
1	Section VII BoQ Item 28 a,b&c	69	Whether we need to include the price of even standby server or only single server is required		Please refer the clarification given against query No.3 &4 of Bidder 1
2	SECTION IV TECHNICAL SPECIFICATIONS I. SCOPE OF WORK Item A.7	32	Whether laying of OFC cable near Mattancherry Wharf to IG Road Toll Gate and Bristow Road Toll Gate with civil scope under bidder scope?		Civil works are included in the Bidders scope
9. BIDDER 9					
1	Section IV Tech. Spec. III. TECH. SPEC. for CCTV cameras	47	Recording Server Specification	The server specification recommended by VMS OEM. The specification referred is most likely an NVR. Please confirm if the VMS complies to	Please refer the clarification given against query No.3 &4 of Bidder 1

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	Item 6			all the features mentioned in Item 5.Can we consider the server specification recommend by the VMS OEM but not as per the NVR Specification mentioned as Item No.6.	
2	SECTION IV TECHNICAL SPECIFICATIONS I. SCOPE OF WORK Item A.3 & III. TECH. SPEC. for CCTV cameras Item 8	31, 48	Specification for Rack Mount Recorder	Mentioned to consider 200 Camera License, As per the site information. Maximum number of cameras would be only 100, Please note the Camera License would cost and therefore the total cost of the project would be made expensive. Advanced purchase would not help the tenderer in anyways. Kindly confirm if we can consider only100 camera License	Please refer the clarification given against query No.3 &4 of Bidder 1
3	SECTION IV TECHNICAL SPECIFICATIONS III. TECH. SPEC. for CCTV cameras Item 3	49	Specification for Rack Mount Recorder	Quantity mentioned is 2, but this item need to be either1 or a lot as per the recommendation of VMS OEM Server requirement. Please do clarify.	Please refer the clarification given against query No.3 &4 of Bidder 1
4	Section VII BoQ Item 28 a,b&c	50	Networking switches	Mentioned the specification of the Networking switches which seems to be the backbone , Please do add the OEM of the Network switch should have a presence of 25years in the networking product	Can be added. The OEM of the Network switch should have a presence of 10 years in the networking production
5	Section VII BoQ Item 28 , 28.a, 28.b,28.c,29	69		can be addressed as (VMS Software + server+ Storage for 90 days back up) -A LOT	Please refer the clarification given against query No.3 &4 of Bidder 1

10. BIDDER 10					
1	Section IV Tech. Spec. III. TECH. SPEC. for CCTV cameras Item 3	39	ANPR camera	For Outdoor Type 2MP ANPR / Zoom Type Box Camera, the Built-in analytics mentioned in point no: 12- "Shall be available at ", we request you to kindly remove "Object counting", as it cannot be performed in the edge level.	Object counting facility must be available at edge / server level
11 BIDDER 11					
1	Section VII BoQ	68	Line Interface unit (LIU)	The LIU is not mentioned in the Bill of Quantities (BOQ). As per site survey LIU is required for the project.	Even though LIU is not mentioned in BOQ, all items required for fibre cable installation & commissioning shall be installed in site to ensure effective surveillance without any break down for 7 years after commissioning
2	Section VII BoQ Item 24	69	P2P link for the wireless communication , QTY 3	The BOQ mentions the P2P link as a quantity of "3 Nos." Please clarify if this refers to 3 pairs or 3 individual links. ? As per site survey 3 Pair is required	Please refer the clarification given against query No.16 of Bidder 4.
3	SECTION IV TECHNICAL SPECIFICATIONS I. SCOPE OF WORK Item A.5	32	The Tenderer shall provide VMS system and Server compatible to the new CCTV cameras that are proposed to be provided in this tender and the old existing CCTV cameras already available at CoPA premises.	Please provide details of the existing camera(s) for integration, including model, make, and any technical specifications required for compatibility.	Details of existing cameras attached
4	Section VII BoQ Item 5	68	GI pole 3 inch dia. 5 metre long with Foundation : QTY 18	As per the tender, the pole height requirement is 5 meters. However, considering the site conditions, a 5-meter pole may not be advisable. We recommend providing an 8-meter height pole for the project to ensure optimal performance and suitability.	Minimum 5 metres pole is required.
5	Section IV Tech. Spec. III. TECH. SPEC.	38	<u>2 MP 30 X OUTDOOR TYPE PTZ CAMERA</u> Camera technical specifications : IR illumination 400 Mtr or better	We will provide IR illumination of 300 meters. Please confirm if this is acceptable.	Please refer the clarification given against query No.6 of Bidder 3

	for CCTV cameras Item 2)				
7	Section IV Tech. Spec. III. TECH. SPEC. for CCTV cameras Item 5)	46	VMS Technical specification :Export file formats supported: .exe, .avi, .ps, .mov, .psx	<p>Among these, .avi and .mov are standard video formats. We provide .avi and .mp4 formats. The .mp4 format (MPEG-4 Part 14) is a widely accepted video container format that offers high compression efficiency and broad compatibility across various platforms and devices.</p> <p>1).exe: Executable file format for Windows applications; not typically used for video content.</p> <p>2) .ps: PostScript file; primarily for vector graphics and page descriptions, not video.</p> <p>3) .mov: QuickTime File Format; a multimedia container format developed by Apple, commonly used for videos.</p> <p>4) .psx: Associated with PlayStation game data files; not standard for video content.</p> <p>Given that .exe, .ps, and .psx are not standard video formats, and considering the widespread acceptance and compatibility of .mp4, our provided formats should meet the tender's requirements effectively.</p>	.avi and .mp4 format supports are sufficient. Amended as : Export file formats supported: .avi and mp4

EXISTING CAMERA DETAILS

ANNEXURE-1

	Camera Location	Model
1	EKM WHARF IN	Hanwha SNZ-6320
2	EKM WHARF OUT	Hanwha SNZ-6320
3	TOLL GATE 1(IN)	Hanwha SNZ-6320
4	TOLL GATE 1(OUT)	Hanwha SNZ-6320
5	TOLL GATE 2(IN)	Hanwha SNZ-6320
6	TOLL GATE 2(OUT)	Hanwha SNZ-6320
7	EMBARKATION JETTY	Hanwha SNZ-6320
8	6 TH FLOOR – NEW AD. BLDG.	Hanwha QND-6070R
9	NEW AD. BUILDING - FRONT	Hanwha SNZ-6320
10	ADM BUILDING (PTZ) - TOP	Tyco ISS04P6ONWIT
11	EKM WHARF (PTZ)	Hanwha SNP-6320RH
12	OTB NORTH	Hanwha SNZ-6320
13	OTB SOUTH	Hanwha SNZ-6320
14	PRIVATE JETTY	Hanwha SNZ-6320
15	MAT. WHARF GATE	Hanwha SNZ-6320
16	MAT. WHARF(PTZ)	Hanwha SNP-6321H

Ref:-GEM/2024/B/5639583-Corrigendum/ Amendment to tender document as per Pre-Bid meeting held on 11-12-2024

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17	A3 AREA(1)	Hanwha QNO-6082R
18	2 ST FLOOR– NEW AD. BLDG.	Hanwha QND-6070R
19	PARKING 2 – NEW AD. BLDG.	Hanwha QND-6070R
20	GROUND FLOOR– NEW AD. BLDG.	Hanwha QND-6070R
21	1 ST FLOOR– NEW AD. BLDG.	Hanwha QND-6067R
22	4 TH FLOOR– NEW AD. BLDG.	Hanwha QND-6070R
23	GUEST HOUSE	Hanwha XNO-6120R
24	EMBARKATION JETTY	Hanwha SNZ-6320
25	3 TH FLOOR– NEW AD. BLDG.	Hanwha QND-6070R
26	KUNDANOOR 2 ROAD	Hanwha LNO-6072R
27	A3 AREA(3)	Hanwha QNO-6082R
28	MALABAR ROAD	Hanwha XNO -6120R
29	A3 AREA(2)	Hanwha QNO-6082R
30	PARKING 1– NEW AD. BLDG.	Hanwha QND-6070R
31	5 TH FLOOR– NEW AD. BLDG.	Hanwha QND-6070R
32	KUNDANOOR 1	Hanwha LNO-6072R
33	6 TH FLOOR– NEW AD. BLDG.	Hanwha QND-6067R
34	APPROACH ROAD	Hanwha XNO -6120R

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	CONTAINER FREIGHT STATION Camera Location	Model
1	W6/W7 CENTER	Hanwha SNZ-6320
2	OUT SIDE	Hanwha SNZ-6320
3	W7/E7 CENTER	Hanwha SNZ-6320
4	W13/W14 CENTER	Hanwha XNO-6120R
5	W19/W20 CENTER	Hanwha XNO-6120R
6	E13/E14 CENTER	Hanwha XNO-6120R
7	W13/W14 CENTER	Hanwha XNO-6120R
8	E19/E20 CENTER	Hanwha XNO-6120R
9	E13/E14 CENTER	Hanwha XNO-6120R
10	FISHEYE-2	Hanwha XNF-8010RV
11	FISHEYE-1	Hanwha XNF-8010RV
12	UBW	Hanwha QNO-6070R
13	UBE	Hanwha SNO-6084R

NVR Location & Details

	NVR Location	Model No
1	CISF CONTROL ROOM (ADM BUILDING) 64 CHANNEL	(SAMSUNG) SRN-4000
2	CISF CONTROL ROOM (ADM BULIDING 16 CHANNEL	(WISENET) XRN-1610A
3	CISF CONTROL ROOM (ADM BULIDING 16 CHANNEL	(WISENET) XRN-1610A
4	EKM. WHARF (CISF GATE) 4 CHANNEL	(WISENET) SRN-473S
5	MAT. WHARF (CISF GATE) 8 CHANNEL	(CP PLUS) CP-UNR-416T2
6	OTB (CISF GATE) 4 CHANNEL	(WISENET) SRN-473S
7	TOLL GATE -1 4 CHANNEL	(WISENET) LRN-810S
8	CFS (CONTAINER FREIGHT STATION) 16 CHANNEL	(WISENET) XRN-1610A