

PRE-BID CLARIFICATIONS WITH ADDENDUM-1 FOR TENDER NO. – TW-IT/OT/05/2016-17 DT. 03.11.2016

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PRE-BID CLARIFICATIONS FOR TENDER NO. – TW-IT/OT/05/2016-17 DT. 03.11.2016

Sl. No	Item Description	Clause No/Parameters	Existing Clause/Parameters	Request/Query from Bidder	Decision of OPTCL
1	General	(Section-IV).(iii).(d)	The System shall provide sufficient storage of all the camera recordings for a period of 30 days or more @ 30FPS, using necessary compression techniques for all cameras.	Please let us know the recording resolution to consider for actual storage calculation.	Recording shall be done in HD resolution. The period of recording is reduced from 30days to 20days.
2	Outdoor Fixed Camera	(Section-V).(a).(ii).(2)	IR Distance – 150-200 Mtr Effective Viewable Distance 180-200 Mtr	As per technical specification you have asked for 3-10mm lens and 150-200 Mtr IR distance and 180-200 Mtr Effective Viewable Distance. For 3-10mm lens, IR & viewable distance can be maximum up to 25-30m. You are requested to kindly accept the same.	The IR distance and Viewable distance is 80metres and the lens shall be provided accordingly by the OEM to meet the IR and Viewable distance.
3	Outdoor Fixed Camera	(Section-V).(a).(ii).(2)	Light Sensitivity	As per current industry standard color lux is limited up to 0.07 lux.	Lux in colour mode: 0.07

			Colour mode: 0.021 lux, B/W mode: 0.05 lux @ 30IRE, F1.2 or better	You are requested to kindly accept the same.	
4	Outdoor Fixed Camera	(Section-V).(a).(ii).(6)	Operating Temperature -30 deg C to +50 deg C	We request you to kindly change operating temperature to -20 deg C to +50 deg C as it will suffice the requirement.	The operating temperature : -20 deg C to +50 deg C
5	Indoor Dome Camera	(Section-V).(a).(iii).(2)	IR Distance – 150-200 Mtr Effective Viewable Distance 180-200 Mtr	As per technical specification you have asked for 3-9mm lens and 150-200 Mtr IR distance and 180-200 Mtr Effective Viewable Distance. None of indoor camera has IR with 150-200m range and viewable distance 180-200mtr. You are requested to kindly change the same upto 15m	The IR distance and Viewable distance is 30 metres and the lens shall be provided accordingly by the OEM to meet the IR and Viewable distance.
6	Indoor Dome Camera	(Section-V).(a).(iii).(2)	Light Sensitivity Colour mode: 0.022 lux, B/W mode: 0.05 lux @ 30IRE, F1.2 or better	We request you to change lux level in color mode upto .25lux	Lux in colour mode: 0.5
7	Indoor Dome Camera	(Section-V).(a).(iii).(6)	Operating Temperature -30 deg C to +50 deg C	We request you to kindly change operating temperature to -20 deg C to +50 deg C as it will suffice the requirement.	The operating temperature : -20 deg C to +50 deg C
8	24 Port L2 Managed Switch	(Section-V).(a).(vii).(3)	Standards & Protocols IEEE 802.3af	As you have asked for Non-PoE switch & Cameras with PoE injector. So 802.3af protocol is not applicable for switch. Please remove the clause.	IEEE 802.3af protocol has been removed from the technical specification
9	Media Converter Card	(Section-V).(a).(ix)	Industrial Grade Media Converter Card	As Media Converter card to kept in Control Room where temperature will not be an issue. So we request you to please accept commercial grade Media Converter Card	Industrial/Commercial Grade both are acceptable for Card Type Media Converter

10	Media Converter Card	(Section-V).(a).(ix).(2)	Fiber Type – Multi-mode Operating Distance – 2KM	As you have asked for Single Mode OFC cable so Media Converter Card to be of same only. So please change this to Single Mode. Also Operating distance is mentioned 2KM whereas you have asked for Media Converter Box with 15KM Operating distance. As per our understanding both Media Converter Box and Card to support same Operating Distance. Please revise this point.	The Media Converter Card Type has been modified from Multi-mode to Single-mode and the operating distance is modified to 2KM
11	Media Converter Chassis	(Section-V).(a).(x).(2)	Type – Industrial Grade	As Media Converter Chassis to kept in Control Room where temperature will not be an issue. So we request you to please accept commercial grade Media Converter Chassis.	Industrial/Commercial Grade both are acceptable for Media Converter Chassis
12	PoE Injector	(Section-V).(a).(xii).(2)	Compliance – 10/100/100BASE-T port	As PoE Injector to connect single camera so 10/100 Ethernet will suffice the requirement.	Modified to 10/100 Ethernet
13	PoE Injector	(Section-V).(a).(xii).(3)	Gigabit Connectivity PoE Injector for 10/100/1000T connection delivers power up to 100 meters	As PoE Injector to connect single camera so 10/100 Ethernet will suffice the requirement.	Modified to 10/100 Ethernet
14	24U Rack	(Section-V).(a).(xv).(1)	Industrial Grade 24U rack	As 24U Rack to be kept in Control Room in an indoor environment where industrial Grade Rack is not require. So please omit this point.	Industrial/Commercial Grade both are acceptable
15	6 Core Armored FO Cable	(Section-V).(a).(xix).(2)	Type – Industrial Grade	Kindly clarify what is meant by Industrial Grade OFC cable. Please clarify.	"Type: Industrial Grade" is removed from the Technical Specification of 6 Core Armored FO Cable(Single Mode)
16	CAT-6 STP Cable	(Section-V).(a).(xx).(1)	Type – Unshielded Twisted Pair, Category 6, TIA / EIA 568-B.2, STP Cable.	Kindly clarify the actual CAT type. As per heading you have asked for STP but in specification you have UTP, STP both.	The CAT type is STP

17	CAT-6 STP Cable	(Section-V).(a).(xx).(1)	Type – Industrial Grade	Kindly clarify what is meant by Industrial Grade CAT6 cable. Please clarify.	"Type: Industrial Grade" is removed from the Technical Specification of CAT-6 STP Cable
18	1.1KV Armored CU-Power Cable	(Section-V).(a).(xxi).(2)	Type – Industrial Grade	Kindly clarify what is meant by Industrial Grade Power cable. Please clarify.	"Type: Industrial Grade" is removed from the Technical Specification of 1.1KV Armored CU-Power Cable
19	Pole	(Section-V).(a).(xxiii).(6)	Type – Industrial Grade	Kindly clarify what is meant by Industrial Grade Pole. Please clarify.	Pole Type as industrial grade is not mentioned in the tender document. The type of installation is mentioned "industrial".
20	Workstation	--	--	Please include Workstation in BOQ as the same is not available in tender document.	Workstation is not included in the BOQ
21	HDPE for CAT6 laying	(Section-A).(4).(1) Supplies	--	Kindly confirm whether we need to consider PVC or HDPE for CAT6 laying as you have mentioned HDPE in Section-A and PVC in Schedule-C & J.	PVC CONDUIT FOR LAN (CAT 6) CABLE WITH ACCESSORIES is required for laying of CAT6 cables. HDPE for CAT6 laying may be read as PVC Conduit for CAT6 Laying
22	PVC Conduit for CAT6 laying	Schedule-C	--	Please confirm.	
23	PVC Conduit for CAT6 laying	Schedule-J Make & Model	--	Also Please confirm size of PVC/HDPE to consider.	The size of PVC/HDPE will be as per site requirement and it is bidders responsibility.
24	HDPE Pipe	--	HDPE pipe for OFC cable laying	Kindly confirm size of HDPE to consider.	The size of HDPE will be as per site requirement and it is bidders responsibility.
25	Pole Qty.	Schedule-K (17)	--	Please confirm if we will get existing structure to install outdoor camera as you asked for only 8 Poles whereas outdoor camera qty. is 41.	Existing structures are available in most of the places and 8 numbers of poles are mentioned in the BOQ. If additional pole is required then it shall be provided by the bidder and the payment will made as per actual
26	Pole Mount Bracket Qty.	Schedule-K (16)	--	You have asked for 8 Nos. Pole only so 50 Nos. Pole Mount bracket will not be require.	The number of pole mount brackets is reduced to 41

				Also 9 Nos. camera is of Indoor type. Please clarify.	
27	OFC/CAT6/Power Cable/HDPE/PVC supply at site	Schedule-K (23-27)	--	Please provide us site wise supply bifurcation for these items so that we can supply accordingly at site.	The site wise supply requirement will be done by the bidder as per the site requirement
28	Hand-holding for 1 year during warranty	Work Breakdown Structure (WBS)	--	Please confirm if we need to depute our engineer during Hand-holding duration for 1 year.	The handholding period is reduced to 90days and bidder needs to submit the performance report of the System during the Handholding period
29	Outdoor Fixed Camera(with fixed camera housing and power injector) [Technical Specification]	Technical Specifications	In Tender doc.,IR Distance and effective viewable distance is mention 150-200 Mtrs and 180-200 Mtrs. So request to kindly amend this 35 - 40 Mtr for both operation (IR distance & Effective viewable distance)	In tender doc. ,Lens -3 to 10 mm, CS mount,those will not support effective visibility more than 50 mtr.	Refer to Sl. No. 2 (Decision of OPTCL)
30	Indoor Dome camera(with power injector for dome camera) [Technical Specification]	Technical Specifications	In Tender doc.,IR Distance and effective viewable distance is mention 150-200 Mtrs and 180-200 Mtrs. So request to kindly amend this 35 - 40 Mtr for both operation (IR distance & Effective viewable distance)	In tender doc. ,Lens-3mm to 9mm(F1.2) focal length those will not support viewable more than 50 mtr.No OEM can complie this Statement .	Refer to Sl. No. 5 (Decision of OPTCL)
31	Same / Different OEM	Camera & VMS, Keyboard & Mouse for Server	You have asked for PTZ Camera & Controller from the same OEM. You have asked for Mouse & Keyboard from the SAME OEM of Server;	As such, you have asked for Cameras / VMS to be of ONVIF compliant. Hence, interoperability is automatically ensured. It should be revised as Cameras & VMS may be from same / different OEM.	The Cameras & VMS may be from same / different OEM but it should be OPEN Platform and necessary OEM compliance/undertaking should be submitted in support of OPEN Platform

			whereas for Cameras & VMS, you have stipulated for different OEMs.		
32	Tech Spec : Media Conv	Technical Specifications	One side it's mentioned as Single Mode, where as other side it's Multi-mode	It must be revised to same mode at both ends. Different modes are NOT compatible.	Refer to Sl. No. 10 (Decision of OPTCL)
33	System Design	System Design	As such, considering scalability / upgradability, we request you to revise the system design from Media Converter to Switch based.	It's more viable in both techno-commercially.	There will be no change in the system design
34	Tech Spec : Media Conv	12 / 14 Slots	In pg.# 82, it's mentioned as 12 / 14 Slots but in pg.# 99, it's mentioned as 14 slots only.	Pls revise to min 12 slots.	Minimum number of slots : 12
35	System Requirements		Facility of camera recording in real-time mode (30 FPS)/25/15/12.5/10 or lower FPS as well as in any desired combination must be available in the system. Facility of Camera recording in Full HD (1280X1920p), D1, 4CIF, CIF, VGA, as well as in any combination i.e. any camera can be recorded in any quality.	Please confirm storage require as per the NAS or others.	NAS of Capacity 16TB is listed in the BOQ

36	General	Scope of work	Pleas quantify the Service jobs viz. OFC / Cable Laying – Any digging or excavation is required or not. If required, please quantify & mention the digging / refilling specs.	This will lead to healthy Commercial evaluation will.	It is the bidders responsibility and it covers a part of the Scope of the Work
37	General	Design (System Architecture)	In Tender doc., System Architecture & Connectivity Diagram are also missing. Request you to provide the General System Architecture along with connectivity Diagram for an effective & technically uniform bidding		The system design is understood from the BOQ and other details mentioned in the tender document.
38	General	provide a) Waybill / Road permit & b) 'C' Form	Pls confirm if OPTCL will provide a) Waybill / Road permit & b) 'C' Form	To ascertain applicable Taxes	Way Bill/Road Permit, C-form will be provided by OPTCL. Entry Tax shall be paid by OPTCL
39	Bid submission date : 25/11/2016		Having the prebid queries clarified, interacting with OEMs (which will depend on the prebid clarifications), 7 days is too small time to submit an effective bid. Request you to allow at least 3 weeks to submit the bid after uploading the clarifications.		Refer to Corrigendum-1

40	outdoor fixed camera		“Light Sensitivity” : Color Mode: 0.021. –	May be changed to Color Mode – 0.5 Lux which will put all bidders in level for participation.	Refer to Sl. No. 2 (Decision of OPTCL)
41	outdoor fixed camera		“IR Distance” : 150 - 200 Mtrs	May be changed to min 30 Mtrs. which will put all bidders in level for participation.	Refer to Sl. No. 3 (Decision of OPTCL)
42	Indoor Dome Camera		“Light Sensitivity” : Color Mode: 0.021	May be changed to Color Mode – 0.5 Lux which will put all bidders in level for participation	Refer to Sl. No. 4 (Decision of OPTCL)
43	Indoor Dome Camera		“IR Distance” : 150 - 200 Mtrs	May be changed to min 15 Mtrs. which will put all bidders in level for participation	Refer to Sl. No. 5 (Decision of OPTCL)
44	Video Surveillance Application Software		The VMS Software and CCTV cameras should not be of the same OEM –	We would request you to kindly reconsider the same and change it to OEM’s own software / third party enterprise grade VMS	Refer to Sl. No. 31 (Decision of OPTCL)
45	Video Surveillance Application Software		The software should Support flexible 1/2/4/8/16/32 Windows Split screen display mode and scroll mode on the PC monitor.	May be changed to 1/2/4/8/16/25. As this is a usable max matrix which can be viewed on a standard display of 55” beyond that display can only be viewed on a Video Walls.	The software should Support flexible 1/2/4/8/16/25 Windows Split screen display mode and scroll mode on the PC monitor.
46	Taxes			Kindly clarify if OPTCL will issue Waybill & C-Form for supply of materials.	Refer to Sl. No. 38 (Decision of OPTCL)
47	Taxes			Kindly clarify if the SI is a local vendor then there will be huge tax variation as OVAT on camera will be 14.5% and other IT items will be 5% and Tax applicable if C-Form & Waybill will be only 2 %.	As per tender
48	Payment Terms	XII. a (i)		Kindly clarify contract price. Is the same including CAMC or Only Supply	The Total Contract Price is including supply, installation, commissioning, warranty for 3 years and 3 years CAMC

49	Payment Terms	XII. (iv)		Request you to kindly consider the hand hold period as 30 days in place of 12 months.	Refer to Sl. No. 28 (Decision of OPTCL)
50	MAF			kindly consider MAF as per OPTCL format or OEM's standard MAF. Further we would like to consider major supply portion MAF (Camera/Active Data-networking/Servers/Passive Network Components) only as it will not be possible to get MAF from each and every OEM.	For details of MAF, SI please refer to Addendum-1
51	outdoor PTZ camera			IR distance specification in PTZ camera is a non-industry standard specification. Please note out of the six approved brands mentioned in your NIT, four brands do not have IR PTZ. We request you to kindly amend the specifications for creating an unbiased and common standard to promote healthy competition	As per tender
52	MAF			Owing to constrained timelines for submission of the bid we request you kindly accept bids with MAF's from major components of the project i.e., Camera, Active Networking components and Passive networking components. Please note many large MNC's not only does not give MAF's in specific formats but also take long durations to generate MAF's	For details of MAF, SI please refer to Addendum-1
53	Terms of payment "Pilot Test Completion Certificate" & "Installation Certificate"			a.The terms of payment "Pilot Test Completion Certificate" & "Installation Certificate" needs to have specific parameters of testing for issuing the relevant documents entitled for release of payments. The retention money of 10% to secure you as an organisation during the period of handholding may kindly be reduced to 3 or 4 weeks to enable us claim 90% of the payment against supply and successful installation	For terms of payment please Refer to Addendum-1. The specific parameters for installation certificate shall be given during the issuance of Work Order. For handholding kindly refer to Sl. No. 5 (Decision of OPTCL)

54	Release of payments			Release of payments has been discussed at large during today's pre-bid meeting. We request that release of payments as per the schedule should be made against submission of BG/PBG of 10% of supply, installation and commissioning.	Refer to Addendum-1
55	VMS			Request you to kindly mention approved makes for Open Platform VMS	Refer to Sl. No. 31 (Decision of OPTCL)
56	24 port L2 Managed Switch	CLAUSE X.III	Cisco/HP/Allied Telesis/Juniper/Brocade Managed switch	D-LINK SWITCH 24 PORT TO BE ADDED TO APPROVED MAKE	As per Tender
57	General	CLAUSE6.1	6. Qualification of bidder 1.The Bidder must be an Authorized Systems integrator (ASI)having a direct purchase and support agreement with the OEMS of the Ip Based CCTV Surveillance System equipment. The bidder should provide Manufacturer's authorization Letter for all IP Based CCTV Surveillance System equipment quoted (except the items for which the bidder itself is the OEM)along with the bid.The ASI should also submit declaration,as a mandatory requirement ,by OEMs that the quoted H/W items shall not	THAT THE CRITERIA OF PROVIDING MAF FOR ALL ITEAMS IS STRINGENT .PL RELAX IT THAT ONLY CAMERA MANUFACTURERS PROVIDE MAF . REST SHOULD NOT BE MANDATORY SINCE THE APPROVED MAKEB LIST ITSELF IS TESTIMONY TO THE FACT THET THE CORRECT MATERIALS WILL BE SHIPPED	Kindly refer to Addendum-1

			be outdated within 6(six) years of supply and that OEM renders necessary spares support to ASI.		
58	2KVA ONLINE UPS WITH BATTERIES	CLAUSE xiii.3	power factor 0.9	FOR 2 KVA ONLINE U.P.PL CHANGE THE P.F FROM 0.9 TO 0.8	The P.F. is modified to 0.8
59	14 Rack Server with Monitor 4 nos .15 NAS for Video Storage(16 TB)4			PL REFER TO THE ITEM MENTIONED IN TENDER DOC .WE ENVISAGE A SYSTEM WHEREBY APPROVED MAKE MENTIONED IN TENDER DOC SHOULD IN INTERNAL STORAGE HAVE A CAPACITY NOT LESS THAN 16TB.THIS SYSTEM IS THERE IN THE APP MAKE MENTIONED AND LESSENS THE COST BECAUSE THE NAS COST IS PROHIBITIVELY HIGH	As per Tender
60	Service Center in Bhubaneswar			We are providing IT Comprehensive AMC support to PXE chandipur,Odisha with 03 Nos. onsite Service Engineers from past 03 years and HAL,Sunabeda,Odisha with 05 Nos. onsite Service Engineers from past 15 Years. We can submit an under taking stating that if we wins the CCTV Surveillance System tenderwe will establish a full-fledged service center with qualified server engineer and necessary service spares at Bhubaneswar. Kindly consider our request and allow us to participate in the tender.	As per Tender

Addendum-1

The following amendment are done in the CCTV Tender No.: TW-IT/OT/05/2016-17 dt, 03.11.2016

1. The Key Deliverables schedule mentioned in SECTION-I.4.IV.c (refer pg no. 13) has been amended as follows.

Key Deliverables:

Sl. No.	Activities/ deliverables	Submission Deadlines	Amount
1	Submission & Acceptance of final complete site survey report, Factory Inspection of the CCTV equipments, Procurement & Delivery of CCTV hardware & software (4 sites)	W+60days	60% of Total Project Cost(excluding CAMC cost)
2	Successful installation & commissioning, Successful system roll-out of the system, Successful training given to OPTCL officers (field officer + IT officer) and Submission of all operational manuals duly checked and accepted as given in WBS of CCTV Surveillance System (4 sites)	W+90days	30% of Total Project Cost(excluding CAMC cost)
3	Successful system maintenance & Hand-holding for 90 days and System acceptance by "End Users" (4 sites)	Successful roll-out + 90days	10% of Total Project Cost(excluding CAMC cost)

N.B.: 'W' refers to the date of acceptance of Work Order.

Note: The end of life of all the CCTV Equipment and IT items quoted by the bidder should be a minimum of Six (6) years from the bid submission date.

2. The Technical Specification of the below items are revised as follows. Technical Specification for all other items is as per the Tender Document

a. Outdoor Fixed Camera(with fixed camera housing and power injector)

Outdoor Fixed Camera(with fixed camera housing and power injector)			
Sl. No.	Item Description	Detailed Specification	
1	CAMERA	Type of camera	High-Definition Outdoor Fixed Camera, suitable for both day and night surveillance
		Place of installation	Outdoor Type
		Industrial Grade	Yes
		Effective Pixel	Minimum 2 Mega Pixel

		Sensor	Progressive scan CMOS
		Lens	CS mount, Full HD, IR Correction or higher The focal length of the lens shall be provided so as to meet specification the IR distance and effective viewable distance
2	OPERATIONAL	Night Vision	Night vision with IR-LED
		IR Features	The Camera shall have inbuilt IR or External IR Component.
		IR Distance	80mtrs
		Effective Viewable Distance	80mtrs
		Wide Dynamic Range	WDR/DWDR
		Backlight Compensation Feature	BLC/HLC/WDR
		Scanning System	Progressive
		Light Sensitivity	Colour mode: 0.07 lux, B/W mode: 0.05 lux @ 30IRE, F1.2 or better
		Signal-to-Noise Ratio	Min 50dB
		Day/Night Feature	Should have Day/Night Feature
		Motion Detection & Tamper Detection Feature	Should have Motion Detection & Tamper Detection Feature
		Privacy Masking Feature	Should have privacy masking feature
		De-Fog Feature	Should have De-Fog Feature
White Balance	Should have Automatic/Manual White Balance Feature		
3	NETWORK	Ethernet	10Base-T / 100Base-TX/ RJ45 connector
		Image Resolution	1920×1080(1080p)
		Frame Rate per second	Frame rate: min. 25 frames/s (PAL) or min. 30 frames/s(NTSC)
		Compression Standards	H.264/ MJPEG / MPEG4(min.)
		Protocols	TCP/IP/IPv4, ICMP, HTTP, HTTPS, FTP, DHCP, DNS, DDNS, RTP, RTSP, RTCP, NTP, UPnP, SMTP, SNMP, IGMP, 802.1X, QoS, IPv6,
		Security	User authentication protection, IP address filtering/802.1x authentication

		Multiple Streams	The Camera shall provide at least two simultaneous video streams. Stream compression should be as following: 1. Primary Stream: H.264 2. Secondary Stream: H.264 or Motion-JPEG/MPEG-4.
		Inter-operability	Should have Onvif conformance feature
		Web Access	Supported Browser : IE 7+, Chrome 18+, Firefox 5.0+, Safari 5.02+, support multi-language
4	GENERAL	Input Voltage	24 VAC and PoE(Power Over Ethernet)
		Power Consumption	Max. 30W
5	RECORDING & STORAGE MANAGEMENT	Audio I/O	Input : 1 channel Output : 1 channel
		SD Card Slot	Built-in SD card slot: SD/SDHC/SDXC/ any other latest technology card
		Type & Capacity	A memory card (a maximum of 32GB micro SDHC/ micro SDXC) or more can be Supplied along with camera and should record automatically when network not available and same data to be push back to storage once network established for camera
		Recording Management	Shall support manual / alarm / edge recording
6	ENVIRONMENTAL	Camera Housing & Mount	1. The Camera housing should be of same make as that of Camera and suitable for the model no offered as specified by the manufacturer and should be an integrated unit. The housing should be Weather Proof IP65/66 rated and of aluminium construction. The housing shall have heater and blower. 2. The camera should be supplied with a power injector as per technical specification specified in the tender document
		Operating Temperature	-20 deg C to +50 deg C
		Humidity	90% or less (non-condensing)
7	STANDARDS & CERTIFICATIONS	Certification	UL and ISO/IEC/EN/CE/FCC certifications required. The bidder is required to submit the certifications along with the techno-commercial bid.
		IP Standard	IP66/IP67

b. Indoor Dome Camera(with power injector for dome camera)

Indoor Dome camera(with power injector for dome camera)			
Sl. No.	Item Description	Detailed Specification	
1	CAMERA	Type of camera	High-Definition Indoor Dome Camera, suitable for both day and night
		Place of installation	Indoor
		Industrial Grade	Yes
		Effective Pixel	Minimum 2 Mega Pixel
		Sensor	Progressive scan CMOS
		Lens	Full HD, IR Correction or higher The focal length of the lens shall be provided so as to meet specification the IR distance and effective viewable distance
2	OPERATIONAL	Night Vision	Night vision with IR-LED
		IR Features	The Camera shall have inbuilt IR or External IR Component.
		IR Distance	30mtrs
		Effective Viewable Distance	30mtrs
		Wide Dynamic Range	WDR/DWDR
		Backlight Compensation Feature	BLC/HLC/WDR
		Scanning System	Progressive
		Light Sensitivity	Colour mode: 0.05 lux, B/W mode: 0.05 lux @ 30IRE, F1.2 or better
		Signal-to-Noise Ratio	Min 50dB
		Day/Night Feature	Should have Day/Night Feature
		Motion Detection & Tamper Detection Feature	Should have Motion Detection & Tamper Detection Feature
White Balance	Should have auto/manual/indoor/outdoor white balance feature		
3	NETWORK	Ethernet	10Base-T / 100Base-TX/ RJ45 connector
		Image Resolution	1920×1080(1080p)
		Frame Rate per second	Frame rate: min. 25 frames/s (PAL) or min. 30 frames/s(NTSC)
		Compression Standards	H.264/ MJPEG / MPEG4(min.)
		Protocols	TCP/IP/IPv4, ICMP, HTTP, HTTPS, FTP, DHCP, DNS, DDNS, RTP, RTSP, RTCP, NTP, UPnP, SMTP, SNMP,IGMP, 802.1X, QoS, IPv6,
		Security	User authentication protection, IP address filtering/802.1x authentication
		Streaming method	Triple streams or above
		Inter-operability	Should have Onvif conformance feature
Web Access	Supported Browser : IE 7+, Chrome 18+, Firefox 5.0+, Safari 5.02+, support multi-language		

4	GENERAL	Input Voltage	24 VAC and PoE(Power Over Ethernet)
		Power Consumption	Max. 12.5W
		SD Card Slot	Built-in SD card slot: SD/SDHC/SDXC/ any other latest technology card
		Type & Capacity	A memory card (a maximum of 32GB micro SDHC/ micro SDXC) or more can be Supplied along with camera and should record automatically when network not available and same data to be push back to storage once network established for camera
		Recording Management	Shall support manual / alarm / edge recording
6	ENVIRONMENTAL	Camera Housing & Mount	The camera should be supplied with a power power injector as per technical specification specified in the tender document
		Operating Temperature	-20 deg C to +50 deg C
		Humidity	90% or less (non-condensing)
7	STANDARDS & CERTIFICATIONS	Certification	UL and ISO/IEC/EN/CE/FCC certifications required. The bidder is required to submit the certifications along with the techno-commercial bid.
		IP Standard	IP66/IP67

c. VIDEO SURVEILLANCE APPLICATION SOFTWARE

VIDEO MANAGEMENT SOFTWARE	
The Cameras & VMS may be from same / different OEM but it should be OPEN Platform and necessary OEM compliance/undertaking should be submitted in support of OPEN Platform	
Sl. No.	Detailed Specifications
1	The video management system (VMS) specified is an enterprise-class client/server based IP video security solution that provides seamless management of digital video, audio and data across an IP network. The video management system is designed to work with ONVIF compliant 3rd party products as part of a total video security management system.
2	Digital video surveillance control software should be capable to display and manage the entire surveillance system. It should be capable of supporting variety of devices such as cameras, Servers, NAS boxes/Raid backup device etc
3	The software should have inbuilt facility to store configuration of encoders and cameras.
4	The software should Support flexible 1/2/4/8/16/25 Windows Split screen display mode and scroll mode on the PC monitor.
5	The software should be able to control all cameras i.e. PTZ control, Iris control, auto / manual focus, and colour balance of camera, Selection of presets, Video tour selection etc.
6	The software should have user access authority configurable on per device or per device group basis. The system shall provide user activity log with user ID, time stamp, action performed, etc.
7	The users should be on a hierarchical basis as assigned by the administrator. The higher priority person can take control of cameras, which are already being controlled by a lower priority user.

8	It should have recording modes viz. continuous, manual, or programmed modes on date, time and camera-wise. All modes should be disabled and enabled using scheduled configuration. It should also be possible to search and replay the recorded images on date, time and camera-wise. It should provide onscreen controls for remote operation of PTZ cameras. It should have the facility for scheduled recording. Different recording speeds (fps) and resolution for each recording mode for each camera should be possible.
9	The software for clients should also be working on a browser based system for remote users. This will allow any authorized user to display the video of any desired camera on the monitor with full PTZ and associated controls
10	Retrieval: The VMS application should allow retrieval of data instantaneously or any date / time interval chosen through search functionality of the application software. In case data is older than 20 days and available, the retrieval should be possible. The system should also allow for backup of specific data on any drives like DVD's or any other device in a format which can be replayed through a standard PC based software. Log of any such activity should be maintained by the system.
11	VMS shall provide the full functionality reporting tool which can provide reports for user login/logoff, camera accessibility report, server health check reports etc.

d. 24 PORT L2 MANAGED SWITCH

24 PORT L2 MANAGED SWITCH		
Sl. No.	Item Description	Detailed Specification
1	Ports	a. 24 RJ-45 autosensing 10/100/1000 ports (IEEE 802.3 Type 10BASE-T, IEEE 802.3u Type 100BASE-TX, IEEE 802.3ab Type 1000BASE-T); Duplex: 10BASE-T/100BASE-TX: half or full; 1000BASE-T: full only b. 4 SFP 100/1000 Mbps ports c. Auto sensing/ Auto negotiating Ports d. IPV6 Ready
2	Type	Industrial Grade
3	Performance	Switching Capacity : min 48Gbps
4	Standards & Protocols	a. General : IEEE 802.1D MAC Bridges, IEEE 802.1p Priority, IEEE 802.1Q VLANs b IEEE 802.1s Multiple Spanning Trees, IEEE 802.1v VLAN, IEEE 802.3x Flow Control, QoS: 802.1p (CoS), Security: IEEE 802.1X Port Based Network Access Control
5	Management Features	a. Web Browser Configuration Menu b. SNMP Manager d. Telnet e. RMON
6	Certification	UL/cUL,FCC,CE,EN certification
7	Power Supply Redundancy	The switch must support Internal load sharing, Dual power supplies; vendors shall propose for Internal Redundant PSU's
8	Warranty	3 years onsite comprehensive warranty

e. Media Convertor(Box Type)[Ethernet-SC Type]

Media Convertor(Box Type)[Ethernet-SC Type]		
Sl. No.	Item Description	Detailed Specification
1	Function	1. 100 Base-FX to 100 Mbps Tx Single mode media convertor 2. Distance Support: min. 2km 3. 1 RJ-45 port and 1 fibre port (SC type connector) 4. Full wire speed forwarding rate
2	Type	Industrial Grade
3	Operating Temperature	0 deg. C to +60deg.C
4	Operating Humidity	Up to 95% non-condensing
5	Mounting Kit	Included
6	Data Transfer Rate	Min. 100 Mbps
7	Compliant Standards	IEEE 802.3, IEEE 802.3ab, IEEE 802.3u, IEEE 802.3x, IEEE 802.3z
8	Status Indicators	LED status indicators should be there
9	Features	Auto Cross/ Link Fault Pass Through function (LFP)/LLR /auto-negotiation
10	Certifications	Should comply with RoHS, UL, EN, IEC standards as well should have IP30 enclosure.
11	Warranty	3 years on-site comprehensive warranty

f. Media Convertor(Card Type)[Ethernet-SC Type]

Media Convertor(Card Type)[Ethernet-SC Type]		
Sl. No.	Item Description	Detailed Specification
1	Connector Type	Dual SC, Card Type, Ethernet-SC Type Media Convertor
2	Fiber Type	Single-mode
3	Type	Industrial/Commercial Grade
4	Compliance	Should be of IEEE standards
5	Operating Distance	2km
6	Power Consumption	6W
7	Operating Temperature	0°C to 40°C
8	Storage Temperature	0°C to 50°C
9	Relative humidity operating and storage (non-condensing):	5% to 95%
10	Certifications	Should comply with FCC/EN/VCCI/CE/UL standards

11	Features	Auto-negotiation(IEEE 802.3u-compliant)/ Auto MDI/MDI-X/ Support Missing Link and Smart Missing Link /Managed or unmanaged operation/Transparent to IEEE 802.1Q VLAN packets
12	Status Indicators	System and port LEDs should there to show the status
13	Warranty	3 years onsite comprehensive warranty

g. MEDIA CONVERTOR CHASSIS

MEDIA CONVERTOR CHASSIS		
Sl. No.	Item Description	Detailed Specification
1	Feature	Min. 12 slots for slide-in modules and duplicated power supply modules
2	Type	Industrial/Commercial grade
3	LED	Front panel LEDs for status indication
4	Rack mountable	Yes
5	Redundant Power Supply	Should have redundant power supply feature
7	Operating Temperature	0 deg. C to +50deg.C
8	Operating Humidity	Up to 90% non-condensing
9	Certifications	Should have UL/EN/FCC/CE/VCCI Certifications
10	Compliance	Should be RoHS compliant
11	Warranty	3 years onsite comprehensive warranty

h. PoE Injector or Power Injector

PoE Injector or Power Injector		
Sl. No.	Item Description	Detailed Specification
1	Type	Industrial Grade
2	Compliance	IEEE 802.3af compliant Supports half/full-duplex operation IEEE 802.3 compliant IEEE 802.3u compliant IEEE 802.3ab compliant 10/100 Ethernet port
3	Connectivity	Power Over Ethernet (PoE) Injector for 10/100 Ethernet connections delivers power up to 100 metres
4	Power Consumption	19.2 watts max

5	Operating Temperature	0 to 50 °C
6	Humidity	10-90% non-condensing
7	Certifications	Should have CE/FCC/VCCI/IC/UL Certifications
8	Warranty	3 years onsite comprehensive warranty

i. 2 KVA ONLINE UPS WITH BATTERIES

2 KVA ONLINE UPS WITH BATTERIES		
Sl. No.	Features	Detailed Specification
1	Capacity	2KVA
2	Design	a) IGBT based True online double conversion design b) Nominal Input Voltage : 208/220/230/240V c) Nominal Input Frequency : 50Hz with range of 46 - 54Hz
3	Power Factor	0.8
5	output	a) Output Voltage : 230V d) Waveform: Pure Sine Wave f) Efficiency : >90% k) Bypass : Automatic or Manual or Static Bypass
7	ENVIRONMENTAL	a) Operating temperature range : 0°C to 40°C b) Storage temperature : 0° C - 60° C. c) Relative humidity : 0 to 95% RH, non-condensing d) Operating altitude : upto 1000 mtrs
8	DISPLAY	Should have Graphical LCD Display for easy user interface
9	SAFETY STANDARDS AND CERTIFICATES	a) Environment : ISO 14001 or higher b) Safety : IEC/EN certification c) Quality : ISO 9001-2000 or higher
10	Credentials	a) The OEM should have their own office & Service Centre in Odisha b) Quoted products technical Catalogue must be available in OEM"s Web Site c) OEM must have 24X7 Toll Free Call Service Facility Toll Free Number to be provided
11	Communication	SNMP or better communication port for interfacing & Remote monitoring
12	Battery Type	1. TYPE: Sealed, lead acid, maintenance free (SMF) 2. RATED VOLTAGE: As per manufacturer standard 3. Battery backup: up to 4hrs(minimum)
13	Battery Housing	Closed housing with suitable lockers
14	Battery Life	Min. 3 years replacement guarantee
15	Warranty	Min. 3 years on site comprehensive warranty

j. 24U, 19 INCHES FLOOR STANDING RACK

24U, 19 INCHES FLOOR STANDING RACK		
Sl. No.	Detailed Specification	
1	Features	a. Floor standing rack b. Industrial/Commercial Grade c. Load Rating of 500 kgs (min) d. Side/Rear: Steel Doors, plain, vented at bottom, fully perforated and/or dual perforated e. Front: Glass Doors with optional vented side trims for front-to-back air flow, toughened tinted glass with lock & key facility f. Powder coated finishing (Steel doors & side trims for glass door should be powder coated), Vertical pillars of the frame should be of aluminium. All other parts should be of sheet steel.
2	Size	a. Height : 24U b. Width : As per requirement c. Depth : As per requirement
3	Accessories	a. Equipment support angles b. Single Fan tray with min. 4 fans c. Adequate nos. of 1 U cable managers d. Adequate nos. of point for AC distribution box with ON/OFF button e. Cable entry provision at top and bottom f. Earthing kit g. Castors with foot-operated brakes

k. RACK SERVER WITH MONITOR

RACK SERVER WITH MONITOR		
Sl. No.	Item Description	Detailed Specification
1	Processor	a. Single processor. b. Intel Xeon E5-2430 product family 6 core processor/ higher c. Processor Speed : 2.2 GHz or higher
2	Motherboard	OEM Motherboard with 1GB NVIDIA Graphics Card
3	Memory	16GB DDR-III 1066 MHz or higher SDRAM Memory with scalable up to 96 GB/higher
5	RAID	SAS RAID Controller supporting RAID 0,1, & 5
6	Network Feature	a. 4 X 1 Port Ethernet controller (10/100/1000 Mbps)/ Higher b. IPV6 Ready
7	Ports	Min. 4 nos. of USB Ports and min 2 PCI Slots

8	Storage	2x450GB SAS Hot Swap HDD (10K rpm or higher)
9	Optical Drive	DVD /CD-RW Combo drive
10	Display	TCO-05 certified 18.5" wide TFT Monitor must be supplied with the server
11	Power Supply	Redundant Power Supply
12	Form Factor	Rack(2U)
14	Keyboard & Mouse	OEM Keyboard & OEM Optical two button scroll mouse must be supplied with the server
16	OS Required & Certification	Microsoft Windows Server 2012 std 64 Bit with Media kit
17	VMS installation	The VMS shall be installed in the server
18	Warranty	3 years onsite comprehensive warranty

I. 6 CORE ARMoured FO CABLE(SINGLE MODE, MULTI-CORE)

6 CORE ARMoured FO CABLE(SINGLE MODE, MULTI-CORE)		
Sl. No.	Features	Detailed Specification
1	Cable Type	Minimum Single Mode 6 (six) core Optical Fiber, 9/125 ^μ m, armoured outdoor type application.
2	Armoured	Corrugated Steel Tape (CST) Armoured of min. 0.125 mm thickness
3	Standards	OFC should be TEC approved. The Vendor has to submit the Manufactures test reports along with OFC, Make with ISI mark.

m. CAT6 STP CABLES

CAT6 STP CABLES		
Sl. No.	Features	Detailed Specification
1	Type	Shielded Twisted Pair, Category 6, TIA / EIA 568-B.2, STP Cable
2	Networks Supported	Gigabit Ethernet (1000 Base-T and 1000 Base-TX) and above.
3	Type Of Conductors	4 pair 23 AWG Conductors
4	Insulation	Polyethylene
5	Jacket	Flame/Fire Retardant PVC
9	Temperature	Up to 60deg C

10	Approval	a. UL Listed b. ETL verified to TIA / EIA Cat 6
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n. 1.1KV ARMOURED CU-POWER CABLES

1.1KV ARMOURED CU-POWER CABLES		
Sl. No.	Features	Detailed Specification
1	Model	3 Core 2.5 Sq.mm Armoured Copper Cable
2	Voltage Rating	Up to and including 1100 Volts
3	Type of Conductor	Copper
4	No of cores	3
5	No. of strands/core	7(multi)
6	Colour code	Red/Yellow/Blue
7	Construction	2.5 sq.mm multi stranded annealed bare electrolytic grade, Conductor Resistance < 7.5 Ohms/Km
8	Primary Insulation	Extruded PVC compound as per IS 5831 type C
9	Inner sheath	Extruded PVC Compound type ST2
10	Armoured Material	Galvanised steel wire
11	Outer sheath	Extruded PVC Compound type ST2

3. SECTION-I.6.I(page no. 14) is revised as follows:

The bidder must be an Authorized Systems Integrator (ASI) having a direct purchase and support agreement with the OEMs of the IP Based CCTV Surveillance System equipment

The bidders should submit the Manufacturer Authorization Form (MAF) along with the bid from the OEMS for the following Equipments:

- i. CCTV Components (Cameras, PTZ Controller & VMS)
- ii. 24 Port L2 Managed Switch
- iii. Media Convertors(Box Type, Card Type & Media Convertor Chassis)
- iv. Fiber Components
- v. UTP/STP Components
- vi. Rack Server With Monitor
- vii. NAS

The ASI should also submit declaration, as a mandatory requirement, by the OEMs that the quoted H/W items shall not be outdated within 6(six) years of supply and that OEM renders necessary spares support to ASI.

4. **The bidder should submit the System Integrator Certificate only for the CCTV Components and Networking Installation along with the bid.**
5. **The total Number of 600VA UPS should be read as 41 (in case of any ambiguity in the Tender Document).**
6. **SECTION-III.1.XXII.(a) “Terms of Payment” is hereby amended as follows:**

TERMS OF PAYMENT:

(a) Supply Installation & Commissioning of the CCTV System

Payment shall be made as mentioned in **SECTION-I.(4).(IV).(c)- Key Deliverables.**

- i. 60% of the Contract Price (excluding CAMC cost) Shall be released on receipt of items in good condition on delivery, verification and stores entry of the all ordered IT Items which are fully factory inspected and inspection report is duly accepted by IT, OPTCL on submission of the following documents.
 - a. Bills in triplicate
 - b. Delivery Challan duly signed by consignee
 - c. Bank Guarantee: The supplier shall furnish Bank Guarantee of appropriate amount to OPTCL covering 10% (Composite Bank Guarantee) of contract price valid for 39 months (thirty nine months) from date of delivery. For this purpose the contract price shall mean firm price.
 - d. Certificate from the Sub-Divisional Officers of the 4 Nos. of Grid Sub-Stations for receipt of e-License / paper License for the Software Items
 - e. Verification & Inspection Certificate duly signed by IT officers and approved by CGM(IT).
- ii. 30% of the amount (Contract Price excluding CAMC Cost) shall be made on successful installation and commissioning of the CCTV Surveillance system, complete system rollout, training to Field and IT officers of OPTCL and submission of necessary manuals, drawings and documentation at all the 4 designated Grid Sub-Stations of OPTCL. The payment shall be made on submission of the following documents:
 - a. Bills in triplicate
 - b. Installation certificate
 - c. Successful System Roll-out certificate
 - d. OEM warranty certificate for 3 years from the date of successful system roll-out of the complete system (Successful roll-out of all the 4 Grid Sub-Stations).

- e. Training Completion Certificate
- f. Manuals, Drawings and other necessary documents
- iii. 10% of the amount (Contract Price excluding CAMC Cost) shall be made on completion of 90days hand holding by the supplier and UAT sign off. The payment shall be made on submission of the following documents:
 - a. Bills in triplicate
 - b. User Acceptance Test Certificate
 - c. Performance Certificate during the Handholding period.

(b) **Comprehensive AMC Support:**

Payment shall be made after Completion of each Quarter on submission of the following documents:

- a. Bills in Triplicate
- b. Preventive Maintenance Report duly signed by Officer-in-Charge of Grid Sub-stations and IT officers

No advance payment in any form will be made.

Handling of foreign exchange component and customs clearances, if any, must be taken care of by the bidder.

7. SECTION-III.1.XVIII.(b) is hereby amended as follows:

A Bank Guarantee of 2% of the cost of the Total Contract Price shall be furnished from any Nationalized/ Scheduled Bank to Chief. General Manager (I.T), OPTCL, Bhubaneswar before 2 month of completion of the 3 years warranty period executed in a non-judicial stamp paper worth of Rs. 29/- (Rupees Twenty nine) only subject to change as per Orissa Stamp Duty Act. Valid for a period of 38 months (Forty months) from the date of commencement of CAMC period. No interest will be payable on the Bank Guarantee.

Note: All other terms and conditions of the tender shall remain unchanged.

CHIEF GENERAL MANAGER (IT)
