



National Institute for Micro, Small and Medium Enterprises

(An organization of the Ministry of MSME, Govt. of India)

An ISO 9001:2015 Certified Organization)

Yousufguda, Hyderabad – 500 045.

TECHNICAL BID

FOR

SUPPLY, INSTALLATION, TESTING & COMMISSIONING OF CCTV BASED ADVANCED SECURITY & SURVEILLANCE SYSTEM AT ni-msme, HYDERABAD.

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1. BIDDERS INFORMATION FORMAT

S.No.	Description of Details	Bidder's Response	Page No. of Technical Bid Submission
1	Name of the Firm /Company		
2	Year of establishment		
3	Type of Company Govt./PSU/Public Ltd/ Partnership/Proprietary) with necessary documents.		
4	Registration number & Date of registration(Self attested certificate copy to be enclosed)		
5	Address of registered office/Head Quarter with contact person's name & designation, contact number, FAX no, E-Mail Address		
6	PAN numbers and related details		
7	GST registration related details		
8	Number of years' experience (Organization's supply, installation and maintenance of campus wide network components. Documentary evidences submitted (PO Copy & Completion certificates) should be mentioned here.		
9	Annual Turnover for FY 2018-19,2017-18,2016-17 (In separate ROW/LINE)		
10	Audited balance sheets submitted for above mentioned financial years? YES/NO		
11	Copy of ISO 9000:2000 /ISO9000:2008.		
12	Total manpower in customer support with details of technical support/helpdesk(Toll free number Mail ID, Contact person name and mobile numbers)		
13	Experience: List of prominent organizations where similar nature of projects executed in last seven years (P.O. Copy & Job completion certificates) to be enclosed		
14	Bidders should submit OEM authorization for Cameras and Switches.		
15	Bidders Relation with OEM, Type of Partnership with OEM (level of partnership-highest/Tier-1, reseller or Distributor		
16	OEM Details , Address in India (Registered office)		
17	OEM Contact person, Designation with contact number, E-Mail ID, FAX No.		
18	Name, Designation & Contact details of Bidder's authorized representative for this tender		

19	Registration Details with Various Govt. Estt. And in case of EMD Exemption details to be furnished. Please Mentioned details for Tender Fee Banker Cheque/DD Number, date etc.		
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2. BIDDERS' QUALIFICATION CRITERIA

<u>DESCRIPTION OF PARAMETERS</u>	<u>COMPLIANCE (Yes/No)</u>
The firm should be registered under The Indian Companies Act, 1956 and/or The Companies Bill 2008/2009.	
The firm must provide GST registration certificate.	
The firm should have registered office in India, preferably in Hyderabad/Secunderabad. The bidder should have experience for at least 5 years and should have executed projects on similar technologies. They would provide E2E services (A Single point of Contact for Passive components, Active components, Security etc.).	
The firm must provide copies of ITR for last three Financial Year and must have a minimum turnover of 2.0 Crore in last three FY.	
The firm must be ISO 9001:2015 certified.	
The firm must declare that there is no lawsuit pending against the proprietor/partners.	
All the Active network components proposed should be from a single Manufacturer for seamless integration.	
The products quoted should not be declared End of Life at the time of delivery and OEM should support the products quoted for at least 5 years and a letter to this extent be attached as a proof	
The Original Equipment Manufacturer of Active Components should be an ISO 9000 Certified.	
The OEM should have local TAC (Technical Assistance Centre) based in India for offering post sales technical support.	
The firm should be a cash profit making company for past three Financial Years as evidenced from balance sheets and P&L Statements.	
The Bidders should be authorized by OEM (CCTV, Network, Storage and VMS) to supply & install the equipment through OEM trained/certified engineers. OEM should provide an Authorization Certificate to the Vendors/ Bidders for support, & the proof of the same should be attached with the tender.	
Bidder shall have experience of having successfully completed a similar project End to End. Bidder must submit relevant reference reports/ completion certificates to substantiate his claim of having completed the following in last FY: <ul style="list-style-type: none"> ▪ Three similar works costing not less than Rs. 40 Lakhs or equivalent OR ▪ Two similar works costing not less than Rs. 50 Lakhs or equivalent OR ▪ One similar work costing not less than Rs. 60 Lakhs or 	

equivalent. Similar work would mean Supply, Installation, Commissioning and Testing of Projects involving provisioning of CCTV System using IP Network Infrastructure. In this regard a list of past/existing clients (with address and contact information) having such installation shall also be provided for verification. Note: NIMSME reserves all rights to reject the Bidder based on the non-suitability of experience.	
The bidder must quote for all the items/services mentioned in the tender. Part/incomplete quotes shall be summarily rejected	
Tender compliance should be certified by OEM's of respective components along with all the supporting documents.	
OEM's participating with Multiple Bidders should submit 100% compliant BOM with all the bidders and the BOM proposed should be identical with all the Authorized bidders.	
In case End-user demands an Onsite demonstration, the bidder must comply with Annexure-II and also demonstration integration on CCTV system with VMS, Storage.	

3. SCOPE OF WORK

The Scope of Work shall include in general but not limited to Supply, Installation, Integration, Networking, Testing and Commissioning of complete CCTV based surveillance system for **ni-msme** in Hyderabad.

NIMSME, Hyderabad envisages to install an integrated Closed-Circuit TV (CCTV) system for Surveillance at **ni-msme**. All the cameras will be having 24 hours continuous recording for 60days in FIFO. The recording system must have capacity to record all the cameras at a rate of 24fps, 1080p resolution with H.265 compression for 60 days with FIFO recording. The system must have provision for play back, browse and record any desired patch. The system must have functions like smart search capabilities based on camera, date & time, motion detection, alarms and events etc.

Bidder shall use gigabit Ethernet for OFC Transmission and Reception ensuring per camera bandwidth not less than 5 MB at a signal rate of 25 fps & FHD, using compression techniques like H.265 or better technique. Signals will be distributed to Remote Monitoring Locations (Admin/User) and Security Control Room (SCR)) for viewing & control over dedicated LAN for CCTV system. The CCTV network would be completely independent of the existing LAN for IT. Accesses to be needed for required camera from outside of CCTV network/**ni-msme** Campus.

There will be clear hierarchy in the monitoring locations/admin/users in respect of control of cameras, where in the priority will be given depending on the prevailing security policy. Access to cameras will be through password levels. There must be provision for programming the cameras into groups in order to facilitate authorization of cameras for monitoring / viewing at different monitoring locations.

The cameras are to be installed in the various locations to view the desired part of plant/township for surveillance. Mounting of the cameras would be on the poles to be

installed or on the existing structures / building as detailed by the user prior to start of execution.

The OFC cables shall be 12 core Single mode Armored cables. All the other cables for Power and for Signal are to be laid in HDPE conduit suitable for outdoor Installations. All the cables are to be neatly and legibly tagged and marked for easy identification, using identification tags at every 200 m interval. All the cable terminations must have ferules for identification. These tag / ferule numbers must be clearly indicated in the Detailed Engineering Diagram. The cables must be properly tied to the cable trays with Nylon tie wraps wherever required /possible. Cables at all road crossings are to be routed through GI pipe of Class B.

Bidder has to lay OFC cable to integrate new LAN system with the existing CCTV LAN and establish the LAN for the CCTV Control equipment and the monitoring locations. The CCTV LAN shall be logically and physically separate from the NI-MSME's existing IT LAN. If required Expansion Switches of suitable port numbers are to be installed for this to connect the monitoring locations.

The Bidder shall take single point responsibility on turnkey basis for the entire scope of work for Supply, Engineering, Installation, Integration, Networking, Testing and Commissioning of the system. Where ever the existing cables are occurred in 12 pair OFC Cable one pair should be allocated for Internet IT Network.

3.3 DESIGN BASIS FOR THE CCTV SYSTEM

CCTV Surveillance system is required to ensure effective surveillance of an area as well as create a tamper proof record for post event analysis.

- The system shall provide an online display of video images on **LCD/LED** monitors located **at** the central monitoring station or any strategic monitoring location.
- System should facilitate viewing of live and recorded images and controlling cameras by authorized users present in the **LAN**.
- The system should provide inter-operability of hardware, OS, Software, networking, printing, database connectivity reporting and communication protocols.
- System expansion should be possible through off the shelf available hardware.
- Video surveillance solution will rely on an IP network infrastructure to link all video surveillance components. Access to video at any time from any network location, enabling real-time incident response and investigation. Transfer of control and monitoring to any other point in the network in an emergency situation. The system shall support third party IP cameras.

4. TECHNICAL SPECIFICATIONS:

IP BASED DOME CAMERA INDOOR:

S. NO	DESCRIPTION OF PARAMETER	DESIRED VALUE
1	Image Sensor	1/2.8" Progressive Scan CMOS
2	Resolution	1920 × 1080@30fps
3	Focus Length	2.8/4/6 mm fixed lens
4		Color: 0.01 Lux @(F1.2, AGC ON),
5		0.028Lux @(F2.0, AGC ON);
6	Video	H.265+, H.265, H.264+, H.264
7		120 dB WDR
8		2 Behavior analyses
9	Audio	Built-in Mic
10		BLC/3D DNR/ROI/HLC
11		IP67
12		3-Axis adjustment
13		Built-in microSD/SDHC/SDXC card slot, upto 128 GB

IP BASED FIXED BULLET CAMERA-HD

S. No	Description of Parameter	Desired value	Compliance
1	Image Sensor	CMOS or Sony Exmor or better	
2	Resolution	5MP	
3	Effective Pixels	2944 (H) X 1656 (V)	
4	TV System	PAL/NTSC	
5	Electronic Shutter Time	Auto: PAL 1/1-1/10000Sec; NTSC 1/1-1/10000Sec	
6	Sync System	External	
7	Usable Illumination	0.01Lux	
8	S/N Ratio	≥52dB	
9	Scanning System	Progressive	
10	Video Output	Network	
11	Focus Length	2.7-13.7mm (Motorized Zoom Lens)	
12	Focus Control	Auto	
13	Type	HD IR Corrected Lens	
14	Pixel	5MP	
15	Infrared LED	10μ x 8PCS	
16	Infrared Distance	Up to 60m	
17	IR Power On	CDS Auto Control	

18	IR Status	Under 10 Lux By CDS	
19	ONVIF	Supports ONVIF 2.4	
20	Ethernet	RJ-45 (10/100Base-T)	
21	Protocol	IPv4, HTTP, TCP/IP, FTP, NTP, RTSP, UDP, SMTP, DNS, DDNS	
22	P2P	YES, Supports QR Code	
23	POE	Supports IEEE 802.3af	
24	Alarm I/O	2/1	
25	Main Stream	5MP@25fps,2944x1656*25fps	
26	Sub Stream	720*480@30fps, 352*288@30fps	
27	IE Brower	IE8-11, Google Chrome, Firefox	
28	Day/Night	Colour image in night/ B&W (IR-CUT)	
29	Compression	H.265+/H.26/ H.264/JPEG, Supports record AVI format	
30	Image Configuration	Saturation/Brightness/Contrast /Sharpness, Mirror, 3D NR, White Balance, BLC, FLK (Flicker Control)	
31	Motion Detection	Supports	
32	Privacy Masking	3 Rectangular Zone	
33	WDR	Ye 120dB	
34	Recording Mode	NVR/CMS/Web	
35	Housing	Metal Body, IP67	
36	Operation Temperature	-40°F to 140°F (-40°C to 60°C)	
37	Storage Temperature	-20°C ~ +60°C RH95% Max	

IP BASED HIGH SPEED DOME PTZ DAY/NIGHT POE CAMERA-HD

S.NO	DESCRIPTION OF PARAMETER	DESIRED VALUE	COMPLIANCE
1	Image Sensor	1/2.8" Sony Exmor or CMOS or better	
2	Resolution	2MP	
3	Effective Pixels	1920x1080p	
4	Lens	4.3-129 or 4.5-145 or 6-180 mm	
5	Zoom	36x Motorized Focus & Zoom	
6	Scanning System	Progressive	
7	Video Output	Network	
8	Focus Control	Auto	
9	Type	HD IR Corrected Lens	
10	ONVIF	Supports ONVIF 2.4	

11	Ethernet	RJ-45 (10/100Base-T)	
12	Protocol	IPv4, HTTP, TCP/IP, FTP, NTP, RTSP, UDP, SMTP, DNS, DDNS	
13	POE	Supports IEEE 802.3at	
14	Day/Night	Color image in night/ B&W (IR-CUT)	
15	Compression	H.265+/H.26/ H.264/JPEG, Supports record AVI format	
16	Image Configuration	Saturation/Brightness/Contrast /Sharpness, Mirror, 3D NR , White Balance, BLC, FLK(Flicker Control)	
17	Motion Detection	Supports	
18	WDR	120dB or better	
19	Recording Mode	NVR/CMS/Web	
20	Housing	Metal Body, IP66	
21	Operation Temperature	-40°F to 140°F (-40°C to 60°C)	
22	Storage Temperature	-20°C ~ +60°C RH95% Max	

FOR DISTRIBUTION SWITCH

S. No.	Description	Compliance (Yes/No)
1.	12 ports Gigabit Fiber, Layer 2+, 12 x 10/100/1000 Base T with 12 x 100/1000 BaseX SFP Combo Ports with 4 x PoE+ 802.3at (within 12 Ports or better) or 1 port ONU	
2.	High availability and PoE/PoE+ full power capability, Industry standard management, Layer 2+ with static routing.	
3.	L2 and L3 switching features (access control list, classification, filtering, IPv4 routing) are performed in hardware at interface line rate for voice, video, and data convergence Layer 2+ features provides straight forward IP static routing capabilities for physical interfaces, VLANs and subnets	

5. INSTALLATION & EXECUTION PLAN

- Supply, installation & commissioning of the system to be carried out to NI-MSME's` satisfaction. Any shortcomings of items are the responsibility of the supplier / Bidder and will provide those items at no extra cost. System should be handed over operational.
- 6U/9U racks for mounting the switches and networking components shall be considered for indoor installations.

- For the Field mounted equipment, Rain-water Canopy along with IP65 rated or equivalent Junction box shall be installed on the Camera Pole or nearby location with proper civil foundation construction practices.
- Cameras at desired location shall be mounted on 6 mtrs Poles with foundation PCC/RCC. Detailed camera mounting assembly shall be proposed in the Technical Bid from customer.
- Camera Stations shall be mounted with suitable mounting accessories; positions/orientation would be confirmed by the User during engineering stage.
- UPS shall draw power from the raw power from the nearest point, necessary power sockets and power cables shall be considered by bidder.
- Quantities of cables and Digging / Laying are approximate and might change as per site conditions.
- Existing 36 CCTV cameras should be brought under one monitor including proposed new cameras.
- The existing 3 LED TVs to be installed at appropriate places as decided by the institute.
- **It is recommended for bidder to conduct a survey of the site on its own before bidding, and in case the quantity required of the OFC/HDPE ducts exceed, the same shall be absorbed by the bidder without any time & Cost implication to ni-msme.**

6. DOCUMENTATION

- a) Catalogue, technical literature of offered equipment.
- b) Installation plan & mounting details
- c) Logic diagram and control schematics
- d) Electrical wiring drawings
- e) Project Execution Timeline
- f) Inspection format after commissioning
- g) Pre-Commissioning Check List.

7. WARRANTY

Major Equipments Camera, Server, Active Network components shall cover a warranty period of 24 months from the dates of receipt of ni-msme at stores, bidder shall also provide the supervisory maintenance support of the equipment /systems during warranty period at site with a scheduled visited plan submitted to user.

8. ANNUAL MAINTENANCE CONTRACT

The OEM/Vender shall be ready to take up comprehensive annual maintenance contract for 5 years, for the entire system after warranty period. The OEM/Bidder has to submit the offer inclusive of Comprehensive AMC and operational spares for 01 year of operation after two years warranty.

BILL OF MATERIAL

S.NO.	DESCRIPTION OF EQUIPMENT/COMPONENT/SERVICE	A/U	QUANTITY
	CAMERA SYSTEM		

1	Outdoor Bullet Camera - 5MPx, Fixed Focus 4/6mm, Day/Night with IR Illuminators, PoE Compliant.	Nos	72
2	Outdoor Bullet Camera - 5MPx, Fixed Focus 4/6mm, Day/Night with IR Illuminators, PoE Compliant.	Nos	10
3	Outdoor PTZ Camera - 2MPx, with 20x Optical Zoom, Day/Night with IR Illuminators, PoE+ Compliant.	Nos	4
ACTIVE NETWORK COMPONENT			
1	Core Switch with Min. 12x 10 Gbps Combo Ports and stacking capability, OSPF, RIP V2 routing Capability etc. with Module	Nos	1
2	Managed 12 Port FO Distribution Switches at main building with loaded SFP module	Nos	4
3	Access switch for camera (POE) with Loaded SFP module	Nos	16
STORAGE SYSTEM COMPONENT			
1	VMS: 64 Channel NVR with H.265 & ONVIF Support (Each NVR Loaded with 6x8TB SATA HDD)	Nos	3
2	Operator Monitoring station: 4 Core Processor with 8GB RAM min. and 1GB Graphics card	Nos	2
3	Multi-monitor setup with 4 Monitors	Nos	2
4	2KVA Online UPS System for VMS Rack	Nos	1
PASSIVE COMPONENT			
1	12 core Armoured single mode fibre	Mts	4500
2	Fiber Termination Box - 12Port LIU loaded	Nos	20
3	Outdoor rated STP cable, 305 mtrs reel	Box	4
4	Direct burial 25/32mm HDPE Pipes	Mts	2000
5	Rack 27U: Server Rack	Nos	1
6	Rack 6U: Network Rack	Nos	4
7	IP 65 - outdoor Junction Box	Nos	15
8	6 mtr GI pole for mounting cameras	Nos	20
SERVICE COMPONENT			
1	Digging & laying of HDPE with FO cable	Mtrs	2500
2	Installation & Commissioning and testing of CCTV Cameras, connecting cables power adaptors and configuration of NVR	LS	1

INDOOR CAMERA BILL OF MATERIAL/QUANTITY:

S.No	DESCRIPTION OF EQUIPMENT/COMPONENT/SERVICE	Quantity in Nos.
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1	<p>IP Dome Camera 1/2.8" Progressive Scan CMOS 1920 × 1080@30fps 2.8/4/6 mm fixed lens Color: 0.01 Lux @(F1.2, AGC ON), 0.028Lux @(F2.0, AGC ON); H.265+, H.265, H.264+, H.264 120 dB WDR 2 Behavior analyses Built-in Mic BLC/3D DNR/ROI/HLC IP67 3-Axis adjustment Built-in microSD/SDHC/SDXC card slot, up to 128 GB</p>	16
2	<p>16CH NVR Third-party network cameras supported • Up to 8 Megapixels resolution recording • Support 1-ch HDMI, 1-ch VGA, HMDI at up to 4K(3840x2160) resolution • 16/32-ch network cameras can be connected with 160M/256M incoming bandwidth • Up to 4 SATA interfaces • Support dual-os to ensure high reliability of system running •Support various VCA detection alarm and VCA search •Support H.265/H.264/MPEG4 video formats</p>	1
3	8TB HDD Surveillance	4
4	SD Card 128 GB SD Card	16
5	Cat-6 UTP Cable Supply, of CAT6 cable	1200 Mtrs
6	OLT(Optical Line Terminal) module Switch 2 Port	1
7	ONU Switches	5
8	Security Boxes Protection Level:IP65,Type:Control Box	4
9	Rack 6 U Rack	1
10	Monitor 55"4k LED	1
11	8 Port POE switch- HF-S08-120W with 1 Up link Ports, 250 meters POE Distance support	2
12	4 Port POE switch- HF-S04- 60W with 2 Up link Ports, 250 meters POE Distance support	1

13	8 Port Gigabit Switch 8 Port Gigabit Desk Top Switch	1
14	Black Boxes Termination Boxes for OFC	4
15	Spike Box 6 Pins Spike Box	4
16	Patch Cords Patch Cords-5 meters	4
17	Installation & Commissioning and testing of CCTV Cameras, connecting cables power adaptors and configuration of NVR	1

ON-SITE DEMONSTRATION & PROOF OF CONCEPT

Bidders should be well prepared upon prior notification from **ni-msme** Hyderabad to demonstrate the products quoted against the RFP and its compliance to the technical specifications / features during the technical evaluation stage of the tender. All the required hardware / Software and other infrastructure should be sourced by bidder / OEM on his own.

Bidders upon prior notification from **ni-msme** team should be able to demonstrate a POC complying the technical requirements specified in the RFP, all the required hardware and software should be organized by the bidder / OEM. Details of the POC or Demonstration details shall be communicated later.

Successful qualification of POC does not guarantee any Order confirmation from NI-MSME, Hyderabad. And the Bidder has to conduct the same with no Time & Cost implication to **ni-msme**, Hyderabad.

For any queries you may contact:

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