



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.

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

NETWORK SWITCHES –CORE SWITCH

S. No.	Description	Compliance (Yes/No)
1	High Availability (HA) Top-of-Rack Switch: 24x10G Stackable Managed Switch with 12x10GBASE-T and 12xSFP+	
2	Layer 3 (static, policy-based and RIP OSPF VRRP PIM dynamic routing)	
3	Dual redundant, modular power supplies equipping full width models contribute to business continuity management Vertical or horizontal flexible stacking with management unit hitless failover and nonstop forwarding across operational stack members Stacking and distributed link aggregation allow for multi-resiliency with zero downtime and load balancing capabilities	
4	1G Ethernet service port for out-of-band management RS232 straight-through serial RJ45 for local management console Mini-USB port for local management console USB port for local storage, logs, configuration or image files	
5	Mixed Stack of 1G and 10G models provides 16K MAC, 2K ARP/NDP, 4K VLANs and 512 routes	

FO 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)	
2.	High availability and PoE/PoE+ full power capability, Industry standard management, Layer 2+ with static routing.	
3.	<p>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</p> <p>Layer 2+ features provides straight forward IP static routing capabilities for physical interfaces, VLANs and subnets</p> <p>16K MAC address table, 1K concurrent VLANs and 64 static routes for SMB and small enterprise access layers</p> <p>Low latency at all network speeds, Jumbo frames support of up to 9Kb accelerating storage performance for backup and cloud applications</p>	

ACCESS LAYER SWITCH

S. No.	Description	Compliance (Yes/No)
1.	8x10/100/1000 Base T with 2 x 100/1000 BaseX SFP Combo Ports with atleast 6 x PoE 802.3af (within 8 Ports or better)	
2.	<ul style="list-style-type: none">• Forwarding modes: Store-and-forward• Bandwidth: 20Gbps full duplex• Network latency: Less than 4 μs for 64-byte frames in store-and-forward mode for 1000Mbps to 1000Mbps transmission• Buffer memory: 512KB embedded memory per unit• Address database size: 4k media access control (MAC) addresses per system	
3.	802.1x for authentication (MD5) • ACL filtering to permit or deny traffic based on MAC or IP addresses	
4.	IEEE 802.3ad Link Aggregation (manual or LACP) • IEEE 802.1w Rapid Spanning Tree Protocol (RSTP) • IEEE 802.1s Multiple Spanning Trees Protocol (MSTP)	

VIDEO MANAGEMENT SYSTEM – NVR BASED

S. NO	DESCRIPTION OF PARAMETER	DESIRED VALUE	COMPLIANCE
1	Compression	Standard H.265	
2	OS	Embedded Linux	
3	Network Input	64 Channel IPC input	
4	Access Bandwidth	450 Mbps	
5	Network Access Format	4K/5MP/ 4MP/ 3MP/ 1080P/ 960P/ 720P@25/ 30fps	
6	Output	HDMI × 1: 4K × 2K / 1920 × 1080 / 1280 × 1024 VGA × 1: 1920 × 1080 / 1280 × 1024	
7	Input	64 Channel IPC input (Inbuilt Mic Camera)	
8	Output	RCA x 1	
9	2-way Audio	RCA x 1	
10	Record Stream	Dual Stream Recording	
11	Resolution	4K/5MP / 4MP / 3MP / 1080P / 960P / 720P	
12	Frame Rate	4K@1600 fps(PAL); 1920 fps(NTSC)	
13	Bit Rate	1Mbps ~ 8Mbps	
14	Encode	CBR	
15	Quality	6 Level	
16	Mode	Manual, Timer, Motion, Sensor	
17	File Manager	Lock, unlock, reserving time	
18	Playback Channels	16 Channel	
19	Search	Time/Calendar Search/ Event/ Tag Search	
20	Smart Search	Highlighted colour to display the camera record in a certain period of time, different colours refers to different record events	
21	Function	Play, Pause, FF, FB, Digital zoom	
22	Mode	Sensor, Motion, Video Loss	
23	Input	4	
24	Output	4	
25	Triggering	Record, snap, preset, e-mail, etc.	
26	Interface	RJ45 10/ 100/ 1000Mbps × 2	
27	Protocols	TCP / IP, PPPoE, DHCP, DNS, DDNS, UPnP, NTP, SMTP	
28	Others	Multiple users online, dual stream	
29	HDD	SATA × 9, max. 8TB per HDD	
30	RS485	RS485 × 1, connect to PTZ and control keyboard	
31	RAID Array	RAID0, RAID1, RAID5, RAID10	
32	USB	USB 3.0 × 1, USB 2.0 × 1 (one in the front panel and the other in the rear panel)	
33	Remote Controller	Yes	
34	Work Environment	-10 ~ 50 °C, 10% ~ 90% Humidity	

ONU Switch:-

ONU (Optical Network Unit) and ONT (Optical Network Termination) – ONU and ONT are basically the same device – ONT is located at the customer premise, and ONU is located outside the home. ONU can be working in different temperature and weather conditions. It should resist water, winds and vandals. The ONU usually communicates with an optical network terminal (ONT), which may be a separate box that connects the PON to TV sets, telephones, computers, or a wireless router. The ONU/ONT may be one device.

OLT (Optical Line Terminal) is the endpoint hardware device located at the CO in a passive optical network (PON). The OLT contains a central processing unit (CPU), passive optical network cards, a gateway router (GWR) and voice gateway (VGW) uplink cards. The main functionality of the OLT is to adapt the incoming traffic (Voice/Data/Video) from the metropolitan rings into the PON transport layer. It can transmit a data signal to users at 1490nm. That signal can serve up to 128 ONTs at a range of up to 12.5 miles by using optical splitters.

Product Specifications:

User interface	10/100/1000M RJ45 port.
PON	Transmission speed :upstream/downstream symmetrical 1Gbps
	Network coverage radius: 20KM
	Optical receive sensitivity: $\geq -26\text{dBm}$
	Luminous power: $>0\text{dBm}$
	Security: ONU authentication mechanism
Protocol	Compliant with IEEE 802.3ah
	YD/T 1475-2006
	IEEE 802.1D, Spanning Tree
	IEEE 802.1Q, VLAN
	IEEE 802.1w, RSTP
	IEEE 802.3ad (LACP)
	Ethernet-II, Ethernet-SNAP
VLAN	Port-based VLAN
	GVRP
	IEEE 802.1Q VLAN
QOS	Backpressure flow control (half-duplex)
	IEEE 802.3x flow control (full-duplex)
	Prevent Head Of Line
	IEEE 802.1p, CoS
	WR,SP and FIFO queue scheduling algorithm
	Port rate limit
Safety	IEEE 802.1x, access control based upon Port; support local and remote RADIUS.

	CHAP,EAP certification; Storm control, port protection;
Management	Various management modes such as Web, TELNET Debug function.
Size	130mm(L)×100mm(W)×27mm(H)
Environment	Operating temperature:0℃~60℃; Operating humidity:10%~85% non-condensing Storage temperature:-40℃~80℃; Storage humidity:5%~95% non-condensing
Power supply	110~240VAC 12V/0.5A DC power interface size:2.1mm/5.5mm
Power Consumption	2.5W

OLT Specifications:-

Chassis	Rack	1U 19 inch standard box
	Slots	NA
Uplink Port	QTY	8
	Copper	10/100/1000M auto-negotiable, RJ45:4pcs
	SFP	4 SFP slots (Combo)
PON Port	QTY	4
	Physical Interface	SFP Slots
	Connector Type	1000BASE-PX20
	Max splitting ratio	1:64
Management Ports		1*100BASE—TX outband port 1 CONSOLE port
PON Port Specific a tion	Transmission Distance	20KM
	PON port speed	Symmetrical 1.25Gbps
	Wavelength	1490nm TX,1310nm RX
	Connector	SC/PC
	Fiber Type	9/125μm SMF
	TX Power	+2~+7dBm
	Rx Sensitivity	-27dBm
	Saturation Optical Power	-6dBm

Management Mode	SNMP, Telnet, and CLI management mode.
Management Function	<p>Fan Group Detecting</p> <p>Port Status monitoring and configuration management;</p> <p>Layer-2 switch configuration such as Vlan, Trunk ,RSTP,IGMP ,QOS, etc;</p> <p>EPON management function: DBA ,ONU authorization, ACL ,QOS ,etc;</p> <p>Online ONU configuration and management User management</p> <p>Alarm management</p>
Layer-two Switch	<p>Support port Vlan and protocol Vlan</p> <p>Support Vlan tag/Untag ,Vlan transparent transmission;</p> <p>Support 4096 VLAN</p> <p>Support 802.3dd trunk RSTP</p> <p>QOS based on port , VID, TOS and MAC address IGMP Snooping</p> <p>802.x flow control</p> <p>Port stability statistic and monitoring</p>
EPON Function	<p>Support port-based rate limitation and bandwidth control;</p> <p>In compliant with IEEE802.3ah Standard Up to 20KM transmission Distance</p> <p>Support data encryption, group broadcasting, port Vlan separation, RSTP, etc.</p> <p>Support Dynamic Bandwidth Allocation (DBA)</p> <p>Support ONU auto-discovery/Link detection/remote upgrade of software;</p> <p>Support VLAN division and user separation to avoid broadcast storm;</p> <p>Support various LLID configuration and single LLID configuration .Different user and different service could provide different QoS by means of different LLID channels.</p> <p>Support power-off alarm function ,easy for link problem detection</p> <p>Support broadcasting storm resistance function</p> <p>Support port isolation between different ports</p> <p>Support ACL and SNMP to configure data packet filter flexibly</p>

		Specialized design for system breakdown prevention to maintain stable system Support dynamic distance calculation on EMS online Support RSTP,IGMP Proxy
Dimension		442mm(L)*315mm(W)*44mm(H)
Weight		4.2kg
Power Supply	220VAC	AC: 90V~240V, 47/63Hz
	-48DC	DC:-36V~-72V
Power Consumption		45W
Operating Environment	Working Temperature	-10~45°C
	Storage Temperature	-40~85°C
	Relative Humidity	5~90%(non-conditioning)

For any queries you may contact:

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