Indian Institute of Tropical Meteorology,
Pashan, Pune - 411008

PS/125/27/2019 January 13, 2020

Sub: Minutes of Pre-bid meeting for Supply, Installation, Commissioning, Integration & Maintenance of Network Infrastructure, Security Surveillance and Campus Wide WiFi Network Solution– Qty. 01 Job. (Turnkey Job).

Indian Institute of Tropical Meteorology, Pune (IITM) has published tender for Supply, Installation, Commissioning, Integration & Maintenance of Network Infrastructure, Security Surveillance and Campus Wide WiFi Network Solution– Qty. 01 Job. (Turnkey Job).

The pre-bid meeting held on 13.01.2020 @ 11.30 hrs at IITM. At the outset Officials welcomed all the members. Committee had an internal meeting to go through the prebid queries received from various vendors.

It has been noted that the new technologies / components have emerged in networking equipment in the recent times and the same was proposed by the various leading network OEM's. The latest chassis switch and access switch can have 10GE SFP+ and 25GE SFP28 supported ports. Using this latest implementations the bandwidth of the corresponding network devices can be increased without major changes in the network architecture of the Institute in terms of port or switch counts. Based upon various change requests from potential bidder, and in view of technological advancements, Committee recommends to incorporate few changes and accordingly the recommended changes in the specifications are as per the **Annexure–I.**

Committee has gone through the queries received from following vendors;

(1) M/s. Orbit Technologies
(2) M/s. HPE,
(3) M/s. Computech Engineers, Pune
(4) M/s. Pace Edge Technologies Pune
(5) M/s. XtraNet Technologies Private Limited

Further representatives of the following participated bidders had attended the meeting.

Sr. No.	Name of the Company
1.	M/s. Orbit Technologies
2.	M/s. Sujata Computers Pvt. Ltd., Pune
3.	M/s. HPE Pune.
4.	M/s. Pace Edge Technologies Pune
5.	M/s. Extreme Networks Pvt. Ltd., Pune
6.	M/s. Wizertech Informatics Pvt. Ltd. Pune
7.	M/s. Computech Engineers, Pune
8.	M/s. Locuz Enterprise Solutions Ltd., Pune
9.	M/s. Cisco Pune
10.	M/s. Vintech Electronics, Pune
11.	M/s. Ishan Infotech Ltd., Pune

Committee has detailed discussion on the queries received by all the participating bidders and the responses are prepared as per **Annexure-II**.

Committee has expression to all participating bidders that the changes requests as per Annexure-1 and II are final and no further change requests shall be accepted by the Institute.

Meeting ended with thanks to chair.

Annexure-I to Pre-bid minute

Supply, Installation, Commissioning, Integration & Maintenance of Network Infrastructure, Security Surveillance and Campus Wide WiFi Network Solution– Qty. 01 Job. (Turnkey Job)					
	Tender Specifications			**Updated Tender Specifications**	
A	**Core Chassis Switches : 3 Nos.**		**A**	**Core Chassis Switches : 3 Nos.**	
(b)	**Hardware and Interface Requirement**		**(b)**	**Hardware and Interface Requirement**	
(i)	**IITM-CORE Switch**		**(i)**	**IITM-CORE Switch**	
1.	Redundant Supervisor Engine / Management Engine		1.	Redundant Supervisor Engine / Management Engine	
2.	1*40GE Single Mode QSFP+ Uplink Port and 1*40GE Multi Mode QSFP+ Uplink Port (Both these ports must be on different line cards/modules to avoid 40G link failure in case of h/w failure of line card/module).		2.	2*[2* minimum 25GE] Single Mode SFP28 Uplink Ports. All these ports must be on different line cards to avoid link failure in case of h/w failure of line card.	
3.	5 * 24 Port 10GE SFP+ supported Line Cards or Total no of 110 10G SPF+ ports			Minimum 5 * 24 Port 10GE SFP+/25GE SFP28 supported Line Cards or Total no of "110" 10GE SFP+/25GE SFP28 ports. All Line cards must of silimilar type	
(ii)	**CCCR-Core**		**(ii)**	**CCCR-Core**	
1.	Redundant Supervisor Engine / Management Engine		1.	Redundant Supervisor Engine / Management Engine	
2.	2*40GE Multi Mode QSFP+ Uplink Port (Both these ports must be on different line cards/modules to avoid 40G link failure in case of h/w failure of line card/module).		2.	2*[2*minimum 25GE] Single Mode SFP28 Uplink Ports. All these ports must be on different line cards to avoid link failure in case of h/w failure of line card.	
3.	Minimum 2*12 Port 10GE SPF+ Supported Line Cards		3.	Minimum 2*12 Port 10GE SPF+/ 25GE SFP28 Supported Line Cards or Total no of "24" 10GE SFP+/25GE SFP28 ports. All Line cards must of silimilar type.	
(iii)	**HPC Core**		**(iii)**	**HPC Core**	
1.	Redundant Supervisor Engine / Management Engine		1.	Redundant Supervisor Engine / Management Engine	
2.	1*40GE Single Mode QSFP+ Uplink Port and 1*40GE Multi Mode QSFP+ Uplink Port (Both these ports must be on different line cards/modules to avoid 40G link failure in case of h/w failure of line card/module).		2.	2*[2*minimum 25GE] Single Mode SFP28 Uplink Ports. All these ports must be on different line cards to avoid link failure in case of h/w failure of line card.	
3.	Minimum 2*12 Port 10GE SPF+ Supported Line Cards		3.	Minimum 2*12 Port 10GE SPF+/ 25GE SFP28 Supported Line Cards or Total no of "24" 10GE SFP+/25GE SFP28 ports. All Line cards must of silimilar type.	
(c)	**Performance**		**(c)**	**Performance**	

1.	The Switches architecture should be capable of system bandwidth capacity minimum up to 8 Tbps and per slot bandwidth capacity up to 480 Gbps.		1.	The Switches architecture should be capable of system bandwidth capacity minimum up to 9 Tbps and per slot bandwidth capacity minimum up to 2.25 Tbps considering 48 port line card. Howerver System architecture hardware should be able to support bandwidth capacity up to 20 Tbps from day one.	
2.	The Switch should support forwarding rates of minimum 800 million packets per second (MPPS)		2.	The Switch should support forwarding rate of minimum 2 Billion packets per second (BPPS)	
3.	The Switch should support 1/10/40 Gbps interface		3.	The Switch should support 1/10/25 Gbps interface and ready to support 40/100 Gbps interface from day one.	
				For All three Chassis Switches- All appropriate Line cards should be pluggable across all core switches and must be of simillar type.	
B	**Access Switches (48 Port Switches – Qty 51 Nos. & 24 Port Switches – Qty 11 Nos.)**				
1.	Each switch should have minimum 2*10G uplink ports		1.	Each switch should have minimum 2*10G/25G uplink ports	
D	Total no of 10GE/1GE SFP+/SFP Modules		D	Total no of 25GE/10GE/1GE QSFP14/SFP28/SFP+/SFP Modules	
	All appropriate Small Form Factor Modules should be pluggable across all proposed switches.			All appropriate Small Form Factor Modules should be pluggable across all proposed switches.	
	IITM-CORE Switch			**IITM-CORE Switch**	
	40GE Single Mode QSFP–Qty-01 No and 40GE Multi Mode QSFP–Qty-01 No			25GE Single Mode SFP28-Qty-04 Nos.	
	CCCR-Core Switch			**CCCR-Core Switch**	
	40GE Single Mode QSFP–Qty-01 No and 40GE Multi Mode QSFP–Qty-01 No			25GE Single Mode SFP28-Qty-04 Nos.	
	HPC Core Switch			HPC Core Switch	
	40GE Multi Mode QSFP–Qty-02 Nos.			25GE Single Mode SFP28-Qty-04 Nos.	
J.	**Passive Work**		**J.**	**Passive Work**	
8	Supply, laying, termination of Single mode OS2 Fibre optic cable: - 6 core Single mode fibre cable.	Approx. 500 Mtr	8	Supply, laying, termination of Single mode OS2 Fibre optic cable: - 6 core Single mode fibre cable.	Approx. 500 Mtr
				Supply, laying, termination of Single mode OS2 Fibre optic cable: - 12 core Single mode fibre cable.	Approx. 800 Mtr

9	LIU: 06 core fibre supported SM LIU fully loaded with Sc pigtails	02 Nos.	9	LIU: 06 core fibre supported SM LIU fully loaded with Sc pigtails	01 Nos.
				LIU: 24 core fibre supported SM LIU fully loaded with Sc pigtails	03 Nos.
10	Patch Cords: 2 Mtr. LC/SC Single mode fibre patch cord	04 Nos.	10	Patch Cords: 2 Mtr. LC/SC Single mode fibre patch cord	16 Nos.
Note :	**Based on requests from various vendors it has been clarified that nomenclature "10GE SPF+/ 25GE SFP28 " means that the ports should be capable to work with both 10G as well as 25G SFP module depend upon the requirement.**				

Pre-Bid Queries by M/s. Orbit & HPE

S.No	Page No.	Clause No.	Sprcification	Changes Required with	IITM Reply
			Specification for the IT network infrastructure, Security Surveillance and Campus wide Wi-Fi Network – Qty. 1 Job		
1	44	6	The switches should support Software Defined Network (SDN) capability which allows the separation of data (packet forwarding) and control (routing decision) paths, to be controlled by an SDN Controller. Institute is likely to implement it in near future. The proposed networking solution should be SDN ready.	Please change to "switches should support Software Defined Network (SDN)or euivalent capability which allows the separation of data (packet forwarding) and control (routing decision) paths, to be controlled by an SDN Controller or policy manager. Institute is likely to implement it in near future. The proposed networking solution should be SDNor equivalent ready."	The switches should support Software Defined Network (SDN) or eqivalent capability which allows the separation of data (packet forwarding) and control (routing decision) paths, to be controlled by an SDN Controller or eqivalent Controller . Institute is likely to implement it in near future. The proposed networking solution should be SDN ready.
		A	**Core Chassis Switches : 3 Nos.**		
		(a)	**Generic Requirements for Core Switches**		
2	45	2	Supervisor engine / Management Engine should have minimum DRAM of 8GB and FLASH of 8 GB	Please change to minimum DRAM of 4GB and FLASH of 4 GB which is sufficient for wired non blocking functionality of proposed switch	As per Tender
3	45	5	The Switch Should support for IPv4 and IPv6 routing, OSPFv3, BGPv4, IPv4 & IPv6 uRPF, Dynamic ARP inspection, IP source guard, Multicast Routing from Day one	Please change to IPv4 & IPv6 uRPF or RPF which is similar	The Switch Should support for IPv4 and IPv6 routing, OSPFv3, BGPv4, IPv4 & IPv6 uRPF or RPF, Dynamic ARP inspection, IP source guard, Multicast Routing from Day one
		(b)	**Hardware and Interface Requirement**		
		(i)	**IITM-CORE Switch**		
4	45	2	1*40GE Single Mode QSFP+ Uplink Port and 1*40GE Multi Mode QSFP+ Uplink Port (Both these ports must be on different line cards/modules to avoid 40G link failure in case of h/w failure of line card/module).	Please add" 40G module should not be on the Supervisor Engine / Management Engine. It should be on separate line card" .	Please refer Annexure-I of pre-bid minutes
5	45	3	5 * 24 Port 10GE SFP+ supported Line Cards or Total no of 110 10G SPF+ ports	Please chanage to 5 * 24 Port 10GE SFP+/25G SFP28 supported Line Cards or Total no of 110 10G SPF+/SFP28 ports	Please refer Annexure-I of pre-bid minutes
		(ii)	**CCCR-Core**		
6	45	2	2*40GE Multi Mode QSFP+ Uplink Port (Both these ports must be on different line cards/modules to avoid 40G link failure in case of h/w failure of line card/module).	Please add" 40G module should not be on the Supervisor Engine / Management Engine. It should be on separate line card"	Please refer Annexure-I of pre-bid minutes
7	45	3	Minimum 2*12 Port 10GE SPF+ Supported Line Cards	Please change to Minimum 2*12 Port 10GE SPF+/25G SFP28 Supported Line Cards	Please refer Annexure-I of pre-bid minutes
		(iii)	**HPC Core**		
8	45	2	1*40GE Single Mode QSFP+ Uplink Port and 1*40GE Multi Mode QSFP+ Uplink Port (Both these ports must be on different line cards/modules to avoid 40G link failure in case of h/w failure of line card/module).	Please add" 40G module should not be on the Supervisor Engine / Management Engine. It should be on separate line card"	Please refer Annexure-I of pre-bid minutes

9	45	3	Minimum 2*12 Port 10GE SPF+ Supported Line Cards	Please change to Minimum 2*12 Port 10GE SPF+/25G SFP28 Supported Line Cards	Please refer Annexure-I of pre-bid minutes
		(c)	**Performance**		
10		3	The Switch should support 1/10/40 Gbps interface	Please change to "The Switch should support 1/10/25/50G Gbps interface and 40G/100G interface"	Please refer Annexure-I of pre-bid minutes
11		5	The Switch should support minimum 100 K Ipv4 routes	Please change to "Switch should support minimum 64 K Ipv4 routes which is very much sufficent for campus core switches"	The Switch should support minimum 64 K Ipv4 routes
12		6	The Switch should support minimum 50 K Ipv6 Routes	Please change to "Switch should support minimum 32 K Ipv4 routes which is very much sufficent for campus core switches"	The Switch should support minimum 32 K Ipv6 Routes
13	45	7	The Switch should support minimum 15 K ACL entries for QoS and Security control	Please change to "The Switch should support minimum 5K ACL entries for QoS and Security control which is very much sufficent for campus core switches"	The Switch should support minimum 5 K ACL entries for QoS and Security control
14	45	8	The Switch should support minimum 15 K multicast ipv4/Ipv6 routes	Please change to "The Switch should support minimum 4K multicast ipv4/Ipv6 routes which is very much sufficent for campus core switches"	The Switch should support minimum 5 K multicast ipv4/Ipv6 routes
15	45	9	The Switch should support minimum 4 K logical interfaces	Please change to "The Switch should support minimum 2K logical interfaces which is very much sufficent for campus core switches"	The Switch should support minimum 2 K logical interfaces
		(d)	**Chassis Virtualization Features**		
16	45	1	The Switch should be capable to support combining of two separate physical switch in a single logical unit over L2 & L3 Multipath to support dual bandwidth and active/active configuration for the connected network devices	Please change to "The Switch should be capable to support combining of two separate physical switch in a single logical unit or Active -active switch over L2 & L3 Multipath to support dual bandwidth and active/active configuration for the connected network devices"	Agreed
		(e)	**Layer 2 Features**		
17	46	3	The Switch should support Secure trunking protocol with MD5 or equivalent protocol to reduce administrative burden of configuring VLANs on multiple switches in turn eliminating the configuration errors & troubleshooting in secure manner	Please remove this point. This is OEM specific Please change to " the switch should support MVRP"	As per Tender
18	46	6	The Switch should support Layer 2 trace route to ease troubleshooting by identifying the physical path that a packet takes from source to destination	Please change to Layer2/Layer3 trace route	Agreed
19	46	7	The Switch should support extensive debugging including layer 2 debugging for troubleshooting	Please change to "debugging including layer 2/ Layer 3 debugging for troubleshooting"	Agreed
		(f)	**Layer 3 Routing Features**		
20	46	2	The Switch should support L3 VPN routes VRF minimum 1000	Please change to " The switch should support minimum 32 VRF"	Agreed
21	46	3	The Switch should support RFC 1771 - BGPv4 with 4- byte ASN	Please change to RFC 4271" RFC 1771 is Obsoletes and RFC 4271 is new RFC for BGP	The Switch should support RFC 4271 - BGPv4
22	46	4	The Switch should support QoS, Security, Flow based Monitoring and Control Plane Protection for Multicast Traffic	Please change to "Control plane protection for multicast/DOS attack."	The Switch should support QoS, Security, Flow based Monitoring and Control Plane Protection for Multicast Traffic or DOS Attack

		(h)	**QoS**		
23	46	3	The Switch should support QoS for IPv6 unicast and multicast traffic	Please change to "IPv6 unicast/broadcast and multicast traffic"	As per Tender
24	46	13	The Switch should support Admission Control: IP DA/SA, IP DA/SA L4, RSVP	Please remove RSVP	The Switch should support Admission Control: IP DA/SA, IP DA/SA L4
25	46	15	The Switch should support Congestion Avoidance: WRED, multiple Queue Thresholds	Please change to "WRED/ Deficit Weighted Round Robin (DWRR), multiple Queue Thresholds/queue shaping	The Switch should support Congestion Avoidance: WRED or DWRR, Multiple Queue Thresholds or Queue Shaping
25	46	16	The Switch should support Scheduling IP precedence, 802.1p and ISL priority, three transmit queues on a per port basis, WRR, Strict Priority Queue TOS<->COS mapping	Please remove ISL priorty, three transmit queues on a per port basis" Please change to "WRR/DWRR" which is similar	The Switch should support Scheduling IP precedence, 802.1p and, WRR or DWRR, Strict Priority Queue TOS<->COS mapping
27	47	18	The Ethernet ports must support Shaped round robin (SRR), Deficit weighted round robin (DWRR) and Weighted Round Robin (WRR)	Please change to "Shaped round robin (SRR)/Deficit weighted round robin (DWRR)/Weighted Round Robin (WRR)"	The Ethernet ports must support Shaped round robin (SRR) or Deficit weighted round robin (DWRR) or Weighted Round Robin (WRR)
		(i)	**Flow based Application Monitoring**		
28	47	1	The Switch should support Flow based Application Monitoring in Hardware	Please remove this point as this is OEM specific.	The switch should be cable to monitor network flow to resolve network performance problem
29	47	2	The Switch should support Egress Flow for collecting flow statistics for packets prior to transmission out the egress interface or interfaces	Please remove this point as this is OEM specific.	The Switch should support tools to collecting flow statistics for outgoing packets from internal network
30	47	3	The Switch should support Sampled Flow for records to be created based on a sample of the traffic matching the flow	Please change to " the Switch should support sflow or equivalent"	The Switch should support tools like Netflow or sflow or equivalent
		(j)	**Security**		
31	47	5	The Switch should support secured communication on the links between devices in the network with a combination of encryption, message integrity check, and data-path replay protection mechanisms	Please remove this point. This is not required in Core switch	Agreed
32	47	7	The Switch should have support for IEEE802.1AE MACsec encryption	Please remove this point. This is not required in Core switch	Agreed
		(k)	**Management**		
33	47	1	The Switch should support the revised IP-MIB that includes statistics collection for IPv6	Please change to " The switch should support MIB"	The switch should support MIB or IPMIB
34	47	8	The Switch should support collection of Top-N to analyse data for each physical port on a switch	Please remove this point. This is OEM specific	The Switch should support collection of details or Information to analyse data for each physical port on a switch
35	47	9	The Switch should support collection of Top-N details for Number of input/output broadcast packets, buffer overflow and bytes	Please remove this point. This is OEM specific	The Switch should support collection of details or Information for Number of input/output broadcast packets, buffer overflow and bytes

36	47	10	The Switch should support collection of Top-N details for Number of input/output multicast packets	Please remove this point. This is OEM specific	The Switch should support collection of details or Information for Number of input/output multicast packets
37	47	11	The Switch should support Layer 2 trace route to identify the Layer 2 path that a packet takes from a source device to a destination device	Please change to "Switch should support Layer 2/Layer 3 trace route to identify the Layer 2/Layer 3 path that a packet takes from a source device to a destination device"	The Switch should support Layer2 or Layer3 trace route to identify the Layer2 or Layer3 path that a packet takes from a source device to a destination device
		(I)	**Administration and Troubleshooting**		
38	47	4	The switch must fully inter-operate with the existing WS-C2960X-48FPS-L & WS-C2960L- 48TS-LL installed at Prithvi Hostel	Please let us know, what are all the current protocol used and all the protocols are open standard or not.	Basic requirement is VLAN communication between WS-C2960X-48FPS-L & WS-C2960L- 48TS-LL switches and poposed core switch.
		B	**Access Switches (48 Port Switches – Qty 51 Nos. & 24 Port Switches – Qty 11 Nos.)**		
39	47	2	The Switch should support minimum 300 Gbps of switching capacity	Please change to Switch should support minimum 100 Gbps of switching capacity for 48 Port Switch and 84 Gbps of switching capacity for 24 Port Switch	Switch should support minimum 200 Gbps of switching capacity for 48 Port Switch and 150 Gbps of switching capacity for 24 Port Switch
40	48	4	The Switch should support minimum 30 K IPv4 routes	Please change to 'The Switch should support minimum 256 IPv4 routes"	The Switch should support minimum 2K IPv4 routes
41	48	5	The Switch should support minimum 15 K IPv6 routes	Please change to 'The Switch should support minimum 128 IPv6 routes"	The Switch should support minimum 1K IPv6 routes
41	48	6	The Switch should support forwarding rates up to 100 million packets per second (Mpps)	Please change to "The Switch should support forwarding rates up to 90 million packets per second (Mpps)"	As per Tender
43	48	7	The Switch should support minimum 4 K VLAN	Please change to "Switch should support minimum 4 K VLAN ID"	The Switch should support minimum 4 K VLAN ID
44	48	15	The switch must support non-blocking, full wire speed switching, with support for cut through and/or store-and-forward switching modes on all ports.	Please change to "The switch must support non-blocking, full wire speed switching, with support for cut through /or store-and-forward switching modes on all ports."	The switch must support non-blocking, full wire speed switching, with support for cut through or store-and-forward switching modes on all ports.
45	48	20	It is desirable that the switch supports failsafe stacking.	Please change to " switch supports failsafe/ backplane stacking"	It is desirable that the switch supports failsafe or backplane stacking
		E	**Wi-Fi Wireless Controller**		
46	49	3	Controller should have capacity to handle **minimum 10000** or more concurrent devices.	Please change to "minimum 8000 concurrent devices which will be sufficent for campus based deployment.."	As per Tender
47	49	4	Controller should support minimum 20 **Gbps** of throughput.	Please change to "Controller should support minimum 10 Gbps of throughput"	As per Tender
		F.	**Indoor Access Point –Qty. 54 No.**		
48	50	4	Access Points should support physical rate minimum of 2 Gbps on 5GHz radios.	Please change to "Access Points should support physical rate minimum of 1.7 Gbps on 5GHz radios."	As per Tender
49	50	5	Access Points should support MU-MIMO (Multi-user Multiple-input Multiple-output) and 4X4 (MIMO) with 3 spatial streams.	Please change to "4X4 (MIMO) with 4 spatial streams."	As per Tender
50	50	6	Access point should have Ethernet interface with supporting speeds of 10M, 100M, 1G 2.5 G.	Please change to supporting speeds of 100M, 1G 2.5 G.	Access point should have Ethernet interface with supporting speeds of 100M, 1G, 2.5G
51	50	14	Must have -90 dB or better Receiver Sensitivity.	Pleass change to " -91 dB or better Receiver"	Access Points should have -90 dB (+/-1) or better Receiver Sensitivity.

52	51	22	Must continue serving clients when WAN link to controller is back up again, should not reboot before joining	Please remove this point	The said point is removed
53	51	24	When operated in remote AP mode, the AP must not disconnect any clients when the connection to the controller fails or in the case the failed connection has been restored again.	Please explain " what is the meaning of remote AP"	The said point is removed
54	51	25	When operated in remote AP mode, the AP must be able to authenticate new users with local radius server directly at the AP itself in case of link failure to controller.	Please explain " what is the meaning of remote AP"	The said point is removed
		G.	**Outdoor Access Point – Qty 20 Nos.**		
55	51	5	Access Points should have -90 dB or better Receiver Sensitivity.	Pleass change to " -91 dB or better Receiver"	Access Points should have -90 dB (+/-1) or better Receiver Sensitivity.
56	51	7	Must support MU-MIMO (Multi-user Multiple-input Multiple-output) and 3X3 (MIMO) with 3 spatial streams.	Please change to "MU-MIMO (Multi-user Multiple-input Multiple-output) and 4X4 (MIMO) with 4 spatial streams on 5Ghz Radio"	As per Tender
57	51	8	Must support physical rate minimum of 1.3 Gbps on 5GHz radios	Please change to" support physical rate minimum of 1.7 Gbps on 5GHz radios"	As per Tender

Pre-Bid Queries by M/s. Computech

Sr.No.	Existing Specifications	Proposed Specifications	Remarks	IITM Remark / Reply
Core Chassis				
1	Line cards:10 Gbps	acceptable with support for future scalability	chassis needs to support line cards of 25GBPS in future	Please refer Annexure-I of pre-bid minutes
			which will need 25*2*48 port = 2.4 tbps per slot switching capacity	
			all ports need to be wireless non blocking	
2	5*24Port 10Gbps line card	acceptable with provisioning either through 24 port or 48 port line cards	we do recommend to maintain 10% spare ports than desired count : hence approx 132 ports to be provisioned , in the rare event of any line card failure	Please refer Annexure-I of pre-bid minutes
3	40 Gbps inter-chassis connectivity	in lieu of single port on SUP engine, trunking of two or more ports through line cards should be acceptable	we can provision the same either through trunking of 4*10GBPS or 2*25GBPS ports and in the event of even 100gbps connectivity, 4*25GBPS ports can be trunked	Please refer Annexure-I of pre-bid minutes
			will need single mode fiber for 40G or above speeds	
3a	2*40G ports on Supervisor	to be deleted	as its catered by point no 3 above	Please refer Annexure-I of pre-bid minutes
4	24 Port/12 Port line cards	2*48 port line cards	to achieve 75+ ports in the remote chassis	Please refer Annexure-I of pre-bid minutes
			(so that OEMs do not opt to sell less than 4 slot chassis making it non-scalable)	
5	Chassis switching capacity 8 tbps	accepted	future scalability 16tbps or more	Please refer Annexure-I of pre-bid minutes
			in the event of 25G/40G/100G line card population	
6	single 12 port 10G linecard,etc	2*48 port line cards	to achieve 75+ ports in the remote chassis	Please refer Annexure-I of pre-bid minutes
			(so that OEMs do not opt to sell less than 4 slot chassis making it non-scalable)	

			Standardization which allows swapping cards across chassis in the event of rare failures and therefore achieving 99.99% uptime	
Access Switch				
1	10 Gbps *2 uplink	accepted	future scalability for 25G/40G	
			Deployment of latest techonology	Please refer Annexure-I of pre-bid minutes
2	300GBPS switching bandwidth	acceptable for 48 ports ; for 24 port - ideally 250GBPS or more	different port density switches should have differential switching bandwidth, with wirespeed performance	Switch should support minimum 200 Gbps of switching capacity for 48 Port Switch and 150 Gbps of switching capacity for 24 Port Switch
3	**MAC address 32K**	acceptable	for 24 port switch - it can be even 16K	MAC Address minimum 16K for both type of switches
4	**IPV6 routes : 15K**	1.5k is sufficient	may be its a typo error	Agreed
5	**VLAN : 4 K**	1 K is sufficient		Agreed
6	**IPv4 routes : 30K**	3K is sufficient	may be its a typo error (access switches do not need such high count of IP routes)	Agreed
12 Port Switch				
1	10 Gbps *2 uplink	accepted	future uplink scalability to 25G/40G	Please refer Annexure-I of pre-bid minutes
Network video recorder (NVR)				
1	resolution : 12MP	12MP not needed and only upto8MP should be acceptable		As per Tender
2	hard disk : 32TB usable after RAID5	28TB usable after RAID 5	45 days storage can get achieved with proposed cameras	As per Tender
Network Camera				
1	3 MP resolution	4MP resolution	high resolution will improve camera performance	As per Tender
2	**H.264/MJPEG**	H.265, H.265+, H.264, H.264+ and MJPEG video simultaneously		Agreed
3		Protection level : IK10	improves encryption level	Agreed
Camera count				
a	32 camera license support	32/64 camera with 320Mbps incoming bandwidth		As per Tender
b		**support for 3rd party network cameras**		As per Tender
	As you have sought multigigabit switches, we presume that you are possibly opting for AX wireless standard, for access points			As per Tender

	Commercial terms			
I	Payment terms			
	60% against shipment, 30% against installation and 10% against performance BG	min 85% against shipment, 15% against installation and submission of PBG (for imported as well as local supplies)	All import transactions from govt cutomers and as sought mandatorily by OEMs are listed in proposed (also when LC is being opened for imported goods, the distributors can not wait for large amount to get cleared post installation)	As per Tender
II	DDP prices	whether USD equivalent INR prices to be quoted since mere USD pricing is not DDP pricing	if IITM needs delivery duty paid, means concessional duty and door delivery included prices, then contractor has to ensure customs clearance and supply in INR	As per Tender
			Due to the above limitation, even for INR based values quoted (considering CDEC), IITM should be open local LC	As per Tender
III			LC charges to beneficiary's account	As per Tender
IV		Partshipment to be allowed	as project will get executed in part by part (passive, distribution active, core active, wifi, cameras etc), atleast shipment within two parts to be allowrd	As per Tender
V	EMD			
VI	8 lakhs is sought / exemption only against NSIC certificate	No bidder can get qualified under the same, hence MSME based exemption to be allowed	Under MSME, not only product specific registration is provided, but govt also allows 10% markup for MSME bidders over L1, to be contracted	In tender Clause No. 1.15.7 "NSIC" may be read as "NSIC / MSME"
VII	Release dates for core network			
	to be released within last two years	we need clarity on the same, whether its a mandatory compliance spec	as multiple OEMs can get disqualified / we suggest to opt for leading OEMs only who are in leader's quadrant of Gartner report (for wired and wireless network)	As per Tender

VIII	Support and service centre			
	OEM centre should be located in Pune	technical support needs OEM office in Pune		As per Tender
		service centre - is not important	Logistics depot ensure 8x5xNBD and 24x7x4 advance hardware replacement, in the event of device failure	As per Tender
		OEM offers logistics depot, for advance replacement services		As per Tender
		24x7 TAC centre (online) is needed for core deployment		As per Tender

Pre-bid queries M/s. Pace Edge Technologies Pune

Sr.No.	tender specs	compliance	extreme response	IITM's Reply
1	Line cards:10 Gbps	acceptable	VDX8770 : future 40G and 100G line cards can be provided since we can support 4tbps per slot we do support TENDERED specs such as 10GBPS downlinks and 40GBPS uplink :	Please refer Annexure-I of pre-bid minutes
2	5*24Port 10G	accepted	we will provision 48*10G line cards (3 nos)	Please refer Annexure-I of pre-bid minutes
3	40 Gbps	supported	For future scalability -100G connectivity will also be fine.	Please refer Annexure-I of pre-bid minutes
3a	2*40G ports on fabric	Supported	4* 10G port can be trunked on Line Card	Please refer Annexure-I of pre-bid minutes
4	Chassis switching capacity 8 tbps m	min 16tbps should get provisioned (4tBPS *4 Slot)	for future scalability	Please refer Annexure-I of pre-bid minutes
4	HPC chassis : 2*12 Port 10GE SPF+ Supported Line Cards	single 48 port line card		Please refer Annexure-I of pre-bid minutes
6	CCCR chassis: 2*12 Port 10GE SPF+ Supported Line Cards	single 48 port line card		Please refer Annexure-I of pre-bid minutes
Access Switch				
1	10 Gbps *2 uplink	complied	Even40Gbps Uplink can be provided	Please refer Annexure-I of pre-bid minutes
2	Mgig Port : 8 Port	Complied	All port should be Multigigabit	As per tender

EMD Exemption				
	EMD exemption only against NSIC certificate	EMD to waived off	NSIC IS NOT APPLICABLE/ MSME should applicable	As per Tender
Release dates for core network				
	2 Years clause for realese date should be removed since 8 year OEM support is avaialable	Complied	eight years support is guaranteed by OEM in the event, customer opts for service contract : this will negate the necessity to get product release dates since thats no longer the issue	Date will be considered from date of publication of tender
Support and service centre				
	OEM Service centre should be located in Pune	service centre - is not important	support will be through our partner's office at Pune	As per tender
			Logistics centre in Bhivandi (closely located to Pune, for ensuring SLA)	

Pre-bid queries M/s. XtraNet Technologies Private Limited

S. No.	Page Number	Section / Clause	Existing Text of the Clause / Provision in the RFP	Clarification / Modification sought	IITM's Remark / Reply
1	32	SPECIAL CONDITIONS OF CONTRACT (SCC)	**Payment Terms :** **On shipment** : Sixty (60%) percent of the Contract Price shall be paid on receipt of the Goods and upon submission of the documents specified in GCC Clause 2.15 **On Acceptance:** The remaining Forty (30%) percent of the Contract value shall be paid to the Supplier within thirty (30) days after the date of the acceptance certificate issued by the Purchaser. Ten (10%) percent of the Contract Price of Goods received, upon acceptance of Performance Security / Performance Bank Guarantee.	Request to ammend the payment terms as mentioned below : 90 % payment of the total value with 100% GST will be release against supply of the items. 10 % will be released after successful installation.	As per Tender
2	11	Bid Security (BS) / Earnest Money Deposit (EMD)	Bid security / EMD is mandatory requirement and exemption is applicable to the firms registered with NSIC only for the manufacture of the tendered goods and not for selling products manufactured by other companies.	Kindly allow the EMD exemption for the service provider/Reseller/Partner for the items which are registerde in NSIC authoritues. Different govy orgination (Central and state) are already allowing the EMD Exemption to such service provider / Reseller/ Partner. Few such orginations for your ready reference are as : CDEC , CDOT , GAIL , MAPIT , AAI .	As per Tender
3	50	Technical Specifications, Indoor Access Point –Qty. 54 No.	Access Points should support MU-MIMO (Multi-user Multiple-input Multiple-output) and 4X4 (MIMO) with 3 spatial streams.	Kindly ammend the clause as mentioned below : Access Points should support MU-MIMO (Multi-user Multiple-input Multiple-output) and 4X4 (MIMO) with 4 spatial streams.	As per Tender
4	50	Technical Specifications, Indoor Access Point –Qty. 54 No.	Access point should have Ethernet interface with supporting speeds of 10M, 100M, 1G 2.5 G.	The given feature is OEM specific. Kindly remove 2.5G Ethernet interface from Access Point specification.	As per Tender