



Government of Jammu and Kashmir
Jammu and Kashmir e-Governance Agency
Information Technology Department
Civil Secretariat, Jammu

Subject: Tender for Supply, Installation and Commissioning of IT Infrastructure for Digital Village Centre (Notification no. 04 JaKeGA of 2019 dated 20.11.2019)

Enclosed are the response to the pre bid queries received by this office regarding the subject captioned above. The clarification is annexed herewith as Annexure A.

Chief Executive Officer
J&K e-Governance Agency

No. JaKeGA/Gen/32/2019

Dated 29.11.2019

Copy to the:

1. Pvt. Secretary to Pr. Secretary to Government, ITD for information of the Principal Secretary.
2. Website In-charge with the instructions to upload pre-bid queries clarification on JaKeGA and JK Tenders website.
3. Office file.

Pre-Bid Queries and their Response for Notification No 04 of JakeGA 2019 dated 20.11.2019 regarding Tender for Supply, Installation, Commissioning of IT Infrastructure for Digital Village Centre (Annexure A)

S. No	Bidder Side			Response from JaKeGA, ITD	
	Bidder Name	Specifications of MCU	Recommended Specifications for the Tender		Resason of Recommended Changes
1		The MCU should have minimum 48 Number of ports on IP in all in one MCU. The MCU if operated in HD720p mode should have 96 ports.	The MCU should have minimum 48 Number of ports on IP in all in one MCU. The MCU if operated in HD720p mode should have 96 ports.It should Support 500 Registered WebClients /Softclients and all registered Clients should be able to do Full HD Point to Point Video Calls without using MCU Ports. The users should be able to make instant video call with online contacts	As once MCU is getting utilized at optimum level it should also have a capability to have 5000 Registered Clients which can do P2P calls parallel without utilizing the MCU ports. Hence it will allow more efficient way of utilization of MCU Multi Party Licenses. This will give client to use the Multi Party License more flexibility and load will get segregated of P2P & Multiparty Calls.	Minimum specifications in the RFP. The bidder is free to offer a better product with higher specification.
2		Minimum Bandwidth Required for Specified video quality at MCU End (Mbps)	Minimum Bandwidth Required for Specified video quality at MCU End 800 Kbps Or 0.3 (Mbps)	As Minimum Bandwidth Parameters Values are not Mentioned hence we request to all the MinBandwidth value to be mentioned in it as per industry standards of Different OEM.	As per RFP.
3		Minimum Bandwidth Required for Specified video quality at End point/far-site end (Mbps)	Minimum Bandwidth Required for Specified video quality at End point/far-site end (Mbps) 384 Kbps Or 0.3 (Mbps)	As Minimum Bandwidth Parameters Values are not Mentioned hence we request to all the MinBandwidth value to be mentioned in it as per industry standards of Different OEM.	As per RFP.
4		MCU should support audio ports on IP minimum 20 VoIP ports. An MCU which doesn't have this feature inbuilt, then it may have a third party integration products that provide 20 the number of Audio VOIP ports however the integration must be tested and smooth.	MCU should support audio ports on IP minimum 20 VoIP/SIP ports. An MCU which doesn't have this feature inbuilt, then it may have a third party integration products that provide 20 the number of Audio SIP/ VOIP ports however the integration must be tested and smooth.	As some OEM provides the SIP Dialing & Some Provides the VOIP Dialing as from the Audio Port. In mentioned existing specifications we only have to achieve the Voice Calling that same may be done via SIP/ VOIP Phone. Hence both should be allowed to be supplied eitherways .	As per RFP.
5		Specifications of Video Conference Camera - Type 1	Recommended Specifications for the Tender	Resason of Recommended Changes	
6		The Video conferencing endpoint should be a point to point system with integrated codec and Camera and microphone. The	The Video conferencing endpoint should be a point to point system with integrated codec and Camera and microphone or with separate Codec and camera and microphone	Different OEMs have different set of devices and technologies. So this will make it more generic.	May be read as "The Video conferencing endpoint should be a point to point system with integrated codec and Camera and microphone or with separate Codec and camera and microphone but all from same OEM."
7			The Video conferencing endpoint should support a dual PTZ camera with Face Detection/ Automatic voice tracking capability or PTZ camera with speaker tracking capability with 12x optical zoom or higher.	As the Voice Tracking enabled camera of all Major OEM comes with Dual Camera and those all are PTZ hence requested specs to be updated from NON PTZ to PTZ Camera. And 12X Optical Zoom is available in PTZ Cameras only as per industry standard.	May be read as "The Video conferencing endpoint should support a single camera with Full HD quality "
8			Or		
9	Email from some Mr. Samir from sam@stagnetworks.com	The Video conferencing endpoint should support a single Non PTZ camera with Face Detection/ Automatic voice tracking capability or PTZ camera with speaker tracking capability with 12x optical zoom or higher.	The Video conferencing endpoint should support a single Non PTZ camera with Face Detection/ Automatic voice tracking/ E Pan Tilt Zoom Functionality capability with 4x Digital zoom or higher.	For a Non PTZ Camera Maximum 4X Digital Zoom is available as per industry standard. Also as the required camera is Fixed one which is to be used in small rooms hence even the latest E Pan Tilt Zoom Functionality should be allowed to be provided. As the E Pan Tilt Functionality is latest technology with allows camera to auto adapt the Pan Tilt & Zoom as per No of Persons sitting in Room. However fr Voice Tracking the PTZ Cameras are industry standard like Eagle Eye II etc.	-
10		System has G-722/ G-711/ G-729 or equivalent wideband audio coding support	System has G-722/ G-711/ G-729/ OPUS/ AAC/ PCMU or equivalent wideband audio coding support	Batter Audio Coding should be also allowed in tender to allow healthy competition	Minimum specifications in the RFP. The bidder is free to offer a better product with higher specification.
11		The system should have integrated Wi Fi Connectivity so that the system can work on wireless network in the room. In case the product doesn't have in built Wi-Fi then it may alternatively do so by turning it into a Wi-Fi client device using a third party integration solution. However the integration must be tested and smooth.	This point should be removed	Video Conference cannot be depended on unreliable source of bandwidth. It can be an additional feature in an endpoint but as a generic requirement it should be removed.	Accepted.
12		The system should have minimum of one Number of Video Input HDMI and one number of HDMI based Video output port.The system should also have a flexibility to connect with a Laptop on a USB port to function as a Web Camera. The required cables for the same should be supplied	The system should have minimum of Two number of HDMI / DVI Or Equivalent based Video output port's for Dual Display should be their from day one.The system should also have a flexibility to connect with a Laptop on a USB port to function as a Web Camera or Wirelessly Sharing the content from Latop should be provided. The required cables for the same should be supplied.	Minimum 2 Output Ports should be putted in tender as Dual Display (2 HDMI / Equivalent Output Ports Is Industry Standard for any VC End Points. Hence any time client can connect two video devices like LED/ Projector/ Monitor to view the content and Connected sited Video on Separate Screen flawlessly simultaneously. Also as WFI is essence of Project as per alst Corrigendum even the advanced Wireless Presentation Functionality for sharing Laptop Content should be allowed. So that PC Content sharing can be provided to if HDMI cbale Based Connectivity or Or Wirelessly eitherways should be acceptable.	Minimum specifications in the RFP. The bidder is free to offer a better product with higher specification.
13		Specifications of Video Conferencing Equipment for Larger Conference rooms - Type 2	Recommended Specifications for the Tender	Resason of Recommended Changes	
14		The system should have 3x HDMI/DVI ports to connect two or more cameras and 1 x PC/Computer. If the said ports are inbuilt in the VC equipment End Point then an additional external hardware must be added and integrated however the solution must be tested and smooth	The system should have 3x HDMI/DVI/HDCI/3G-SDI/DP ports to connect two or more cameras and 1 x PC/Computer. If the said ports are inbuilt in the VC equipment End Point then an additional external hardware must be added and integrated however the solution must be tested and smooth	Ports to be added as all are same and specs shall be more generic as Different OEM provides different Ports as combination	May be read as "The system should have 2x HDMI/DVI ports or higher to connect Cameras and PC/Computer."
15		The system should be supplied with 6 Microphones day one. The system should support Noise Reduction, Automatic Gain control, Acoustic Echo Canceller, Active Lip synchronization	The system should be supplied with 4 Or 6 Or Microphones day one. The system should support Noise Reduction, Automatic Gain control, Acoustic Echo Canceller, Active Lip synchronization	Different OEMs have different microphones with different sensitivity. To make it more generic 4 or more should be there. Even in Point no 1 of End Point its being allowed that 4 or 6 Or More Microphones are Allowed.	May be read as "The system should be supplied with 4 Microphones from day one. The system should support Noise Reduction, Automatic Gain control, Acoustic Echo Canceller,,"
16		The system should have two Audio in over HDMI or higher	The system should have two Audio in over HDMI/DVI/ USB or higher in any combination to be provided from day one	As or the Audio In Different OEM uses different Audio Port Combination also. Hence same will make tender generic.	May be read as "The system should have two Audio in over HDMI or DVI or USB or higher in any combination to be provided from day one. However the same must be working and must be integrated with the setup".

17					
18	Email from some Pranav from manupranav@frontlinegro up.org	Dual-Band 802.11ac Wave 2 or better access points. The Wi-Fi signal dissemination is expected to be minimum of 150 feet reach.	To provide connectivity access to multiple user's as per point no. 17 (255 Concurrent user's), we hereby suggest that coverage should not be less than 100Meter (300Feet) to provide better Wi-Fi signals.		Minimum specifications in the RFP. The bidder is free to offer a better product with higher specification.
19		Radio chains: streams 2x2:2. Min EIRP power 28 dBm or Better	The AP shall provide a minimum of 32 dBm EIRP for both 2.4 GHz and 5 GHz frequencies.		As per RFP.
20		Access Point should be support directional integrated antenna .	Access Point should be support directional/Omni integrated antenna.		May be read as " Access Point should support Omnidirectional antenna"
21		AP shall support simultaneously MESH mode to serve MESH connection requirements and also regular WLAN for wireless clients to association	AP shall support simultaneously MESH mode to serve MESH connection requirements and also regular WLAN for wireless clients to association and Backhaul must support upto 300Mtr with its integrated Antenna's by using 5Ghz and simultaneously coverage on both the Bands i.e. 2.4Ghz & 5Ghz.		As per RFP.
22		Certifications: FCC, CE and EN certified, Plenum rated pig tail to be used wherever applicable.	Certifications: FCC/CE and EN certified, Plenum Comply rated pig tail to be used wherever applicable.		As per RFP.
23					
24	M/s Softel Solutions Pvt. Ltd. Add: E-1002 ,1st floor,Above IICI Bank ,CR PARK –Kalkaji Main road, CR PARK,NEW DELHI- 110019,INDIA	OEM should have presence in India at least from last 10 years and making no losses in business in last 5 years	OEM should have presence in India/globally at least from last 10 years and making no losses in business in last 5 years		May be read as "OEM should have presence in India at least from last 03 years and making no losses in business in last 03 years."
25		Page 16 (Annexure 2; Point 1): The bidder should be a registered Company/Organization/MSME with Government with Valid GST No and PAN No. The bidder should be registered under The Companies Act, 1956 or The Companies Act 2013 for atleast last three years.	The bidder should be a registered Company/Organization/MSME with Government with Valid GST No and PAN No		As per RFP.
26		The Video conferencing endpoint should support a single Non PTZ camera with Face Detection/ Automatic voice tracking capability. The system should have integrated Wi Fi Connectivity so that the system can work on wireless network in the room	The Video conferencing endpoint should support a single Non PTZ camera with Face Detection/ Automatic voice tracking capability/ auto focus		May be read as "The Video conferencing endpoint should support a single camera with Full HD quality "
27			Point to be removed		Accepted.
28		The system should have 3x HDMI/DVI ports to connect two or more cameras and 1 x PC/Computer	The system should have 3x HDMI/DVI/equivalent ports to connect two or more cameras and 1 x PC/Computer		May be read as "The system should have 2x HDMI/DVI ports or higher to connect Cameras and PC/Computer."
29		Gateway should have atleast Serial Ports (one each for RS-232 and RS-485) for the function of making changes / IP Ethernet protocol, conversion to RS-232 interface or vice versa.	To be removed		As per RFP.
30		Gateway should have POE ports to power up devices like IP Video Camera, the switch ports should support functionalities like VLAN, Inter VLAN Routing	To be removed		As per RFP.
31		The gateway should have integrated 802.11a/b/g/n compliant wireless Access point capability. Should have dual radios for 2.4Ghz as well as 5Ghz	Customer have external AP, router no need support Wi-Fi		As per RFP.
32		The integrated Access point should have capability to serve both as access point as well client to a WiFi network.	Customer have external AP, router no need support Wi-Fi		As per RFP.
33		SCADA Support			Accepted.
34		Gateway should support DNP3			Accepted.
35		Gateway should support MODBUS SCADA Tunneling (BSTUN)			Accepted.
36		Gateway should support for high availability architectures and the ability to duplicate RTU traffic in software to a redundant SCADA master station. Sometime referred to as 'multi-drop'.	Scada is for power systems and should not be required here. So request for removal.		Accepted.
37		Gateway should support SCADA Protocol Translation (Serial to IP) for DNP3-->DNP3/IP			Accepted.
38		Gateway should be able to provide IEC 60870 T101 to IEC 60870 T104 protocol translation to serve as a SCADA gateway			Accepted.
39	Gateway should be able to operate in the temperature range of -40 to 60 degree celcius	/-10-50°C		May be read as "Gateway should be able to operate in the temperature range of -15 to 55 degree celcius."	
40	The Gateway should have a standalone GPS which should help to map the coordinates on the NMS	To be removed		As per RFP.	
41	Gateway should comply to automotive standards like SAEJ1455 2a1, 2b2, 2c, 2d3, 3a4, 3b	To be removed		Accepted.	
42	Hazardous certification: UL 121201, CSA 213, UL/CSA 60079-0, -15, IEC 60079-0, -15 IECEx Test Report, EN 60079-0, -15 ATEX Certificate	To be removed		May be read as, " UL ad FCC Certified"	
43					
44					
45	Specification of Mast / Tower	Specification of Mast / Tower	Resason of Recommended Changes		
46	Self Supporting Galvanized Pole Single Tubular Monopole Tower Pole with ladder and Top Mounting Ring with as per TRAI Guidelines	Kindly confirm if a pole has to be installed or a tower.	Pole not recommended for heights above 10 metres.		May be read as "Self Supporting Galvanized Pole Single Tubular Monopole Tower/Pole with ladder and Top Mounting Ring with as per TRAI Guidelines."
47	Height 10 metres above ground as per BOQ	Confirmation required for exact length of Mast/Tower			
48	Specifications of MCU	Recommended Specifications for the Tender	Resason of Recommended Changes		
49	The MCU should have minimum 48 Number of ports on IP in all in one MCU. The MCU if operated in HD720p mode should have 96 ports.	The MCU should have minimum 48 Number of ports on IP in all in one MCU. The MCU if operated in HD720p mode should have 96 ports.It should Support 500 Registered WebClients /Softclients and all registered Clients should be able to do Full HD Point to Point Video Calls without using MCU Ports. The users should be able to make instant video call with online contacts	As once MCU is getting utilized at optimum level it should also have a capability to have 5000 Registered Clients which can do P2P calls parallel without utilizing the MCU ports. Hence it will allow more efficient way of utilization of MCU Multi Party Licenses. This will give client to use the Multi Party License more flexibility and load will get segregated of P2P & Multiparty Calls.		Minimum specifications in the RFP. The bidder is free to offer a better product with higher specification.
50	Minimum Bandwidth Required for Specified video quality at MCU End (Mbps)	Minimum Bandwidth Required for Specified video quality at MCU End 800 Kbps Or 0.3 (Mbps)	As Minimum Bandwidth Parameters Values are not Mentioned hence we request to all the MinBandwidth value to be mentioned in it as per industry standards of Different OEM.		As per RFP.
50	Minimum Bandwidth Required for Specified video quality at End point/far-site end (Mbps)	Minimum Bandwidth Required for Specified video quality at End point/far-site end (Mbps) 384 Kbps Or 0.3 (Mbps)	As Minimum Bandwidth Parameters Values are not Mentioned hence we request to all the MinBandwidth value to be mentioned in it as per industry standards of Different OEM.		As per RFP.

51	MCU should support audio ports on IP minimum 20 VoIP ports. An MCU which doesn't have this feature inbuilt, then it may have a third party integration products that provide 20 the number of Audio VOIP ports however the integration must be tested and smooth.	MCU should support audio ports on IP minimum 20 VoIP/SIP ports. An MCU which doesn't have this feature inbuilt, then it may have a third party integration products that provide 20 the number of Audio SIP/ VOIP ports however the integration must be tested and smooth.	As some OEM provides the SIP Dialing & Some Provides the VOIP Dialing as from the Audio Port. In mentioned existing specifications we only have to achieve the Voice Calling that same may be done via SIP/ VOIP Phone. Hence both should be allowed to be supplied eitherways .	As per RFP.
52	Specifications of Video Conference Camera - Type 1	Recommended Specifications for the Tender	Resason of Recommended Changes	
53	The Video conferencing endpoint should be a point to point system with integrated codec and Camera and microphone. The	The Video conferencing endpoint should be a point to point system with integrated codec and Camera and microphone or with separate Codec and camera and microphone	Different OEMs have different set of devices and technologies. So this will make it more generic.	May be read as "The Video conferencing endpoint should be a point to point system with integrated codec and Camera and microphone or with separate Codec and camera and microphone but from same OEM."
54	The Video conferencing endpoint should support a single Non PTZ camera with Face Detection/ Automatic voice tracking capability or PTZ camera with speaker tracking capability with 12x optical zoom or higher.	The Video conferencing endpoint should support a dual PTZ camera with Face Detection/ Automatic voice tracking capability or PTZ camera with speaker tracking capability with 12x optical zoom or higher.	As the Voice Tracking enabled camera of all Major OEM comes with Dual Camera and those all are PTZ hence requested specs to be updated from NON PTZ to PTZ Camera. And 12X Optical Zoom is available in PTZ Cameras only as per industry standard.	May be read as "The Video conferencing endpoint should support a single camera with Full HD quality "
55	M/s Aman Technologies	Or		
56		The Video conferencing endpoint should support a single Non PTZ camera with Face Detection/ Automatic voice tracking/ E Pan Tilt Zoom Functionality capability with 4x Digital zoom or higher.	For a Non PTZ Camera Maximum 4X Digital Zoom is available as per industry standard. Also as the required camera is fixed one which is to be used in small rooms hence even the latest E Pan Tilt Zoom Functionality should be allowed to be provided. As the E Pan Tilt Functionality is latest technology with allows camera to auto adapt the Pan Tilt & Zoom as per No of Persons sitting in Room. However fr Voice Tracking the PTZ Cameras are industry standard like Eagle Eye II etc.	
57	System has G-722/ G-711/ G-729 or equivalent wideband audio coding support	System has G-722/ G-711/ G-729/ OPUS/ AAC/ PCMU or equivalent wideband audio coding support	Batter Audio Coding should be also allowed in tender to allow healthy competition	Minimum specifications in the RFP. The bidder is free to offer a better product with higher specification.
58	The system should have integrated Wi Fi Connectivity so that the system can work on wireless network in the room. In case the product doesn't have in built Wi-Fi then it may alternatively do so by turning it into a Wi-Fi client device using a third party integration solution. However the integration must be tested and smooth.	This point should be removed	Video Conference cannot be depended on unreliable source of bandwidth. It can be an additional feature in an endpoint but as a generic requirement it should be removed.	Accepted.
59	The system should have minimum of one Number of Video Input HDMI and one number of HDMI based Video output port. The system should also have a flexibility to connect with a Laptop on a USB port to function as a Web Camera. The required cables for the same should be supplied	The system should have minimum of Two number of HDMI / DVI Or Equivalent based Video output port's for Dual Display should be their from day one. The system should also have a flexibility to connect with a Laptop on a USB port to function as a Web Camera or Wirelessly Sharing the content from Latop should be provided. The required cables for the same should be supplied.	Minimum 2 Output Ports should be putted in tender as Dual Display (2 HDMI / Equivalent Output Ports Is Industry Standard for any VC End Points. Hence any time client can connect two video devices like LED/ Projector/ Monitor to view the content and Connected sited Video on Separate Screen flawlessly simultaneously. Also as WiFi is essence of Project as per alst Corrigendum even the advanced Wireless Presentation Functionality for sharing Laptop Content should be allowed. So that PC Content sharing can be provided to if HDMI cbale Based Connectivity or Or Wirelessly eitherways should be acceptable.	Minimum specifications in the RFP. The bidder is free to offer a better product with higher specification.
60	Specifications of Video Conferencing Equipment for Larger Conference rooms - Type 2	Recommended Specifications for the Tender	Resason of Recommended Changes	
61	The system should have 3x HDMI/DVI ports to connect two or more cameras and 1 x PC/Computer. If the said ports are inbuilt in the VC equipment End Point then an additional external hardware must be added and integrated however the solution must be tested and smooth	The system should have 3x HDMI/DVI/HDCI/3G-SDI/DP ports to connect two or more cameras and 1 x PC/Computer. If the said ports are inbuilt in the VC equipment End Point then an additional external hardware must be added and integrated however the solution must be tested and smooth	Ports to be added as all are same and specs shall be more generic as Different OEM provides different Ports as combination	May be read as "The system should have 2x HDMI/DVI ports or higher to connect Cameras and PC/Computer."
62	The system should be supplied with 6 Microphones day one. The system should support Noise Reduction, Automatic Gain control, Acoustic Echo Canceller, Active Lip synchronization	The system should be supplied with 4 Or 6 Or Microphones day one. The system should support Noise Reduction, Automatic Gain control, Acoustic Echo Canceller, Active Lip synchronization	Different OEMs have different microphones with different sensitivity. To make it more generic 4 or more should be there. Even in Point no 1 of End Point its being allowed that 4 or 6 Or More Microphones are Allowed.	May be read as "The system should be supplied with 4 Microphones from day one. The system should support Noise Reduction, Automatic Gain control, Acoustic Echo Canceller,."
63	The system should have two Audio in over HDMI or higher	The system should have two Audio in over HDMI/DVI/ USB or higher in any combination to be provided from day one	As or the Audio In Different OEM uses different Audio Port Combination also. Hence same will make tender generic.	May be read as "The system should have two Audio in over HDMI or DVI or USB or higher in any combination to be provided from day one. However the same must be working and must be integrated with the setup".
64				
65	Technical Specification of Wireless Outdoor Access Point Specifications (Page 28-29)			
66	Technical Specification	Required or Proposed Charges		
67	Dual-Band 802.11ac Wave 2 or better access points. The Wi-Fi signal dissemination is expected to be minimum of 150 feet reach.	To give connectivity to multiple user's as per point no. 17 (255 Concurrent user's), we hereby suggest that required coverage should not be less than 100Meter (300Feet)		Minimum specifications in the RFP. The bidder is free to offer a better product with higher specification.
68	Radio chains: streams 2x2:2. Min EIRP power 28 dBm or Better	The AP shall provide a minimum of 32 dBm EIRP for both 2.4 GHz and 5 GHz frequencies.		As per RFP.
69	Access Point should be support directional integrated antenna .	Access Point should be support directional/Omni integrated antenna .		May be read as " Access Point should support Omnidirectional antenna "
70		AP must support 2G/3G/4G mobile Data Offload (MDD).		As per RFP.
71	AP shall support simultaneously MESH mode to serve MESH connection requirements and also regular WLAN for wireless clients to association	AP shall support simultaneously MESH mode to serve MESH connection requirements and also regular WLAN for wireless clients to association and Backhaul must support upto 300Mtr with its integrated Antenna's by using 5Ghz and simultaneously coverage on both the Bands i.e. 2.4Ghz & 5Ghz.		As per RFP.
72	Certifications: FCC, CE and EN certified, Plenum rated pig tail to be be used wherever applicable.	Certifications: FCC/CE and EN certified, Plenum Comply rated pig tail to be be used wherever applicable.		
73	Active Equipment Specifications Router Specifications (Page 25-28)			As per RFP.
74	Technical Specification	Required or Proposed Charges		As per RFP.
75	General requirements			May be read as "The Video conferencing endpoint should support a single camera with Full HD quality "

76	M/s Netro Networks	Gateway should have atleast Serial Ports (one each for RS-232 and RS-485) for the function of making changes / IP Ethernet protocol, conversion to RS-232 interface or vice versa.	These ports are generally not required. Specific to one OEM. To be removed.		Accepted.
77		Hardware and Interface Requirements			May be read as "The system should have 2x HDMI/DVI ports or higher to connect Cameras and PC/Computer."
78		Gateway should have POE ports to power up devices like IP Video Camera, the switch ports should support functionalities like VLAN, Inter VLAN Routing	PoE ports are generally for switches. Router is not meant for PoE. If required Power adaptors can be used. To be removed.		As per RFP.
79		The gateway should have integrated 802.11a/b/g/n compliant wireless Access point capability. Should have dual radios for 2.4Ghz as well as 5Ghz	Customer have external AP, router no need support Wi-Fi. To be removed.		As per RFP.
80		The integrated Access point should have capability to serve both as access point as well client to a WiFi network.	Customer have external AP, router no need support Wi-Fi. To be removed.		As per RFP.
81		SCADA Support	Scada is for power system, NO need for this function here. To be removed.		Accepted.
82		Gateway should support DNP3			Accepted.
83		Gateway should support MODBUS SCADA Tunneling (BSTUN)			Accepted.
84		Gateway should support for high availability architectures and the ability to duplicate RTU traffic in software to a redundant SCADA master station. Sometime referred to as 'multi-drop'.	To be removed.		Accepted.
85		Gateway should support SCADA Protocol Translation (Serial to IP) for DNP3->DNP3/IP			Accepted.
86		Gateway should be able to provide IEC 60870 T101 to IEC 60870 T104 protocol translation to serve as a SCADA gateway			Accepted.
87		General Administration of Router			Accepted.
88		Gateway should be able to operate in the temperature range of -40 to 60 degree celcius	Since router is installed in a premise, this temp range is not required. Change to -10 to 50°C		May be read as "Gateway should be able to operate in the temperature range of -15 to 55 degree celcius."
89		The Gateway should have a standalone GPS which should help to map the coordinates on the NMS	OEM Specific. To be removed.		As per RFP.
90		Gateway should comply to automotive standards like SAEJ1455 2a1, 2b2, 2c, 2d3, 3a4, 3b	OEM Specific. To be removed.		Accepted.
91		Hazardous certification: UL 121201, CSA 213, UL/CSA 60079-0, -15, IEC 60079-0, -15 IECEx Test Report, EN 60079-0, -15 ATEX Certificate	OEM Specific. To be removed.		May be read as UL, FCC
92					
93	M/s Alethe Consulting Private Limited Plot No. 11, Info City II Technology Park, HSIDC, Sector 33, Gurgaon-122001	Access Point should be support directional integrated antenna	Directional integrated antenna required for the single direction point to point connectivity. Hotspot user can not be able to connect network. Hotspot user can only connect the network with Omni directional antenna. Hence Request you to kindly modify this clause as "Access Point should be support Omnidirectional integrated antenna".		May be read as " Access Point should support Omnidirectional antenna"
94		AP shall support minimum antenna gain of 4.5 dBi or higher for both 2.4 and 5 Ghz radios.	Technology and architecture differs from OEM to OEM. Ultimately user will use the EIRP and EIRP will be the combination and depends upon Transmit power and antenna gain. Hence the antenna gain will be differ across the OEMs. Request you to kindly modify this clause as "AP shall support minimum antenna gain of 4 dBi or higher on 5 Ghz radios." so all leading OEM can participate.		As per RFP.
95		AP should be Wi-Fi certified for WMM, WPA2, PMF, 802.11n, 802.11ac	Considering WiFi Alliance recommendation, We understand that WLAN infrastructure must have latest Wifi Security standard like WPA 3 enabled . Kindly modify the clause as " AP should be Wi-Fi certified for WMM, WPA2,WPA 3, PMK, 802.11n, 802.11ac "		As per RFP.
96		Additional Clause	WIDS/WIPS is recommended to protect System against RF attacks as per industry standard requirement. Pls add the clause as "Controller should support WIDS/WIPS includes rogue AP detection and AP should support wireless containment using Tarpitting , ARP poisoning and wired detection,non wifi scanning etc " to protect WLAN system from malicious activities.		As per RFP.
97		WNMS Point	NMS is always critical part of any network solution . To achieve and maintain SLA and uptime ,NMS is required for real-time monitoring, proactive alerts, reporting, and fast efficient troubleshooting in Multivendor environment for Network products. Please add the clause as " NMS should monitor multi-vendor snmp-based networking infrastructure deployed at Outdoor locations. "		As per RFP.
98		WNMS Point	WLAN system should have Visibility to all of the network components that affect WLAN performance like clients, APs, controllers, switches, authentication servers, and the RF environment to avoid any network failure . Please add the point as " NMS should provide real-time monitoring, pro-active alerts, historical reporting, efficient troubleshooting through centralized intuitive user interface, Automated configuration policy auditing for WLAN infrastructure supported with email based alerts and triggers. "		As per RFP.
99		WNMS Point	With immediate picture of the user's connectivity, with details about the user's association history as well as current signal strength and bandwidth, DOIT can view this data for analysis and future planning. Please add the clause as " NMS must be able to provide detailed performance statistics for WLAN equipment (statistics related with bandwidth, coverage etc.) and also provide graphical details of WLAN utilization, average data rate, WLAN traffic etc. on a per AP basis "		As per RFP.

100		WNMS Point	WLAN system should able to perform and scheduled centralized configuration changes and software updates in advance to minimize disruption of service operations. Also information of user tracking and session history can be used to show who is connected to network, when they connected, and where they've roamed. Please add the clause as "NMS must provide Centralized Software updates, customized email based triggers and reports. RF planning, and location tracking of Aps and clients. Should provide details on visibility on applications and client destinations."		As per RFP.
101		Additional Point	OEM should have ISO 9001:2015 Certification		As per RFP.
102		Additional Point	OEM of the proposed Access Point should have been present in India for at least the last 10 Years		OEM should have presence in India at least from last 03 years and making no losses in business in last 03 years.
103		Additional Point	OEM of the proposed Access Point should be in the Gartner Magic Quadrant for Wired and Wireless Products from last 3 years		As per RFP.
104		Additional Point	OEM of the proposed Access Point should have at least 100 Technical resources on its Payroll in India on the date of submission of tender. Letter from HR Head/Company Secretary of the company to be enclosed		As per RFP.
105					
106	M/s ITI Limited Corporate Marketing : F-84 Dooravaninagar Bangaluru 560016 India	Dual-Band 802.11ac Wave 2 or better access points. The Wi-Fi signal dissemination is expected to be minimum of 150 feet reach.	To give connectivity to multiple user's as per point no. 17 (255 Concurrent user's), we hereby suggest that required coverage should not be less than 100Meter (300Feet)		As per RFP.
107		Radio chains: streams 2x2:2. Min EIRP power 28 dBm or Better	The AP shall provide a minimum of 32 dBm EIRP for both 2.4 GHz and 5 GHz frequencies.		As per RFP.
108		Access Point should be support directional integrated antenna .	Access Point should be support directional/Omni integrated antenna .		May be read as " Access Point should support Omnidirectional antenna"
109			AP must support 2G/3G/4G mobile Data Offload (MDO).		As per RFP.
110		AP shall support simultaneously MESH mode to serve MESH connection requirements and also regular WLAN for wireless clients to association	AP shall support simultaneously MESH mode to serve MESH connection requirements and also regular WLAN for wireless clients to association and Backhaul must support upto 300Mtr with its integrated Antenna's by using 5Ghz and simultaneously coverage on both the Bands i.e. 2.4Ghz & 5Ghz.		As per RFP.
111		Certifications: FCC, CE and EN certified, Plenum rated pig tail to be used wherever applicable.	Certifications: FCC/CE and EN certified, Plenum Comply rated pig tail to be used wherever applicable.		As per RFP.
112					
113	M/s HFCL Ltd. (formerly Himachal Futuristic Communications Ltd.) 8, Commercial Complex, Masjid Moth, Greater Kailash II, New Delhi - 110048, India	AP should have -20 to +55 degree operating temperature.	Considering climatic conditions of India and for participation by maximum no. of OEMs, request to relax the temperature range. Request to change the clause to: AP should have -15 to +55 degree operating temperature		As per RFP
114		AP should support up to 255 concurrent client associations	As a general limitation of most of majority chipsets, most Dual Band Access Points support maximum 192 simultaneous clients, 128 on 5GHz and 64 on 2.4GHz. Furthermore, 192 clients per AP would be more than sufficient to address the rural Wi-Fi use case. For maximum participation from various OEMs we request you to change the clause to: AP should support up to 192 concurrent client associations		As per RFP
115		AP shall support MESH mode operation both on 2.4 GHz and 5 GHz bands	For best usage of Wi-Fi, mesh is formed over 5 GHz and 2.4 GHz is made available for clients to get connected. Request to change the clause to: AP shall support MESH mode operation on 5 GHz band		As per RFP
116					
117	M/s XtraNet Technologies Private Limited Bhopal Mumbai UAE USA	One Project of similar nature of system integration having minimum of Supply, installation and Commissioning of Mast/Tower, Wi-Fi Access Point, Router, LED Display order of the value of 1.5 Cr. or more in any State/Central Government/Government Agencies/PSU; or Two Projects of 75 Lacs of similar nature of system integration having minimum of Supply, installation and Commissioning of Mast/Tower, Wi-Fi Access Point, Routers, LED Display, order of the value of 1 Cr. or more in any State/Central Government/Government Agencies/PSU.	Requesting the One Project of similar nature of system integration having minimum of Supply, installation and Commissioning of Mast/Tower/ Wi-Fi Access Point /Router / Switch / LED Display order of the value of 1.5 Cr. or more in any State/Central Government/Government Agencies/PSU; or Two Projects of 75 Lacs of similar nature of system integration having minimum of Supply, installation and Commissioning of Mast/Tower /Wi-Fi Access Point / Router/ Switch/ LED Display, order of the value of 1 Cr. or more in any State/Central Government/Government Agencies/PSU/ Large Corporate.		As per RFP
118		Access Point Technical Specifications			
119		Technical Specification		Required or Proposed Charges	
120		Dual-Band 802.11ac Wave 2 or better access points. The Wi-Fi signal dissemination is expected to be minimum of 150 feet reach.	To give connectivity to multiple user's as per point no. 17 (255 Concurrent user's), we hereby suggest that required coverage should not be less than 100Meter (300Feet).		As per RFP
121		Radio chains: streams 2x2:2. Min EIRP power 28 dBm or Better	The AP shall provide a minimum of 32 dBm EIRP for both 2.4 GHz and 5 GHz frequencies.		As per RFP
122		Access Point should be support directional integrated antenna .	Access Point should be support directional/Omni integrated antenna . AP must support 2G/3G/4G mobile Data Offload (MDO).		May be read as " Access Point should support Omnidirectional antenna"
123		AP shall support simultaneously MESH mode to serve MESH connection requirements and also regular WLAN for wireless clients to association	AP shall support simultaneously MESH mode to serve MESH connection requirements and also regular WLAN for wireless clients to association and Backhaul must support upto 300Mtr with its integrated Antenna's by using 5Ghz and simultaneously coverage on both the Bands i.e. 2.4Ghz & 5Ghz.		As per RFP
124		Certifications: FCC, CE and EN certified, Plenum rated pig tail to be used wherever applicable.	Certifications: FCC/CE and EN certified, Plenum Comply rated pig tail to be used wherever applicable.		As per RFP
125					

126	M/s Alethe Consulting Private Limited Plot No. 11, Info City II Technology Park, HSIDC, Sector 33, Gurgaon-122001		Considering WiFi Alliance recommendation, We understand that WLAN infrastructure must have latest Wifi Security standard like WPA 3 enabled . Kindly modify the clause as "AP should be Wi-Fi certified for WMM, WPA2, WPA 3, PMK, 802.11n, 802.11ac "		Minimum specifications are mentioned in RFP. Any higher specification is acceptable.	
127		Additional Clause	WIDS/WIPS is recomened to protect System against RF attacks as per industry standard requirement. Pls add the clause as "Controller should support WIDS/WIPS includes rogue AP detection and AP should support wireless containment using Tarpitting , ARP poisoning and wired detection,non wifi scanning etc " to protect WLAN system from malicious activities.		Minimum specifications are mentioned in RFP. Any higher specification is acceptable.	
128		WNMS Point	NMS is always critical part of any network solution . To achieve and maintain SLA and uptime ,NMS is required for real-time monitoring, proactive alerts, reporting, and fast efficient troubleshooting in Multivendor enviorment for Network products. Please add the clause as "NMS should monitor multi-vendor snmp-based networking infrastructure deployed at Outdoor locations."		Minimum specifications are mentioned in RFP. Any higher specification is acceptable.	
129		WNMS Point	WLAN system should have Visibility to all of the network components that affect WLAN performance like clients, APs, controllers, switches, authentication servers, and the RF environment to avoid any network failure . Please add the point as "NMS should provide real-time monitoring, pro-active alerts, historical reporting, efficient troubleshooting through centralized intuitive user interface, Automated configuration policy auditing for WLAN infrastructure supported with email based alerts and triggers."		Minimum specifications are mentioned in RFP. Any higher specification is acceptable.	
130		WNMS Point	With immediate picture of the user's connectivity, with details about the user's association history as well as current signal strength and bandwidth, DOIT can view this data for anlysis and future planning. Please add the clause as "NMS must be able to provide detailed performance statistics for WLAN equipment (statistics related with bandwidth, coverage etc.) and also provide graphical details of WLAN utilization, average data rate, WLAN traffic etc. on a per AP basis "		Minimum specifications are mentioned in RFP. Any higher specification is acceptable.	
131		WNMS Point	WLAN system should able to perform and scheduled centralized configuration changes and software updates in advance to minimize disruption of service operations.Also information of user tracking and session history can be used to show who is connected to network, when they connected, and where they've roamed. Please add the clause as "NMS must provide Centralized Software updates, customized email based triggers and reports, RF planning, and location tracking of Aps and clients. Should provide details on visibility on applications and client destinations."		Minimum specifications are mentioned in RFP. Any higher specification is acceptable.	
132		Additional Point	OEM should have ISO 9001:2015 Certification		As per RFP.	
133		Additional Point	OEM of the proposed Access Point should have been present in India for at least the last 10 Years		As per RFP.	
134		Additional Point	OEM of the proposed Access Point should be in the Gartner Magic Quadrant for Wired and Wireless Products from last 3 years		As per RFP.	
135		Additional Point	OEM of the proposed Access Point should have at least 100 Technical resources on its Payroll in India on the date of submission of tender. Letter from HR Head/Company Secretary of the company to be enclosed		As per RFP.	
136						
137		Technical Specification		Required or Proposed Charges		
138		Dual-Band 802.11ac Wave 2 or better access points. The Wi-Fi signal dissemination is expected to be minimum of 150 feet reach.	To give connectivity to multiple user's as per point no. 17 (255 Concurrent user's), we hereby suggest that required coverage should not be less than 100Meter (300Feet)			As per RFP.
139	Radio chains: streams 2x2.2. Min EIRP power 28 dBm or Better	The AP shall provide a minimum of 32 dBm EIRP for both 2.4 GHz and 5 GHz frequencies.			As per RFP.	
140	Access Point should be support directional integrated antenna . Wi-Fi network can provide a cellular-like user experience. Traffic shall be timely handed over between a cellular network and a Wi-Fi network seamlessly.	Access Point should be support directional/Omni integrated antenna .			May be read as " Access Point should support Omnidirectional antenna"	
141		AP must support 2G/3G/4G mobile Data Offload (MDO).			As per RFP.	
142	AP shall support simultaneously MESH mode to serve MESH connection requirements and also regular WLAN for wireless clients to association	AP shall support simultaneously MESH mode to serve MESH connection requirements and also regular WLAN for wireless clients to association and Backhaul must support upto 300Mtr with its integrated Antenna's by using 5Ghz and simultaneously coverage on both the Bands i.e. 2.4Ghz & 5Ghz.			As per RFP.	
143	Certifications: FCC, CE and EN certified, Plenum rated pig tail to be used wherever applicable.	Certifications: FCC/CE and EN certified, Plenum Comply rated pig tail to be used wherever applicable.			As per RFP.	
144	PARAMETER		MINIMUM SPECIFICATION			
145	General Information	The proposed WLAN Solution should be based on centralized management concept with AP deployed at multiple locations and managed & monitored centrally from central locations. In case of Virtual hardware (if required), it should be quoted with required server/hardware for each type of controller. It should wireless speed upto 1Gbps and minimum 200Mbps.			As per RFP.	
146	Authentication & Encryption	MAC, 802.1x, web based authentication.			As per RFP.	
147		Ability to utilize RADIUS attributes to assign users or devices to specific roles/VLANs.			As per RFP.	
148	802.11 Standard Support	Support 802.11a/b/g/n/ac wireless standards			As per RFP.	

149		AP to Controller Communication	Use of industry standards-based (IEEE or IETF) CAPWAP or any tunneling protocols as per guidelines of DOT.		As per RFP.
150			Automatic and secure updates of firmware and software on all APs without user intervention.		As per RFP.
151			Support discovery protocol from APs to find and sync with Virtual/Hardware controller		As per RFP.
152			All AP configuration and service delivery information centrally managed and maintained via the Virtual/Hardware controller		As per RFP.
153			Centralized Virtual/Hardware controller provides an easy to use (template based) mechanism to support configuration		As per RFP.
154			Controller must be work on Distributed Network base and in case of centralised network it should be non blocking		As per RFP.
155			Controller must Auto approve APs across Network		As per RFP.
156			Controller must support auto AP discovery and provisioning and auto IP assignment.		As per RFP.
157			AP Cluster Management		As per RFP.
158			Device must have AP status and wireless client monitoring.		As per RFP.
159			Device have option of wireless traffic and usages statistics for monitoring.		As per RFP.
160			Device have option for AP Radio settings, device name editing and remote rebooting.		As per RFP.
161		AP Management	Device should support fast roaming, fast handover, traffic shaping and band steering		As per RFP.
162			Device should have option of Guest Networks and client limiting per AP.		As per RFP.
163			Device must have minimum 8 SSID for VLANs.		As per RFP.
164			Device must have option of port security, Storm Control and port Isolation.		As per RFP.
165			Device should support Access control list and Attack prevention.		As per RFP.
166			Device Should support Secure control messaging and SSL certificate.		As per RFP.
167			Wireless Security (WEP, WPA / WPA2, Enterprise, WPA-PSK / WPA2-PSK)		As per RFP.
168			Must be able to set a maximum per-user bandwidth limit on a per-SSID basis.		As per RFP.
169			Must support user load balancing across Access Points.		As per RFP.
170			Device should support Bulk Firmware upgrade.		As per RFP.
171			Device should support Unified configuration import and export.		As per RFP.
172			Device should support intelligent diagnostics.		As per RFP.
173			Device should support WEB User Interface Support non IE Browsers as Chrome, safari and firefox		As per RFP.
174			Device should support Guest SSID		As per RFP.
175			Solution must have the ability to intelligently and dynamically load-balance devices without receiving a new association request from the device		As per RFP.
176	M/s Z-Com		Allow for automatic and manual RF adjustment		As per RFP.
177			Load balancing across bands and steering of dual-band capable clients from 2.4GHz to 5GHz in order to improve network performance without the use of client specific configurations or software		As per RFP.
178			Traffic shaping capabilities across different type of clients running different operating systems in order to prevent starvation of client throughput in particular in a dense wireless user population without the use of client specific configurations or software		As per RFP.
179		RF Management	Capability to provide preferred access for "fast" clients over "slow" clients in order to improve overall network Performance.		As per RFP.
180			System should support RF management in real time and without the need to perform any network baselines or manually administered measurements and must be based on real RF information versus models in management systems.		As per RFP.
181			RF redundancy (System should intelligently detect coverage hole detection in case of near AP goes down)		As per RFP.
182			User and bandwidth capacity: Must be able to set a maximum per-user bandwidth limit on a per-SSID basis		As per RFP.
183			Capability to ensure privacy protection by preventing firewall and IP spoofing attacks, and enforcing TCP handshake		As per RFP.
184		Access Control	Rules for access rights based on any combination of time, location, user identity, device identity, and extended attributes from the authentication database		As per RFP.
185			Airtime-based bandwidth contract to allow for rate-limiting over WLAN		As per RFP.
186			Wireless Intrusion Detection Solution (WIDS)		As per RFP.
187			Ability for the system to provide visibility into all 802.11 Wi-Fi channels		As per RFP.
188			Accurate and automatic method of classifying real Rogues (on network) versus interfering neighbor networks whether Rogues have encryption or not and without client software or upgrades to current network		As per RFP.
189			Data/packet CRC and sequence error detection and prevention		As per RFP.

190	Intrusion Detection / Prevention	Blacklisting of wireless user devices after failed authentication attempts for web based authentication and 802.1X authentication against user-defined thresholds		As per RFP.
191		Blacklisting of wireless devices after wireless denial of service attack is detected from the wireless device		As per RFP.
192		Blacklisting of wireless devices after firewall / ACL access rule violations are detected within the centralized switch / controller		As per RFP.
193		Blacklisting a user		As per RFP.
194	Mobility	The system must support L2 roaming capabilities across APs with no special client-side software required		As per RFP.
195		The system must support roaming capabilities across APs.		As per RFP.
196		Provide application, user, and policy based QoS		As per RFP.
197		Support real time voice and video applications such as IPTV and VoWiFi		As per RFP.
198		<i>Offered solution should support Voice over WLAN</i>		As per RFP.
199		Battery-saving features such as proxy ARP for clients, multicast/broadcast filtering, large DTIM configurations, multicast/broadcast to unicast conversion integrated into the AP and controllers without requiring client side software components		As per RFP.
200		Traffic prioritization		As per RFP.
201		<i>An internal/external DHCP server for ease of deployment and scalability must be available</i>		As per RFP.
202	Network Services	Command line interface to control and manage all aspects of the WLAN system from controller		As per RFP.
203		The guest access solution should provide access based on Quota/time-based		As per RFP.
204		Rules for access rights based on any combination of role identity, and device identity		As per RFP.
205		Plug-and-Play deployment and operation		As per RFP.
206		The service must be fully regulatory compliant. The service provider must maintain logs of users accessing Wi-Fi service.		As per RFP.
207		Service provider to provide console access to customer wherein customer can monitor the Wi-Fi users connected, data consumed in GB etc.		As per RFP.
208	Management	Wireless Intrusion Detection Solution (WIDS)		As per RFP.
209		SNMP v1, V2c, v3		As per RFP.
210		Browser-based system for total solution management including: configuration, monitoring, troubleshooting.		As per RFP.
211		Single dashboard view of overall network, user, and security status		As per RFP.
212		Administrative rights partitioning - different admins have different rights.		As per RFP.
213		Controller must support 2G/3G/4G mobile Data Offload (MDO) and must be configured with Telecom/enterprise network.		As per RFP.