



Indian Institute of Management Calcutta

Computer Centre

CORRIGENDUM

Dated: 19-02-2024

Corrigendum in reference to TENDER REFERENCE NO IIMC/CC/GPON-Upgrade/23-4/019
Dated February 02, 2024 and GeM Bid Number **GEM/2024/B/4571110** for **TENDER FOR
UPGRADATION OF GPON NETWORK AT IIMC CAMPUS.**

The Following Modifications are being carried out in the NIT.

Page No of the NIT	Changes Proposed in Header	Earlier Description	Modified Description and to be read as.
7 of 12	Technical Criteria for Active and Passive under Unpriced Bill of Materials Sl. No – 3 (Installation and service charges)	One-time installation, commissioning & remote technical support for 3 yrs. Of GPON Network.	One-time Installation, testing , commissioning & remote Onsite technical support for 3 yrs. of entire GPON Network devices .

Revised specifications of the OLT and ONT

1 8-Port GPON OLT with 4x 2 or more 10G uplink Port

SL #	Specifications	Compliance Yes/No
	Make & Model:	
1	The 8-port Temperature harden (-40°C to 65°C) GPON OLT provides up to 500 FTTH to subscribers with 4x ITU-T G.984 GPON fiber links. The GPON OLT supports split ratios of up to 1:128, while each SFP slot supports both class C+ and class B+ transceivers for different service reaches. The 8-port pizza box OLT is a cost-effective solution in thinly populated regions, and the 1U design makes installation easier thanks to its small size and compact design.	

2	The 1U OLT should supports various interfaces including eight Gigabit Ethernet optical interfaces and four two or more 10G interfaces; with which customers can have better flexibility and unified management to integrate more services. The 10G interfaces can be used with ERPS function for ring protection or to cascade other GPON devices without sacrificing bandwidth.	
3	Proposed device should have hybrid architecture which support at least 12x 8 or more Switching port and 8x GPON ports.	
4	Device should have Temperature hardened	
5	Field-proven IGMP snooping and proxy for IPTV deployment	
6	Should have support to provide 500K FTTH to subscriber	
7	Support B+ and C+ GPON SFP	
8	OLT supports various interfaces including eight Gigabit Ethernet optical interfaces and four 2 or more 10G interfaces to connect various connectivity.	
9	Should have battery charger function	
10	Temperature ranging from -40°C to 65°C,	
11	OLT provides various management methods, such as local console port, Telnet and SNMP v1/v2/v3-based EMS along with a web GUI.	
12	ITU-TG.984.1/2/3/4 standard compliant: 1:128 ONT support per PON port; GPON Type-B Protection; Rogue ONT detection; ONT FW upgrade through OLT; Maximum 20 Km PON transmission distance	
13	IEEE802.1D Spanning Tree Protocol ; IEEE802.1s Rapid Spanning Tree Protocol ; IEEE802.1w Multiple Spanning Tree Protocol ; LACP to comply with IEEE802.3ad	
14	4094 IEEE 802.1Q compliant VLAN tagging ; IEEE802.1ad VLAN stacking (Q-in-Q) ; VLAN translation 1:1 ; VLAN translation N:1 ; Mirroring by port ; Mirroring by VLAN ; Port isolation	
15	Multicast VLAN Registration (dynamic/compatible mode) ; IGMPv2 & v3, snooping & proxy ; IGMP filter profile setting ; IGMP fast leave ; MLDv1 & MLDv2 snooping and proxy ; MVR	
16	DHCP relay agent ; PPPoE IA ; Static MAC ; Access Control List(ACL) ; MAC limit per port ; Storming control ; Anti MAC spoofing ; Prevent DHCP attack ; Prevent ARP spoofing ; DDoS	
17	IEEE 802.1p QoS with 8 priority queues per port ; Broadcast, multicast, unknown flooding storm control ; Queue scheduling includes: SPQ, WFQ ; Limit packet rate by ACL	
18	One console port, USB type-A interface; One management port, RJ-45 interface; One alarm port, D-SUB 9-pin male connector; One swappable fan module	
19	8x Optical SFP port and 4x 10G SFP+ ports	
20	AC input 100~240 V AC and DC input -36 V~-72 V DC	
21	Battery Charger +12 V DC battery	
22	Humidity: 10% to 95% (Non-condensing) Certification; Safety: – EN60950-1 – EN62368-1 ; EMC: – EN55022 class A – EN55024 class A - ETSI 300 386 V2.1.1	
23	Should support Windows /Linux/Ubuntu based EMS for provisioning and monitoring which can be accessed through Windows based client utility	
24	OLT should support single line command to register ONTs to the PON port.	
25	OLT should support Loopguard/storm control features. Detection /recovery time for loop should be configurable.	

26	OLT/ONT/EMS including Splitters offered shall be of the same Make/manufacturer and shall be covered under same back-up guarantee from the same OEM, to Ensure full compatibility,	
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2 GPON Class B+, 4xGbE LAN, FXS ports ONT

SL #	Specifications	Compliance (Yes/No)
Make & Model:		
1	GPON ONT that provides high-speed fiber access combines with residential gateway, VOIP and wireless features. It is compatible for optical ITU-T G.984 and Dual band wireless IEEE 802.11ac environment.	
2	Integrated Internet services through fiber optics	
3	2.4GHz 802.11b/g/n (2x2 MIMO) and 5Ghz 802.11ac (2x2 MIMO) support	
4	802.11 ac/a/n (5 GHz, 2x2 MIMO, up to 866 Mbps) 802.11 b/g/n (2.4 GHz, 2x2 MIMO, up to 300 Mbps)	
5	Advanced QoS ensures quality of triple-play services	
6	Provisioning and Management through TR-069 and OMCI	
7	ONT with a 4-port GbE Switch provides various integrated services through a single optical fiber	
8	ONT Management and Control Interface (OMCI) as well as TR069 management functions	
9	Comply ITU-T G.984 GPON standard:	
10	G.984.1 general characteristics	
11	G.984.2 physical Media Dependent (PMD) layer specifications	
12	G.984.3 transmission convergence layer specifications	
13	G.984.4 ONT management and control interface specification	
14	Support DS/US transmission rate to 2.488 Gbps/1.244 Gbps	
15	Wavelength: 1490 nm downstream & 1310 nm upstream	
16	Comply with class B+ type PMD	
17	Physical distance reach to 20 km	
18	Support Dynamic Bandwidth Allocation (DBA)	
19	GPON Encapsulation Method (GEM) supports Ethernet packet	
20	Supports GEM header removal/insertion and data extraction/segmentation (GEM SAR)	
21	Configurable AES DS and FEC DS/US	
22	Support up to 8 T-CONs each with priority queues (US)	
23	Codecs: G.711 a/u, G.723, G.726	
24	DTMF tone: detection and generation	
25	Internal call, T.38 FAX relay, T30, Call waiting, Call hold/call retrieve	
26	Call forwarding (No condition, Busy, No answer)	
27	Call transferring (Blind, ConsultOnHold, Attendant)	
28	Three-way conference, Support flexible traffic classification	
29	Second call/Adding an outgoing call, Switch between 2 active calls	
30	Port-based VLAN/802.1Q, DSCP/802.1P	
31	IEEE 802.11n 2.4 GHz with up to 300 Mbps data rate	

32	Wireless Protected Setup (WPS)	
33	WEP data encryption (64/128 bit)	
34	WPA/WPA2 (Wi-Fi Protected Access)	
35	Multiple SSID (up to 4)	
36	IGMP v1/v2/V3	
37	Network Address Translation (NAT)/Network Address Port Translation (NAPT)	
38	Generic packet filter	
39	Gateway/Firewall/DMZ	
40	USB2.0 port for file sharing	
41	WAN/PON: One Giga optical interface (SC/APC)	
42	Phone: Minimum One FXS phone ports RJ-11 for voice connectivity	
43	ONT should support one SIP server to be mapped with one FXS port	
44	LAN: Four 10/100/1000Mbps Ethernet ports RJ-45	
45	WLAN button: Wi-Fi tact Switch, WPS button: WPS tact switch	
46	Reset: A tact switch. One reset/restore factory default button	
47	Power switch: Push-push type button	
48	Operating temperature 0°C to 45°C (32°F to °F)	
49	Storage Temperature: -30°C to 70°C (-°F to 140°F)	
50	Power redundancy (Optional)	
51	Supported certificates: EMC: CE, Safety: CE LVD, Energy Saving: CE ErP	
52	ONT should supply with SC/APC to SC/APC OFC Patch cord and loaded SMB	
53	OLT/ONT/EMS including Splitters offered shall be of the same Make/manufacturer and shall be covered under same back-up guarantee from the same OEM, to Ensure full compatibility.	

Other terms and conditions of the NIT remains same. Last date of the bid submission is extended till 23rd February 2024 till 03:00 PM.

For further details please refer GeM portal or IIM Calcutta website tender page.

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19/02/2024

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