

**المواصفات الفنية الخاصة بالمناقصة العامة**

**رقم المناقصة : (٢٠١١/٥٥)**

**الخاصة بشراء وتوريد عدد (50) IP DSLAM مع**

**التركيب والتدريب**

**المؤسسة العامة للاتصالات السلكية واللاسلكية**

**الإدارة العامة للمشتريات والمخازن**

**إدارة المشتريات - قسم العقود والمناقصات**

## The RFP of 50 IP-DSLAM For Rural Sites

### Access Node :

\* The bid should consist of referenced compliance of sheet for all Specifications mentioned below.

Id	Specifications	YT Comments
	<b>Architecture:</b>	
D.1	IPDSLAM Capacity with Splittered should be Min=64 Max=96 and shelf size must not be more than 2U	
D.2	N+1 Redundant switching fabric	
D.3	1+1 Redundant power system	
D.4	1+1 Redundant for network side interface	
D.5	1+1 Redundant fans	
D.6	Provide full rang of VPI/VCI in all DSL flavors	
D.7	Scalable system	
D.8	Multicast support	
D.10	DC Power Supply	
D.11	Environment Humidity, Temperature according ITU standards, and suitable for our site Temperature : (-10 C to +60 C). Humidity :(0 to 95)%	
	<b>Uplink cards</b>	
D.12	Provide Fast Ethernet uplink	
	<b>Access Services:</b>	
D.13	Support ADSL Standards Support <ul style="list-style-type: none"> <li>• ANSI T1.413 Issue 2</li> <li>• G.994.1 (G.handshake)</li> <li>• G.997.1 (physical layer management)</li> <li>• G.992.1 (full-rate G.dmt)</li> <li>• G.992.2 (G.lite)</li> </ul>	
D.14	Support ADSL2+ Standards Support <ul style="list-style-type: none"> <li>• G.992.3 (ADSL2) Annex A, B, L, M</li> <li>• G.992.5 (ADSL2+) Annex A, B, M</li> </ul>	
	<b>Software</b>	
D.15	IGMP v1, v2,v3	
D.16	IGMP Proxy	
D.17	IGMP Snooping	
D.18	VLAN 802.1Q	
D.19	Bridging 802.1D	
D.20	Priority IEEE 802.1p	
D.21	Q in Q VLAN tagging (IEEE 802.1ad provider bridges)	
D.22	Routing protocols - RIP v1,v2 - OSPF	
D.23	Support external RADIUS, and Tacaes	
D.24	Multi-protocol encapsulation: Must support RFC 2648	

D.25	Converting from PPPoE to PPPoA, and vice versa	
D.26	DiffServ	
D.27	IPv4	
D.28	Ipv6	
D.29	Anti-spoofing	
D.30	IP address anti-spoofing	
D.31	PWE3	
D.32	DHCP relay	
D.33	ARP Proxy	

**Others:**

<b>Id</b>	<b>Specifications</b>	<b>YT Comments</b>
	<b>Others:</b>	
O.1	The system shall be based on integrated architecture with one versatile shelf for all kinds of services and support subscriber boards protection in compliance with ITU-T	
O.2	All system buffers must comply with related international standards, ITU and IETF.	
O.3	All firmware have to be the latest version.	
	<b>Equipment:</b>	
O.4	The proposed equipment (including every single card) shall be original and new and they <b>are not</b> in the out-of-sale or out-of-life phase and they shall be available for the coming five years before they become out-of-sale and five years before they become out of life. The bidder has to provide a proof from the manufacturer for this point.	
	<b>Management system:</b>	
O.5	<ul style="list-style-type: none"> <li>- All the required hardware and software necessary for the management system must be quoted.</li> <li>- Server Hardware should support tape backup.</li> <li>- CPU and RAMS , High specification.</li> <li>- Software should be original, and licenses are unlimited time to use.</li> </ul>	
O.6	The proposed solution should support, but not limited to, management interfaces like Command line interface (CLI),(TL1), and,(SNMP)	
O.7	Backup and restore configuration to all access.	
O.8	Support downloading firmware to the access (Remotely software upgrade)	
O.9	Provide alarms, and alerts for all failures, service degradation, or conditions that may cause failure, or service degradation in real time.	
O.10	Support GUI for easy operation (local & centralized management control)	
	<b>License:</b>	
O.12	The bidder has to provide a fully licensed system that ensures all services and functions according to the RFP specifications to operate from day one. And the bidder should provide the list of all services and functions that need a license with its cost.	

	<b>Documentation and clarifications:</b>									
O.13	The bidder has to supply all the documentation that give full description of the proposed equipment. - Manuals for all proposed equipments should be provide in Hardcopy at least 2 copies, and also softcopy.									
O.14	The bidder has to provide a clarification for the following points (with detailed documentation): <ul style="list-style-type: none"> <li>o In service to monitor and troubleshoot xDSL services.</li> <li>o Out of service to monitor the readiness of a line for IPDSLAM services.</li> </ul>									
O.15	The Supplier is required to provide the relevant documentation and training manuals of the proposed systems.									
	<b>SUPPORT:</b>									
O.16	The bidder has to propose support all of the proposed equipment with the following specifications: <ul style="list-style-type: none"> <li>- Delivering the latest software upgrade.</li> <li>- help desk support to help solving problems and facilitating the process of installation.</li> <li>- The bidder shall describe procedure to obtain on-site support assistance for operation and maintenance difficulties.</li> <li>- Online documentation and support tools.</li> <li>- Replacement of defective parts in mutually agreed time frame.</li> </ul>									
	<b>Training:</b>									
O.17	The bidder has to provide outside training in company training central for 8 persons as the following table: <table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th rowspan="2">No. of Trainees</th> <th colspan="2">Work. Days</th> </tr> <tr> <th>Basic</th> <th>Advance</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">8</td> <td style="text-align: center;">10</td> <td style="text-align: center;">10</td> </tr> </tbody> </table> <p>The training should include all the necessary subjects regarding the IPDSLAM and the proposed equipment that enable the staff to do all the Hardware installation, operation, maintenance, and troubleshooting.</p>	No. of Trainees	Work. Days		Basic	Advance	8	10	10	
No. of Trainees	Work. Days									
	Basic	Advance								
8	10	10								
	<b>Profile:</b>									
O.18	The bidder has to provide the areas and countries where the proposed products were installed. Providing a third party tester report is highly recommended as a reference to the company and to the equipment proposed, and also IOT certificates.									
	<b>Delivery:</b>									
O.19	The bidder has to provide the necessary time required for delivering the proposed equipment.									
	<b>Cables and accessories:</b>									
O.20	All necessary cables(0.4mm, and the length 30m as a minimum ), MDF frames, and accessories (connectors, patch cords,...etc) must be included and should be a high									

	quality. Samples of MDF frames and cables should be apart of the bid contents.	
	<b>Installation and commissioning activities:-</b>	
O.21	<p>- The bidder shall install 10 sites, and make on site training to able the PTC's engineers to install all the remaining sites.</p> <p>- The bidder has to quote installation period and commissioning provide the following:</p> <ul style="list-style-type: none"> <li>- Supply of IPDSLAM.</li> <li>- The installation, and commissioning of the 10 sites equipment.</li> <li>- Supply, installation, and configuration of management system.</li> <li>- Technical support, and warranty of the above mentioned elements.</li> </ul>	
	<b>Required Technical Information</b>	
O.22	specify whether his products can support several network-side interfaces of each type, and in which modes are they supported (load-sharing, aggregation, redundant active-standby, etc).	
O.23	state the power consumption for all supported cards and the maximum power consumption for fully configured chassis.	
O.24	specify the maximum heat dissipation (BTU/hour) for a fully configured chassis in normal operation condition.	
O.25	specify the type of cooling (Passive or Forced air cooling or Air Conditioned). If fans are used state the number of fans and fans redundancy.	
	<b>Priced Bill of Quantities</b>	
O.26	The Bidder shall provide a Priced Bill of Quantities for all articles and supplier services for the full proposal. The prices of all elements shall be fully disaggregated, including modular or software based capacity. If any articles and/or services are not identified in the Bill Of Quantities, but are required to provide an overall working solution according to the specifications defined in the RFP, It/They shall be delivered, installed, tested or otherwise provided free of charge.	
O.27	The prices shall be quoted for all articles and services provided under the project	
O.28	In addition to the above, all supported cards by IPDSLAM have to be quoted.	



## General Warranty:

<b>Id</b>	<b>Specifications</b>	<b>YT Comments</b>
G.1	The Bidder warrants both hardware and software for a period of 24 months following the date of issuing the Provisional Acceptance Certificate.	
G.2	The Bidder will replace or repair faulty modules.	
G.3	The Bidder should guarantee to supply to YT required spare parts for 10 years.	
G.4	After the end of the software warranty period, any fault notified shall be corrected in accordance with the terms and conditions of the subsequent support agreement signed between the parties	
<b>Operations &amp; Maintenance Support Under Warranty</b>		
U.1	During the warranty period, all warranty related interactions between the Bidder, and YT will be required to operate in such a way that all calls for the relevant services can be analyzed and results and reports generated.	
U.2	YT anticipates that this will require a 24-hour per day, 7 days per week service. Bidders whose proposal does not require such full time service should provide a detailed explanation of the reasons why their solution can meet the requirement in a shorter time period	
U.3	The Bidder shall describe procedures for repair and replacement of defective items and state maximum response time to provide on-site operation and maintenance support from the receipt of the operator's notification of any defect.	
U.4	Services provided under the contract shall be fully insured against loss or damage incidental to the nature of such services, including consequential damages caused by the Bidder's personnel.	

## The BoQ:

Ports	DSLAMs uplink	الربط الى (Source)	الموقع (Site)	المحافظة		م
96	FE	سنترال صعده	دماج	صعده	1	1
96	FE	سنترال المكلا	سيحوت	المهرة	2	2
96	FE	سنترال المكلا	بور	حضرموت	3	3
96	FE	سنترال المكلا	السويدي			4
96	FE	سنترال المكلا	صبيخ			5
96	FE	سنترال المكلا	الردود			٦
96	FE	سنترال المكلا	بضه			٧
96	FE	سنترال المكلا	العقاد			٨
96	FE	سنترال ذمار	الجمعة	ذمار	4	٩
96	FE	سنترال ذمار	بني مرة			١٠
96	FE	سنترال ذمار	كبود			١١
96	FE	سنترال ذمار	مدينة الشرق			١٢
96	FE	سنترال البيضاء	الزاهر	البيضاء	5	١٣

Ports	DSLAMs uplink	الربط الى (Source)	الموقع (Site)	المحافظة	م
96	FE	سنترال البيضاء	القرعة		١٤
96	FE	سنترال البيضاء	المردم والجهرى		١٥
96	FE	سنترال البيضاء	ذى خير		١٦
96	FE	سنترال إب	شبان	إب	6
96	FE	سنترال إب	المجمعة		١٨
96	FE	سنترال إب	حيسان		١٩
96	FE	سنترال إب	القفر		٢٠
48	FE	سنترال إب	طبيع		٢١
48	FE	سنترال إب	المركز		٢٢
48	FE	سنترال إب	بيت العشملي		٢٣
48	FE	سنترال إب	مذيخرة		٢٤
48	FE	سنترال إب	الردود		٢٥
48	FE	سنترال إب	شوط الفرس		٢٦
48	FE	سنترال زنجبار	أحور	أبين	7
48	FE	سنترال زنجبار	السعدي		٢٨
48	FE	سنترال زنجبار	شقره		٢٩
48	FE	سنترال زنجبار	العمرى		٣٠
48	FE	سنترال زنجبار	العرقه		٣١
48	FE	سنترال حجه	كعيده	حجه	8
48	FE	سنترال الحديدية	الكدن	الحديدية	9
48	FE	سنترال الحديدية	القناوص		٣٤
48	FE	سنترال شبوه	الحرجه	شبوه	10
48	FE	سنترال المحويت	بيت قوزع	المحويت	11
48	FE	سنترال المحويت	قلعة الرزقي		٣٧
48	FE	سنترال المحويت	العرقوب		٣٨
48	FE	سنترال عمران	هلا بالحسين	عمران	12
48	FE	سنترال عمران	الحجلة		٤٠

ملاحظه:-  
بالاضافه الى 10 موقع بنفس المواصفات السابقه وبسعة ٤٨ خط لاحتلال المواقع القديمه OLD ADSL SITES حيث  
يصبح اجمالي عدد المواقع 50 موقع.

