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भारत संचार निगम लिमिटेड  
(भारत सरकार का उपक्रम)  
**BHARAT SANCHAR NIGAM LIMITED**  
(A Govt. of India Enterprise)

No: 64-140/10-Broadband

Dated: 06-06-2011

To  
The CGM  
All Telecom Circle / Metro District

Subject: Tentative allotment of DSLAM equipment under Phase-I of Next Generation Broadband [NGBB] Tender for 3.22Mn Ports

Karnataka circle is in process of procurement of DSLAM equipment under Next Generation Broadband [NGBB] Tender for 3.22Mn Ports.

I) Ports:

- 1) The Phase-I procurement will be of 1.61Mn Ports.
- 2) The detail is as follows.

Ports Requirement	Phase-I	Phase-II
ADSL2Plus Ports for 64P DSLAM	1,40,000	1,40,000
VDSL2 Ports for 64P DSLAM	28,000	28,000
ADSL2Plus Ports for 240/480/960P DSLAM	12,00,000	12,00,000
VDSL2 Ports for 240/480/960P DSLAM	2,42,000	2,42,000
Total	16,10,000	16,10,000

II) DSLAM Chassis Planned:

Chassis Size	Quantity Phase-I	Quantity Phase-II
64P	3500	3500
240P	1000	1000
480P	1000	1000
960P	1250	1250

III) Configurations:

- 1) The following configuration of DSLAM's are planned under the above Tender.

Configuration	Equipped Ports	
64P ADSL	ADSL 48 Ports	For Rural Exchange Coverage
64P VDSL	VDSL 48 Ports	For Urban DLC locations, Multistoried buildings etc
240P DSLAM	ADSL 128 Ports VDSL 48 Ports	However all the Racks are wired upto the maximum rated capacity i.e. 240/480/960 Ports as the case may be. Hence there will be complete flexibility for interchange of cards as per site requirements.
480P DSLAM	ADSL 320 Ports VDSL 48 Ports	
960P DSLAM	ADSL 576 Ports VDSL 144 Ports	

- 2) The DSLAM line interface slots have universal slots. It is possible to insert any type of subscriber termination card in any slot in the 240/480/960P DSLAM.

IV) VDSL:

- 1) The VDSL may be planned in the Urban Areas.
- 2) All the VDSL Ports have backward ADSL compatibility i.e. they can work as ADSL Ports also depending upon the distance and the CPE used.

V) Splitters:

- 1) The splitters are to be mounted on the MDF such that one length of cable shall be adequate from the MDF to the DSLAM.
- 2) The MDF Tag blocks, Verticals and MDF Splitters are procured through the tender for only the 960P DSLAM's.
- 3) The MDF Tag blocks, Verticals and MDF Splitters for 240/480/960P DSLAM will be supplied by Telecom Factory.

VI) Aggregate GE interface:

- 1) The aggregate GE interfaces available in various configurations of the DSLAM are as follows.

DSLAM Capacity	GE Interfaces			
	Aggregation towards RPR / Other Aggregation Networks (Uplink)	Ring/Linear Cascade for other DSLAM's	Aggregation of other IP Traffic	Total including redundancy
64P	1	1	-	2
240P	2	2	-	4
480P	2	2	2	6
960P Config-A	2	2	2	6
960P Config-B	2	2	-	4

- 2) In 64P DSLAM, there will be one GE optical and one 10/100/1000 Electrical interface.

VII) Connectivity:

- 1) All Urban DSLAM's may be connected to the nearest Multiplay Network RPR switch or OC LAN switch through Fiber.
- 2) It shall be possible to cascade the DSLAM's from the same vendor which are co-located or located in other places through the GE Ports without any restriction.
- 3) It shall be possible to cascade the DSLAM's in different locations in a Ring configuration and one of the DSLAM shall act as a master which shall trunk the traffic to the aggregation Network.
- 4) It shall be possible to use the free GE Ports available in the DSLAM for aggregating any other IP traffic like 3G BTS, Wi-MAX BTS, Leased lines etc.
- 5) All Rural DSLAM's may also be connected to the nearest Multiplay Network RPR switch or OC LAN switch through Fiber as far as possible.
- 6) Efforts may be made to connect the existing DSLAM's over Fiber or through DWDM/SDH systems GE interface as large quantity of Transmission network has already been deployed after the deployment of the DSLAM's through the Multiplay and Rural projects.

- 7) In case the new Rural DSLAM locations require converters, the converters which are made free from the existing locations may be used.

VIII) Urban Plan:

- 1) The 240/480/960P DSLAM is planned for the Urban areas.
- 2) These DSLAM's can be used for the Rural areas also where ever there is demand.

IX) Rural Coverage Plan:

- 1) Low capacity 64P ADSL DSLAM equipment is meant for providing broadband connectivity in uncovered rural exchanges.
- 2) All the rural exchanges are to be covered with DSLAM's
- 3) It may be noted that previously this office has directed to divert the 64P DSLAM from Rural Exchanges where loading is zero to Urban locations where there is shortage of capacity to meet the immediate requirements. Once additional capacity is installed in the urban exchanges using high capacity DSLAM's, the 64P DSLAM may be shifted to the original rural locations.
- 4) As a principle, the number of DSLAM's in one Rural exchange may be limited to one having optimum capacity by DSLAM readjustment for better capacity utilisation.
- 5) No 64P ADSL DSLAM shall be used in the Urban Areas.
- 6) In case more equipment is required to cover uncovered rural exchanges then same may be informed to this office.

X) Allotment:

- 1) Tentative circle wise allotment is enclosed as Annexure-I.
- 2) The allotment has been done taking into consideration the present capacity, connections and coverage of the Urban and Rural Exchanges.

You are requested to kindly examine the allotment to your circle. If any modification is required, the same may please be informed to this office within 7 days i.e. by 10-06-2011 by email on broadbandbsnlco@gmail.com. If no information is received within 7 days then the tentative allotment will be considered as final allotment.

In addition to above, you are requested to send the exchange wise capacity requirement for the year 2011-12. The required information may send as per Annexure-II attached on same email address given above within 7 days time i.e by 13-06-2011.

This may be treated as most urgent.



(R. Saji Kumar)  
Addl. GM (NWP-BB)

**Copy To:**

Sr. GM (NWP-BB) BSNL C.O. for information please.