G.SHDSL Modules of H3C Series Routers

I. Preface

G.SHDSL is the short of single-pair high-speed digital subscriber line. It is an uplink/downlink symmet ry DSL technology and supports 192Kbps-2320Kbps rates. Theoretically the transmission distance at 144Kbps rate can be 7.9km under single-pair mode and 3.8km at 2320Kbps rate. When working under four lines mode, above rate or theoretical transmission distance can be doubled. G.SHDSL interface module developed on medium/low end router can directly connect to DSLAM via one or two use r line in 8040, enabling user to access the Internet. It can also enable constructing networks like cam pus network by working under CO/CPE mode.

II. Introduction

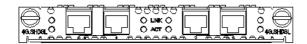
1G.SHDSL/2G.SHDSL/4G.SHDSL is the short of 1/2/4 port Single-Pair High-Speed Digital Subscribe r Line interface module. With TCPAM (Trellis Coded Pulse Amplitude Modulation) coding method, G. SHDSL can provide up to 2.3Mbps symmetric rate. Rate can be matched automatically depending on line length and line condition. G.SHDSL is in wide use and its transmission distance is farther than AD SL. It can replace the traditional E1/T1 line for high speed data service access. Unlike ADSL that occ upies the same line with POTS or ISDN service for transmission, this modulation method occupies the band beginning from 0Hz.

The specified function characteristics of 1G.SHDSL/2G.SHDSL/4G.SHDSL module in the system are as follows:

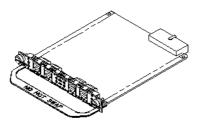
- 1、 support manually activate/deactivate G.SHDSL line, providing convenient troubleshooting approaches:
- 2、 support G.991.2 interface standard, it also can be configured adaptive mode.

III. Module Appearances

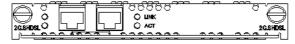
1G.SHDSL/2G.SHDSL/4G.SHDSL module appearances are shown as follows respectively:



1G.SHDSL module appearance diagram



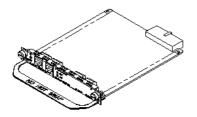
2G.SHDSL module appearance diagram



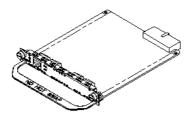
4G.SHDSL module appearance diagram

Module Interface Indicator

1G.SHDSL module panel is shown as follows:



1G.SHDSL module panel



2G.SHDSL module panel



4G.SHDSL module panel

The following table shows the implication of various indicators:



LINK	Extinguished represents the link is not connected; li ghting represents that the link is connected.
ACT	Extinguished represents no data has been received/ sent; flashing represents some data has been receiv ed/sent.

IV. Module Interface Attributes

1G.SHDSL/2G.SHDSL/4G.SHDSL module interface attributes

Attributes	1G.SHDSL mod ule	2G.SHDSL mod ule	4G.SHDSL mod ule		
Type of connector	RJ11				
Connector nu mber	1	2	4		
Interface stan dard	G.991.2				
Interface rate	Under single-pair mode, the supported range of receiving/sending independent symmetric rate is from 192 Kbps to 2304Kbps, with rate variety step 8Kbps.				
Type of interface cabl e	The interface cable of G.SHDSL module is a line				
Service	G.SHDSL access through common line				

V. Module Interface Cable

1G.SHDSL/2G.SHDSL/4G.SHDSL module interface cable is a common line.

& Note:

 $The \ standard \ configuration \ of \ 1G.SHDSL/2G.SHDSL/4G.SHDSL \ module \ includes \ common \ lines.$

Connection of Module Interface Cable

The connection of G.SHDSL module interface cable is rather simple. You only need to connect one s ide of a line to RJ11 socket of G.SHDSL module of a router, and the other side to PSTN network.