

عنوان : من اینترنت ISP قسمت دوم

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با اصطلاحات ADSL آشنا شوید (Glossary)

- SNR Margin
- Attenuation
- Attainable Rate
- D (interleave depth):
- VPI/VCI
- PPPOE
- Mode:
- Type:
- Line Coding:
-

) Glossary(

- ADSL – Asymmetric Digital Subscriber Line – what this is all about, where downloads and uploads are different speeds (512/256, 1512/512 etc)
- ATM – Asynchronous Transfer Mode – a network protocol used by ADSL
- BRAS – Broadband Remote Access Server – a PPP server
- CPE – Customer Premises Equipment – your modem and wiring
- DSLAM – Digital Subscriber Line Access Multiplexer – What your modem connects to, generally at a telephone exchange.
- PPPOA – Point-to-Point Protocol Over ATM
- PPPOE – Point-to-Point Protocol Over Ethernet
- PVC – Permanent Virtual Circuit
- SDSL – Symmetric DSL – similar to ADSL except it has the same speed for both downloads & uploads (1/1, 2/2, etc)
- SNR – Signal to Noise Ratio – difference between the volume of signal over the volume of noise
- ULL – Unbundled Local Loop

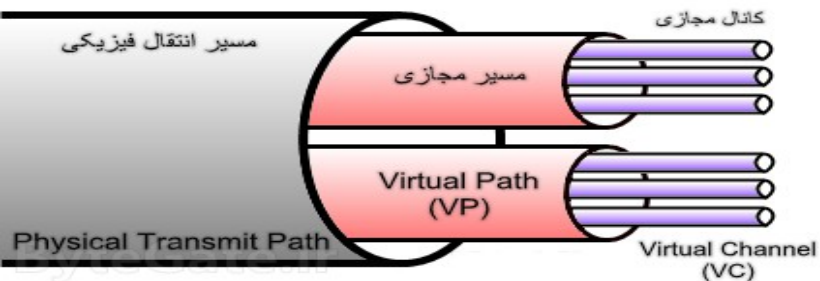
VCI و VPI چیست؟

- VPI مشخص کننده شماره مسیر VP و VCI مشخص کننده شماره مسیر VC است

- کانال VC

- مسیر VP

کانال انتقال پکت‌های داده در ATM



VCI و VPI چیست؟

- VPI یک مقدار ۸ یا ۱۶ بیتی است که در حالت ۸ بیتی (حالت رایج) دارای ۲۵۶ حالت مختلف بوده و امکان داشتن مقداری بین عدد ۰ تا ۲۵۵ (صفر تا ۲۵۵) را دارد
- "VCI مخفف عبارت Virtual Channel Identifier به معنای "مشخص کننده کانال مجازی" بوده و یک مقدار ۱۶ بیتی است. یعنی دارای ۶۵۵۳۶ حالت مختلف بوده و امکان داشتن مقداری بین عدد ۰ تا ۶۵۵۳۵ (صفر تا ۶۵۵۳۵) را دارد

SN Margin (AKA Signal to Noise Margin or Signal to Noise Ratio)

- 6dB or below is bad and will experience no synch or intermittent synch problems
- 7dB-10dB is fair but does not leave much room for variances in conditions
- 11dB-20dB is good with no synch problems
- 20dB-28dB is excellent
- 29dB or above is outstanding
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Line Attenuation (میرایی یا تضعیف خط)

- اصطلاح مخبراتی

- صدا زدن

- ADSL

– SIGNAL attenuation (wire health)

- وضعیت خط

- میانگین bucket

– LINE attenuation (connection health)

- Service Qualification

- frequency and signal strength by your providers DSLAM

Line Attenuation Value

- 20dB and below is outstanding
- 20dB-30dB is excellent
- 30dB-40dB is very good
- 40dB-50dB is good
- 50dB-60dB is poor and may experience connectivity issues
- 60dB or above is bad and will experience connectivity issues

Line Attenuation

line attenuation is the following:

- Less than 1km should be 23-24 Mbit
- 1.0km = 13.81db = 23Mbit
- 1.5km = 20.7db = 21Mbit
- 2.0km = 27.6db = 18Mbit
- 2.5km = 34.5db = 13Mbit
- 3.0km = 41.4db = 8Mbit
- 3.5km = 48.3db = 6Mbit
- 4.0km = 56db = 4Mbit
- 4.5km = 62.1db = 3Mbit
- 5.0km = 69db = 2Mbit

Signal to Noise Ratio (SNR) margin

$SNR = \text{signal} / \text{noise}$

- negotiate ADSL
 - Attenuation
 - noise
- conversation at a party
- SNRMargin
 - o minimum SNR
 - o target SNR
 - o maximum SNR

SNR margin

- 6dB or below noise margin is bad, it will experience no synch or intermittent synch problems
- 7dB-10dB is fair but does not leave much room for variances in conditions
- 11dB-20dB is good with little or no synch problems (if no large variation)
- 20dB-28dB is excellent
- 29dB or above is outstanding