



Specification Sheet

General

Operation Modes

Modem Termination (MT), Modem Passthrough (MPT), Ethernet Termination (ET), Ethernet Passthrough (EPT) PLM™ *Physical Loop Meter*

ATU-R Modem Chip Set

Conexant

Standards Supported

ITU G.992.5 (ADSL 2Plus),
ITU G.992.3 (ADSL2/G.DMT.bis),
ITU G.992.2 (G.Lite)
ITU G.992.1 (ADSL1/G.DMT),
ANSI T1.413 Issue 2

Physical Interfaces

One RJ-11 WAN port and RJ-45 LAN access port on PIM for MT/ MPT/ ET Modes
One RJ-45 LAN access port on CSA platform for EPT Mode
One bantam jack for PLM

LED Indicators

ADSL: Link, ACT, Alarm, PPP
Ethernet : Link, ACT, Speed
Loop : PLM (ACT, HV)
Module : On or Off

Control Information Window (CIW)

Control : Start/stop and reset
Timing : Indication of test start time, remaining time
States : Operation flow states with PASS or FAIL indication plus elapsed time
Alarm/Event : Instant alarm/event reporting on any occurrence under test

Modem Termination Mode

ADSL Control

- Modem Control

Modem open / close or retrain with trellis coding controlled
Programmable thresholds of link rate, SNRM in upstream/downstream and link up time

- Scheduling Test

Programmable start/stop of time scheduled to test
Real time alarm/event logs with time/date stamped
Up to 10 interval results can be saved to MMC card for storage and printing

Link Quality

- Link Up/Downstream Results

Link up rate (INTL or FAST), Estimated max. rate, Tx power, Line attenuation, SNR margin and Capacity

- Global Statistics

FEC, CRC, HEC, NCD, OCD, LOS and SEF
Last cycle or accumulated in upstream/downstream

- Error Seconds

FEC, SES, LOS, UAS
Rx cells, data cells and bit error (ADSL 2/2+)

DMT PSD Analysis

Bit per tone, SNR per tone, SNRM per tone presented in tabular and graphics
Zoom in/out and Bin/KHz conversion features

IP Layer Test

[SW Option, PIM-12X-SILT]

- IP Net Client Access

RFC 1483/2684 LLC/VC Bridged/Routed encapsulation
RFC 2516 PPPoE, RFC 2364 PPPoA
w/ RFC 1334 PAP/RFC 1994 CHAP PPP session authentication
w/ RFC 1332 IPCP addressing



RFC 1577/2225 CLIPoA
MAC Encapsulated Routing(MER) mode supported
Static & RFC 1541 DHCP addressing supported
IP information provided with addressing, mask, gateway & DNS

- IP Net Test

ICMP Ping
Programmable packet size and no. of pings with the no. of ping sent/reply and RTD in max./ave./min.
Trace Route
Programmable timeout time in sec. with a list of IP host name/address traced, no. of hops and echo time
Host target input in either IP address or URL

ATM Layer Test

- ATM Client Access

VPI/VCI provisioned in manual or auto-scanning

- ATM Net Test/Statistics

F5 E2E/segment OAM loop back cell test
The no. of OAM cell transmitted/received, loss and success /fail indication

Internet Service Test

[SW Option, PIM-12X-SIST]

- Web Browser

True HTTP Web browsing (Konqueror compliant) with packets/bytes received

- FTP Up/Download Test

FTP server response, upload or download time, file size, throughput and packets/bytes received

Modem Passthrough Mode

ADSL Control

Same as Modem Termination Mode

Link Control

Same as Modem Termination Mode

DMT PSD Analysis

Same as Modem Termination Mode

WAN/LAN Passthrough Control

Same as IP Net Client Access with NAT for routing mode
DHCP Server supported on LAN port

LAN Traffic Statistics

Total Byte, Packet and Error Received
Utilization (%) and Unicasts / Broadcasts
CRC, Runt, Oversize, Jabber, Alignment and Collision
Last cycle or accumulated in upstream/downstream

ATM Traffic Statistics

AAL 5 frames/cells, CLP cells, PDU CRC and OAM cells
Statistics accumulated in upstream/downstream

Ethernet Termination Mode [SW Option, PIM-12X-SETM]

LAN Client Emulation

PPPoE, DHCP and Static IP supported
IP information provided with addressing, mask, gateway & DNS

IP Net Test

Same as Modem Termination Mode

Internet Service Test

Same as Modem Termination Mode

Modem SNR Trace

[SW Option, PIM-12X-SSNR]

Modem SNR trace measurement presented in graphics
Customized feature, please consult factory for availability**Ethernet Passthrough Mode**

[SW Option, PIM-12X-SEPM]

LAN Traffic Statistics

Same as LAN Traffic Statistics in Modem Passthrough Mode

Triple Play Analysis Suite**Ethernet IP Analysis**

[SW Option, PIM-12X-STPA-EIPA]

- Performs complete network protocol decoding with plain mnemonics in English and there is an explanation of the use with each Hex value of the field defined by IETF standard recommended
- Ethernet traffic can be captured "off the wire" from a live network connection with up to 500 protocols supported

VoIP Expert Analysis

[SW Option, PIM-12X-STPA-VoIP]

- Automatic VoIP signaling detection and real-time MOS analysis in passive mode
- Associates signaling, voice streams per call base
- SIP(RFC-3261) signaling decode in call flow with measurement of call setup or error indication
- RTP(RFC-1889,3550) Analysis - packet jitter, pack loss, session throughput analysis per second with threshold exceeding indication
- Evaluates non-intrusive voice quality monitoring based on the industry standard ITU-T G.107 E Model (MOS and R-Factor evaluation)
- Works with Ethernet Passthrough Mode

VoIP SIP Phone Simulation

[SW Option, PIM-12X-STPA-VoIP-SIP]

- SIP (RFC-3261) Phone Emulator
- Support SIP-Proxy Through or Peer-to-Peer modes
- Support Voice from Microphone or voice file
- Changeable SIP/RTP port number and adjustable sound volume
- Works with either Modem or Ethernet Termination Mode

IPTV Expert Analysis

[SW Option, PIM-12X-STPA-IPTV]

- Auto-discover and real-time measurement of MPEG-2 Transport Stream(ISO-13818-1)
- Automatic generation of host table with IP address, UDP port number
- PSI table reconstruction/decode - PAT,PMT,CAT
- MPEG video/audio packet loss counters - Avg, Min, Max and Error seconds
- PCR Jitter measurement - Avg, Min, Max and Error seconds
- Stream throughput - Avg, Min, Max and Error seconds
- Event log with time stamp by packet loss or PCR jitter in exceeding of threshold
- PES Header analysis include MPEG-2 Video/Audio, MPEG4-Part2 (ISO-14496-2) and H.264/ MPEG4-Part10(ISO-14496-10)
- Works with Ethernet Passthrough Mode

IPTV STB Simulation

[SW Option, PIM-12X-STPA-IPTV-STB]

- Support EPG <Electronic Program Guide> scanning including channel zap time indication
- Support IGMP(RFC-2236) join/leave method for access multicast streams with all MPEG analysis function of IPTV Expert Analysis
- Support RTSP(RFC-2326) for access Unicast stream with all MPEG analysis function of IPTV Expert Analysis
- Works with either Modem or Ethernet Termination Mode

PLM™ Physical Loop Meter

[SW Option, PIM-12X-SPLM]

	Unit	Range	Resolution	Accuracy	Leads
DCV	Volts	0~250	0.1	1%+/-1V	T-R,T-S,R-S
ACV	Vrms	0~250	0.1	1%+/-1V	T-R,T-S,R-S
DC Current	mA	0~200	0.1	1%+/- 2mA	T-R,T-S,R-S
Capacitance	µ f	0~4	0.001	1%+/- 2nf	T-R,T-S,R-S
Resistance	Ohms	0~4000	1	2%+/-1digit	T-R,T-S,R-S
High Insulation (Leakage) Res.	M Ohms	1~1000		2%+/-1digit	T-R,T-S,R-S
RFL	Locate a Resistance Fault on a single conductor				
Open/Short Meter	Measuring the Open(capacitance)/Short(Resistance) location calculated in distance based/w wire gauge, cable type, temperature				

Ordering Information**ASDL Triple Play PIM and Options**

PIM-12A-ADSLA	ADSL Triple Play PIM (Platform Interface Module) Annex A Standard Features
PIM-12B-ADSLB	ADSL Triple Play PIM (Platform Interface Module) Annex B Standard Features

Standard Accessories

256MB MMC card, ADSL WAN (PIM-ACC-CAB-WAN), LAN Cat 5 (PIM-ACC-CAB-LAN) and CSA platform/PIM operator's manual (Preloaded on MMC)

Software Options

PIM-12X-SETM	Ethernet Termination Mode
PIM-12X-SEPM	Ethernet Passthrough Mode
PIM-12X-SSNR	Customized Modem SNR Trace Test

PIM-12X-STPA-IPTV	Triple Play Analysis Suite - IPTV Expert Analysis (PIM-12X-SEPM Option Required)
PIM-12X-STPA-IPTV-STB	IPTV STB Simulation (PIM-12X-SETM Option Required)
PIM-12X-STPA-VoIP	Triple Play Analysis Suite - VoIP Expert Analysis (PIM-12X-SEPM Option Required)
PIM-12X-STPA-VoIP-SIP	VoIP SIP Phone Simulation (PIM-12X-SETM Option Required)
PIM-12X-STPA-EIPA	Triple Play Analysis Suite - Ethernet IP Analysis
PIM-12X-SILT	IP Layer Test
PIM-12X-SALT	IP Client Access and IP Net Test with Statistics
PIM-12X-SALT	ATM Layer Test
PIM-12X-SIST	ATM Client Access and ATM Net Test with Statistics
PIM-12X-SIST	Internet Service Test
PIM-12X-SPLM	HTTP Web Browser/ FTP Performance Test
PIM-12X-SPLM	Physical Loop Meter

Optional ADSL Triple Play PIM Accessories

PIM-ACC-M1G	1GB MMC card
PIM-ACC-M2G	2GB MMC card
PIM-ACC-CAB-WAN	ADSL WAN Cable in 2M, RJ11(M) to RJ11(M)
PIM-ACC-CAB-LAN	LAN Cat 5 Straight Cable in 2M, RJ45(M) to RJ45(M)
PIM-ACC-CAB-DVR	DVRM Cable in 2M, RJ11(M) to T/R/G Alligator clips
PIM-ACC-MAN-ZZ	PIM Operator's Manual(Hardcopy)

ZZ= Operator's manual language**ANACISE TESTNOLOGY CORP.**

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