



General

Operation Modes

BERT, IP QoS, Service Tool, RFC 2544, Bandwidth Billboard, Triple Play Analysis Suite – Data
Triple Play Analysis Suite – IPTV
Triple Play Analysis Suite – VoIP

Physical Interfaces

Single or Dual 10/100/1000Base-T Electrical UTP (RJ-45) and 1000Base-X Optical (SFP) port

Standard Supported

IEEE 802.3 2000 Compliance

LED Indicators

Module : On or Off
IF/LB : SFP (Optical), UTP (Copper) or Loop back
Link : Signal or Loss (SFP), Link Up or Down (UTP)
Speed : 1G (SFP), 10M, 100M or 1000M (UTP)
Sync : Pattern Sync/Loss (BER) or Error
Laser : Laser On or Off

Traffic Generation

Physical

Configurable Speed, Duplex, Flow Control (Auto/Manual), Loop Back and Pause

IP Version

IP V4 or IP V6

Frame Formats

EtherType II (DIX v.2),
IEEE 802.3 - LLC1 and IEEE 802.3 - SNAP

Streams

Single or Multi streams (Up to 4 traffic streams per port) can be configured with traffic generation profile individually

Addresses

Source/Destination MAC/IP with ARP, and VLAN ID (Single/Stack Q-In-Q)

Prioritization

VLAN ID (802.1Q) / Priority (801.P), and IP (TOS/ Cisco DiffServ DSCP)

Frame Size

64 to 1518 Bytes, Jumbo

Load

Up to full wire speed in Line Utilization %, Line Rate in Kbps, Frame/Packet Rate in FPS/PPS and Frame Gap

Duration

Infinite, Time, The number of frames

Payload

IP QoS or BER PRBS

Shaping

Constant, Ramp and Burst

Error Insertion

Bit (BERT), Out of sequence (IP QoS), CRC, IP Checksum and Alignment

Traffic Statistics

Physical States

Remote configuration detection in Advised/Capable of Speed, Duplex, Pause, Clock or MDI/MDIX
Current port connected in State, Speed, Link, Duplex, LOS, LOS Sec., Optical Power (SFP)

Tx/Rx Traffic Statistics

Data Rate in Mbps (Current, Min, Avg, Max)
Utilization in % (Current, Min, Avg, Max)
Frame Rate in FPS (Current, Min, Avg, Max)
Frame size distribution analysis
Bytes/Frames, Unicasts/Multi-casts, Broadcasts
Under/oversize, Flow Control, Rx Bad Frames

IP QoS Test

Operation

Single or Dual IP QoS in asymmetrical or symmetrical testing
Single or Dual Local/Remote loopback with MAC/IP S/D addresses swapped automatically

QoS Index Inserted

Sequence no. or/and Timing inserted with payload automatically

Timing Resolution

40ns

Payload Generated

All 1's, All 0's and Alt 1/0

QoS Measurements

Network Delay (Min, Avg, Max) in Current and Cumulative
Interarrival Time (Min, Avg, Max) in Current and Cumulative
Jitter (Min, Avg, Max) in Current and Cumulative
Loss (Count, Ratio) in Current and Cumulative
Out of Sequence (Count, Ratio) in Current and Cumulative
QoS result is classified per the standard of ITU-T Y.1541
Network Performance Objectives for IP-Based Service

BER Test

Operation

Single or Dual BER Testing in asymmetrical or symmetrical testing
Single or Dual Local/Remote loopback with MAC/IP S/D addresses swapped automatically

Patterns

$2^{15}-1$, $2^{23}-1$ and $2^{31}-1$ with pattern inverted option
Long Continuous Random Test Pattern (CRPAT)
Long Continuous Jitter Test Pattern (CJPAT)
Long Compliant Supply Noise Pattern (CSPAT)

BER Results

Bit Error Count (BE), Bit Error Rate (BER), Sync Loss, Pattern Sync/Loss time
BER result is classified per the standard of ITU-T G.821
Error Performance Analysis

Applications

Available in Dual port version only

Lab Operation

Conformance testing purpose
Full comply with IETF RFC 2544 Benchmarking Methodology for Network Interconnect Devices
Throughput, Latency, Frame Loss, Back to Back, Recovery and Reset

Metro Operation

Installation/Commissioning purposes
Adjustable all measurement parameters manually for flexibility
Throughput, Latency, Frame loss and Back to Back
Programmable result threshold with PASS/MARGIN/FAIL
Indications in Tabular

Port Location in blinking, Detecting copper cable faults in Open, Short and Distant to fault

Bandwidth Billboard

Applications

Pass through (**PIM-4XD-GigE** Dual port version)
Mirror/Hub (**PIM-4XS-GigE** Single port version)

Hardware Filters

- MAC/IP Address
- Broadcast
- VLAN ID/Priority
- TCP/UDP
- IP TOS/Cisco DSCP
- Multicast

Stream Traffic Statistics

Full wire speed traffic statistics with up to 10 streams analysis abilities simultaneously
Stream discoveries in Host Table per the selectable category of MAC, IP, VLAN
Up to 10 Top Talkers analysis with Traffic Rate in Mbps, Utilization %, Frame Per Second (FPS) and Frames

Ordering Information

GigE Triple Play PIM and Options

PIM-4XS-GigE GigE Triple Play PIM (Single Port Version)
Single 10/100/1000Base-T Electrical UTP (RJ-45) and 1000Base-X Optical (SFP) port

PIM-4XD-GigE GigE Triple Play PIM (Dual Ports Version)
Dual 10/100/1000Base-T Electrical UTP (RJ-45) and 1000Base-X Optical (SFP) ports

Standard Accessories

256MB MMC Card
CSA Platform/PIM operator's manual (Preloaded on MMC)

Software Options

PIM-41X-SQOS	Adds IP QoS Testing Ability
PIM-41D-S2544	Adds RFC 2544 Testing Ability
PIM-41X-STOOL	Adds Service Tools Testing Ability
PIM-4XD-SBILLBOARD	Adds Bandwidth Billboard Feature Ability
PIM-41X-SIPV6	Adds IPV6 Version Testing Ability
PIM-41D-STPA-DATA	Triple Play Analysis Suite – Ethernet IP Analysis

PIM-41X-STPA-DATA-IST/INT	Triple Play Analysis Suite – Data Ping, Trace Route, FTP/Web Browser
PIM-41D-STPA-IPTV	Triple Play Analysis Suite – IPTV Expert Analysis
PIM-41X-STPA-IPTV-STB	Triple Play Analysis Suite - IPTV STB Simulation
PIM-41D-STPA-VOIP	Triple Play Analysis Suite - VoIP Expert Analysis
PIM-41X-STPA-VOIP-SIP	Triple Play Analysis Suite - VoIP SIP Phone Simulation

Hardware Options

PIM-4XX-SFPS	SFP SX 850 nm, Multimodes
PIM-4XX-SFPL	SFP LX 1310 nm, Single Mode
PIM-4XX-SFPZ	SFP ZX 1550 nm, Single Mode

Optional Accessories

PIM-ACC-M1G	1GB MMC card
PIM-ACC-M2G	2GB MMC card
PIM-ACC-CAB-LAN	LAN Cat 5 Straight Cable in 2M, RJ45(M) to RJ45(M)
PIM-ACC-CAB-SML	Single Mode Optical Cable in 2M, LC(M) to LC(M)
PIM-ACC-CAB-MML	Multi Mode Optical Cable in 2M, LC(M) to LC(M)
PIM-ACC-CAB-SMS	Single Mode Optical Cable in 2M, LC(M) to SC(M)
PIM-ACC-CAB-MMS	Multi Mode Optical Cable in 2M, LC(M) to SC(M)
PIM-ACC-GigE-MAN	GigE Triple Play PIM Operator's Manual (Hardcopy in English)



ANACISE TESTNOLOGY CORP

Fl. 3, No. 3, Alley 112, Ruel-Guang Rd.,
Neihu Dist., Taipei 114, Taiwan, R.O.C.



Tel : +886-2-2792-8880 E-mail : marketing@anacise.com
Fax : +886-2-2792-8058 Web : www.anacise.com

LOCAL CONTACTS