

## Quad Play Testing from Epiteiro

Epiteiro's AT400 probe measures Quality of Service (QoS) key performance indicators directly from the customer premises or core network. With the ability to test data, voice and video services the AT400 is the premier monitoring probe in the ISP-I portfolio.

The AT400 probe enables telcos, regulators, ISPs and enterprises to benchmark services from competing suppliers, manage networks and troubleshoot faults. Under the control of Epiteiro's flagship ISP-I Management platform, the AT400 probes perform a remotely-configurable suite of real-time tests and forward the results to a common database which can be viewed using the on-line ISP-I Dashboard.

Tests can be scheduled to run at various times of the day – typically peak and off-peak – to provide a rich database of metrics that can be analysed with the dashboard or sent as a data-feed to external programs.

A silent background mechanism automatically updates the AT400 so that new software releases and support for additional functionality and network protocols can easily be deployed.

### Reporting and Data Recording Mechanisms

The AT400 reports test results to ISP-I central (Epiteiro-managed) control servers on a configurable schedule, using secure HTTP-based transportation.

Communication of configuration, results and software updates between the AT400 and the control centre servers uses MD5 encryption to ensure this secure transmission of data.

Epiteiro provide an extremely flexible reporting interface via the ISP-I platform and can additionally develop customized reporting to further meet requirements. All results are stored in real-time in a server-side SQL database.



### Features

- Measure End-to-end performance
- Support for all DSL (including ADSL, ADSL2+, SHDSL & VDSL), Cable, Fiber (FTTx), 3G HSPA, WiMAX and LTE
- RFC-2544 IP testing capability including TCP Throughput, HTTP, Latency Packet Loss, Jitter, Traffic Management, Email
- End-to-End VoIP Quality testing including ITU PESQ and E-Model

### Benefits

- Benchmark and compare services across national / international networks
- Pinpoint customer-affecting faults in the network
- Use for capacity planning, SLA Monitoring and testing of new services

### Data Tests

The AT400 includes Data service test support for:

- TCP or UDP based 'Up To' speed tests to end-point servers off-net or on-net
- HTTP/S including cached and un-cached
- Network Latency: ICMP-based echo request
- RFC 2544 including Throughput Jitter, Latency & Packet Loss (TCP & UDP)
- QoS Classification including DiffServ, MPLS and P2P Traffic Signature support

## Voice Tests

Both call setup and call quality tests can be performed with the AT400 including KPIs such as;

- Call Set Up Time / Failures
- Call Drop Rate
- Pre/Post Dialling Delay
- Dial, Busy, Ringback, Silence Tone Detection
- PESQ P.862 and E-Model Voice Quality
- Packet Loss, Jitter , Delay
- IP Address
- RSSI / Cell ID
- CINR / SINR / CNR / SNR



## Video Tests

Streaming video can be tested from an EpiTiro Endpoint based on KPIs such as;

- Start-up time
- Non-playing time (msecs) / Re-buffering Time (msecs)
- Bandwidth/Throughput (Mbps)
- Delivered Bandwidth (Mbps)
- Delivered Frame Rate (fps)

Specifications	
Device Type:	AT400 Quad Play Test Probe
Main Processing:	Tyan s3115, Atom DC 330 processor, 1GB RAM DDR II 667, 80GB SATA
Physical Characteristics:	1U x W 430mm (17 in.) x D 380mm (15 in.), 10 kg, Rack mount-ready
Remote Management Protocol:	MD5 Encrypted HTTP
Status Indicators:	Port status, link activity, power
Configurable Interfaces:	2 x RJ-45, 2 X USB 2.0 KVM over IP IPMI AST 2050 remote access Optional 1 - 4 x PSTN Telephony RJ11 Optional GSM/CDMA Handset Controller (incl. Integrated DSP)
Compliant Standards:	CE, IC CS-03, FCC
Power:	240VAC / 0.6A / 144W, -48VDC 3.0A 144W
Operating Temperature Range :	10° C - 35° C (50° F - 95° F) 10 - 85% humidity