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Brochure

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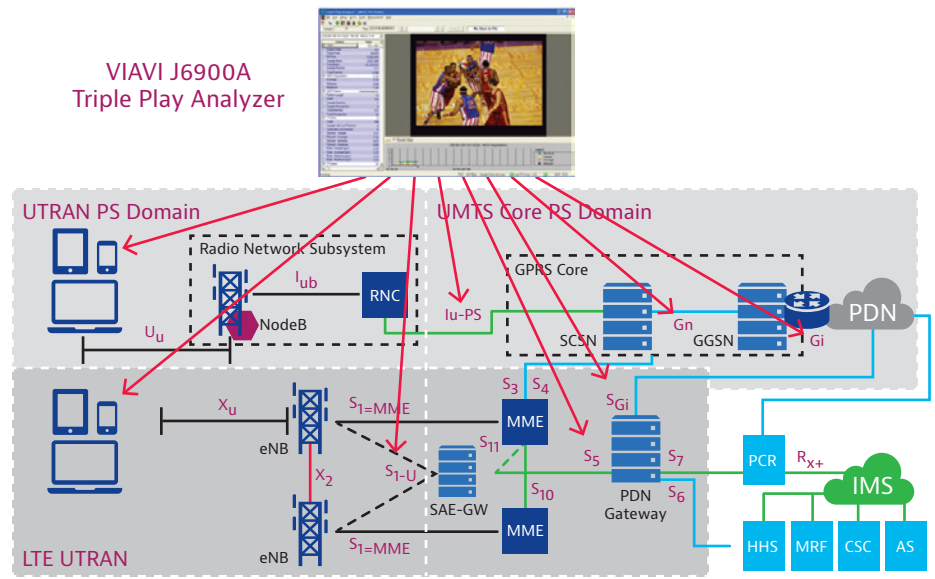
**Triple Play Analyzer**

For Mobile Applications

## TPA for Mobile Application

### Advanced Capabilities

The VIAVI J6900A Triple Play Analyzer (TPA) is the most complete monitoring and troubleshooting tool in a single solution for network equipment manufacturers and communication service providers who develop, install and troubleshoot video, voice and data applications over wireline and wireless networks to realize faster time to market.



### Technology to quickly solve problems in today's complex mobile networks

Triple play services – video, voice and data – are not limited to wireline infrastructures. Adding wireless to “traditional” triple play services is often referred to as quadruple play. Mobile providers are adding triple play services to their offerings, resulting in new dimensions of complexity. The VIAVI J6900A Triple Play Analyzer (TPA) is the most complete monitoring and troubleshooting tool in a single solution for developing, installing, monitoring and troubleshooting quad-play applications to realize faster time-to-market.

### Support of Triple Play Service Evolution

TPA supports the comprehensive QoS/QoE measurements for Video and VoIP over UMTS, HSPA, WiMAX and LTE networks.

- Voice/Video MOS with real-time Voice/Video render to monitor the end-user experience
- IGMP Channel Zap and RTSP Command Response Time
- QoS analysis for IP, RTP, MPEG-TS, MPEG-PES
- GTP and GRE tunneling auto detection

### Full Triple Play Service Support

- Powerful real-time monitoring, analysis and troubleshooting solution for next generation IPv4 and IPv6 video, voice and data networks
- “Complete triple play solution in a single platform” reduces CAPEX and OPEX costs
- Automatically discovers and analyzes IPTV, MSTV, VoD, VoIP and data streams
- Intuitive triple play dashboard service overview

### Video QoS/QoE Measurements

- Video QoS/QoE analysis for MPEG-TS and ISMA encapsulation
- Monitor and listen to MPEG-2, MPEG-4, H263, H264, AVS and other installed CODECs in real-time, which help verify the end-user's real experience
- Video MOS degradation utilizing an adaptive neural network model based on MPEG-TS, PES and transport metrics (patent pending)
- MPEG-PES Group of Pictures (GOP) and I, P, B frame performance analysis

### **Comprehensive MPEG-TS analysis, such as:**

- PCR Jitter measurements
- ETSI TR 101 290 events
- PSI and PCR rates
- Bit rates and utilizations per PID and ES
- RFC4445 MDI:DF and MDI:LR
- RTP jitter, packet loss, RTCP delay and RFC 3357 Loss Pattern Sample metrics
- Passive IGMP channel zap time and VoD RTSP command response time analysis

### **VoIP QoS/QoE Measurements**

- Real-time audio play out and recording of G.711, G.723, G.729, and AMR codec to find non-IP based impairments in real-time
- Non-intrusive voice quality analysis using predictive MOS technology
- ITU G.107 E-Model / R-Factor scores
- Complete RTP/RTCP stream statistics and correlation analysis
- RTP Jitter, packet loss, out of sequence
- RFC 3357 loss pattern sample metrics
- RFC4445 MDI:DF and MDI:LR
- RTCP delay measurements

### **Mobile Network Monitoring Points**

TPA can be deployed in the middle points of mobile networks, including:

- UMTS: Iu-PS, Gn, Gi, Nb interface
- LTE: S1-U, S5, SGi interface
- WiMAX: R3, R6 interface
- TPA software can also run on the PC-based mobile station for end-user experience monitoring

### **Comprehensive Protocol Support**

- Support for over 500 protocols and decodes
- Support both MPEG-TS and ISMA encapsulation over various UDP and TCP protocol stacks
- Automated support for major layer 2 and tunneling protocols, including MPLS, PPPoE, VLAN, GRE, GTP, and other Layer 3 offsets

### **Flexible Usage Model**

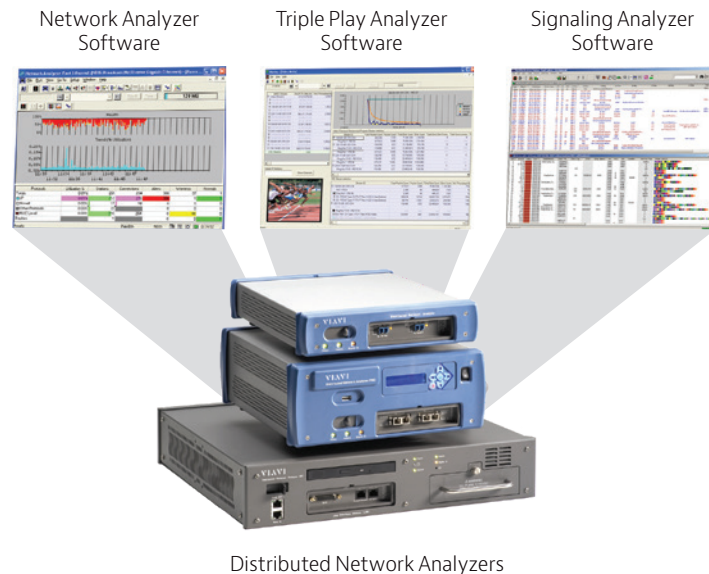
- TPA software running on a PC with one or multiple 10/100/1000M NICs
- TPA Client Software running on a PC while using VIAVI Distributed Network Analyzer (DNA) hardware platform for data acquisition

## **Key Features**

- The most complete monitoring and troubleshooting tool in a single solution — reducing CAPEX and OPEX
- Powerful solution for next generation IPv4 and IPv6 voice, video and data networks
- Provides capabilities to develop, install and troubleshoot voice, video and data applications over wireline and wireless networks to realize faster time to market
- Automatically discovers and analyzes IPTV, MSTV, VoD, VoIP and data streams

## **Applications**

- Supports comprehensive QoS/QoE measurements for Video and VoIP over UMTS, HSPA, WiMAX and LTE networks
- Mobile network Monitoring Points
- Combined Mobile Signaling, Media Quality and IP Transport Tests



### Powerful E2E Troubleshooting

- The VIAVI J6910A Multiplay Performance Manager (MPM) provides integration for the TPA probe and VIAVI QoS Manager platform to enable network-wide, end-to-end multiplay services QoS/QoE troubleshooting and monitoring.
- Unique capability to collect in-depth, real-time information across multiple interfaces and protocol layers in the network
- Real-time automated reporting and alarming on the network performance and QoS/QoE degradation
- Drill-down from MPM into TPA for root-cause analysis

### Combined Mobile Signaling, Media Quality and IP Transport Test Solution

- Coupling with DNA hardware and Multi-User platform, TPA can operate simultaneously with the software for IP Transport troubleshooting, and the Signaling Analyzer software, which monitors 2G/3G/4G mobile signaling.

### J6900A Triple Play Analyzer

- TPA configuration options include:
- J6900A-001 TPA Base Software

- J6900A-002 TPA Video QoE Measurements
- J6900A-003 TPA Voice QoE Measurements
- J6900A-004 TPA MSTV License
- J6900A-100 TPA Multi-NICs Measurements

Please contact your VIAVI sales engineer for more configuration options.

### Remove all doubt

Our repair and calibration services will get your equipment back to you, performing like new, when promised. You will get full value out of your VIAVI equipment throughout its lifetime. Your equipment will be serviced by VIAVI-trained technicians using the latest factory calibration procedures, automated repair diagnostics and genuine parts. You will always have the utmost confidence in your measurements.

VIAVI offers a wide range of additional expert test and measurement services for your equipment, including initial start-up assistance on site education and training, as well as design, system integration, and project management.



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