Acterna DTS MPEG over Satellite Transmission Analysis

Realtime monitoring and testing

As the transportation of Digital Programming over Satellite proliferates more and more, the Satellite Service Operators have to not only ensure the physical characteristics of their Digital "Broadcast" channels are within parameters, but also have to ensure that the underlying content or digital payload is error free too. Satellite transmission of Digital content is becoming more and more pervasive as it continues to be used not only to supply service providers with content, but also service directly to the consumer.

The Head-ends of such Operations have finely tuned and optimized equipment that compensate for one another and any pre-determined degradations caused as a result of transmission between them. These compensatory actions range from physical layer adjustments such as levels of signal to digital content adjustments like "de-jittering" the timing information present in Digital Video signals to compensate for network latency. However, at times even these highly resilient networks and network elements end up in situations outsides their "worst-case" scenarios and program degradation becomes visible.

Analyzing the physical layer characteristic of a Quadrature Phase Shift Key (QPSK or it's many variant) modulated RF signal does not provide much insight into its digital payload, and as such the Operators have to be able to gain visibility into the underlying "content" or MPEG-2 protocol layer to ensure programming content and other parameters like PCR (timing) data, PSI/SI (table) data etc. Acterna is proud to introduce the Satellite interface into the ever-popular DTS MPEG Analyzer to help troubleshoot and fix such problems.

Call Acterna today for a demonstration or for more product information.

Highlights

- **Support 8PSK Turbo, QPSK Turbo, QPSK DVB, QPSK DCII modulation schemes**
- **RF measurements for correlation between MPEG and RF layer issues**
- **Easy-to-use graphical interface minimizes training requirements**
- **Complete real-time analysis and monitoring to verify stream contents, service plans, PIDs, rates, timing parameters, and TR101 290. Event logs, triggers and reports for baselining and comprehensive monitoring**
- **Identify problems and collect evidence of faulty equipment or content to maximize response and resolution from vendors and content providers**
- **Monitor both sides of your satellite service (i.e. L-Band or I/F and ASI) with same equipment**

ACTERNA™
Communications Test and Management Solutions

Specifications

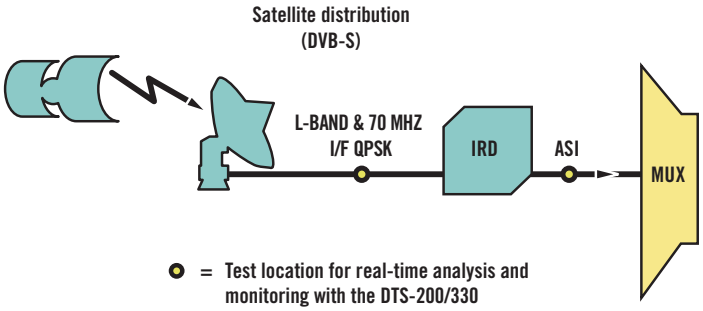
General Specifications	
Dimensions	5.5 x 14.5 x 1.2 in (PIM)
Weight	1 lb (PIM)
RF Interface	
RF Interface Type	75 ohm, F81 connector
Modulation Types	8PSK Turbo, QPSK Turbo, QPSK DVB, QPSK DCII
Standards Compliance	DVS-031, DVB and DAVIC
Symbol Rate	Variable rate from 256 ks/s to 30Ms/s
FEC Decoder	DVB/Digicypher II and Turbo code
Tunable Frequency Range	950 to 2150 MHz (L-Band) and 70 MHz (I/F)
Frequency Resolution	1 kHz
Channel Bandwidth	30 MHz nominal
Input Signal Level	- 25 to -70 dBm @ 950 to 2150 MHz (L-Band) + 5 to –40 dBm @ 70 MHz (I/F)
Input Impedance	75 ohms @ L-Band and I/F
Input Return Loss	> 8 dB
De-Interleaver Code Rates	
Turbo QPSK, Rate 1/2, 2/3, 3/4, 5/6, 7/8	
Turbo 8PSK, Rate 2/3, 3/4_2.05, 3/4_2.10, 2.10, 5/6, 8/9	
QPSK, DVB, Rates of 1/2, 2/3, 3/4 , 5/6, 7/8	
QPSK, DCII, Rates of 5/11, 1/2, 3/5, 2/3, 3/4, 4/5, 5/6, 7/8	
LNB control specification	DiSEqC™ 1.0
DiSEqC™ is a trademark of EUTELSAT	
LNB control Band Select	
High band/Low Band control using 13/18V selection	
LNB control Polarity Select	
Vertical/Horizontal selection control using 22kHz on/off	

Key RF Results

Status	Viterbi and Reed-Solomon lock
Average Channel Power	
Minimum, Maximum, Mean and Current shall be reported. (accuracy +/- 3dB from -25 to –65dBm for L-Band & 0 to –40 dBm for 70 MHz I/F)	
Signal to Noise Ratio	
Minimum, Maximum, Mean and Current shall be reported. (accuracy +/- 3dB from 0 to 25dB for L-Band & 0 to 18 dB for 70 MHz I/F)	

Ordering Information

PSK Application Module	
DTS-200 Satellite Interface Analysis Module	7553/91.11
DTS-200 Satellite Interface Analysis & Record Module	7553/91.13
DTS-330 Satellite Interface Analysis Module	7551/92.71
DTS-330 Satellite Interface Analysis & Record Module	7551/92.72
Additional Application modules available	
DTS-200 ASI Analyzer	7553/91.07
DTS-200 ASI Analyzer/Recorder	7553/91.09
DTS-200 Gigabit Ethernet Analyzer	7553/91.19
DTS-200 QAM Analyzer	7553/91.15
DTS-200 QAM Analyzer/Recorder	7553/91.17
DTS-330 Gigabit Ethernet Analyzer	7551/92.80
DTS-330 QAM Analyzer	7554/92.80
DTS-330 QAM Analyzer/Recorder	7554/92.81
Related QAM testing products from Acterna	
Digital Service Activation Meter (DSAM)	IDSAM3600B
Stealth Digital Analyzer (SDA) 5000	ISDAPACK2



MPEG over Satellite verification at all points of a Satellite network

DIGITAL SATELLITE DiSEqC 1.0 EQUIPMENT CONTROL

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