Signal Integrity Solutions
VectorStar®, ShockLine™, BERTWave™, and Signal Quality Analyzer

Analyze the Quality of Your Signal
With Anritsu Bit Error Rate Testers
Anritsu BERTs offer a wide variety of tools to measure the quality of high speed digital signals. Measurements, such as BER, skew and crosstalk can be determined between up to 8 channels at 32 Gb/s. Various types of jitter can be injected to evaluate jitter tolerance. Clock recovery can be used when different Tx and Rx clocks are employed. During EYE mask test and “bathtub” curve derivation emphasis and equalization can be applied to improve EYE openings.

Features
Bit Error Rate Testers (BERTs)
• Provides BER from 0.1 Gb/s to 32 Gb/s (64 Gb/s with external MUX and De-MUX)
• Crosstalk test and skew tolerance test using synchronized multi-channel PPG
• Wide range of encoding (e.g. NRZ, PAM4, PAM8)
• Eye Diagram measurement
• Jitter testing capability including SJ, RJ, BUJ, SSC
• Passive Linear Equalizers for improved EYE opening
• Modular design with Re-configurable mainframe

Vector Network Analyzers (VNAs)
• Widest frequency measurement capability up to 145 GHz in a single coaxial connection
• High quality low frequency measurements for better DC extrapolation
• Highest resolution time domain measurements for identifying defects
• Wide variety of de-embedding capability to minimize the effects of fixtures
• Broad set of signal integrity tools and measurements, including simulated eye diagrams
  - Trace-based EYE diagram to provide immediate results from circuit changes
  - Skew, jitter, NEXT, FEXT measurements
  - Check for passivity, causality, and more

Solutions for Signal Integrity
BERTs are great tools for analyzing signal quality. VNAs help diagnose issues when the quality doesn't meet expectations. If the issue lies within a device model, Anritsu VNAs offer the widest frequency range in a single coaxial connection and a low starting frequency for better DC extrapolation to help create the most accurate models. If the issue lies within a physical channel, Anritsu VNAs offer best in class time domain resolution to pinpoint defects. A wide range of de-embedding tools enables users to minimize the effects of fixtures in critical measurements.
Basics of Signal Integrity

Signal integrity (SI) is a set of measures of the quality of an electrical signal. Signals are then used for the data communication in channels (cables & buses) to interconnect components or equipment. The quality of the signal can be degraded by quantities such as the loss of amplitude, crosstalk, delay, jitter, noise and or interference. The task of signal integrity engineering is to analyze and reduce the effects of impairments to improve quality.

The right tools to achieve best-in-class signal integrity analysis

VectorStar®
- MS4640B Vector Network Analyzer
- ME7838A/E/D VectorStar Broadband VNA
- ME7838A4 VectorStar 4 Port Broadband VNA

ShockLine™
- MS46522B Performance 2 Port VNA
- MS46524B Performance 4 Port VNA

BERTWave
- MP2100B Multi-Channel BERT
- MP1800A Multi-Channel BERT

Learn More: www.anritsu.com