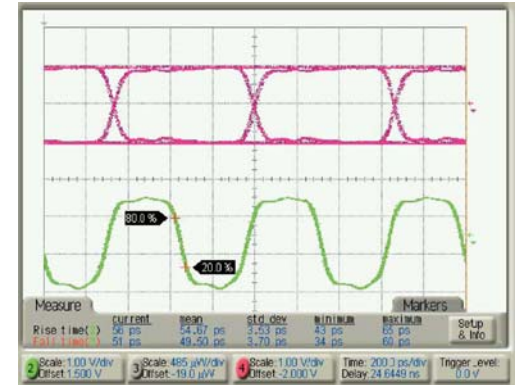# BitAlyzer® 1500/1600 Bit Error Rate Tester Fact Sheet
## The Analysis Needed to Find the Source of Bit Errors



**Performance and insight for today's data communications testing**



Physical Layer Test with a BitAlyzer

**Speed up debug of digital signaling errors**

- Flexible PRBS Pattern Generation up to 1.6 Gb/sec
- BER Measurements and analysis to BER $10^{-12}$
- BER-contoured masks support analysis of specified $1 \times 10$–$12$ eye opening.
- Pattern capture for easy, customized signal generation
- Automatic delay calibration to compensate for changes in temperature or frequency

| Features | Benefits |
|---|---|
| Pattern Generation and Error Analysis, high-speed BER Measurements up to 1.6 Gb/s | The combination of generation and analysis in one instrument enables receiver BER compliance testing for today's electronic and communications systems |
| Integrated Stress Generator for stressed eye sensitivity (SRS) and jitter tolerance compliance testing | A test signal's data rate, applied stress, and data pattern can be changed on the fly, independent of each other; enabling a diverse set of signal variations for testing chipset/system sensitivity. |
| Integrated, BER correlated eye diagram analysis with pass/fail masks | Rapidly understand BER performance limitations, assess deterministic vs random errors, perform detailed pattern dependent error analysis, error burst analysis, and perform error free interval analysis. |
| Error Location and BER contour analysis on PRBS signals up to 26 GB/sec | Provides a quick understanding of signal integrity in terms of BER. Error location provides detailed BER pattern sensitivities to speed up identification of deterministic vs. random BER errors |
| ANSI Jitter Measurements (RJ, DJ, and TJ) | Fast, effective method for determining long pattern PRBS31 jitter composition with triangulation. Graphical representation makes jitter analysis more thorough, yet simpler to follow. |
| BER Contour with Automatic Mask Creation | Measure and view the eye diagram opening as a function of BER. |

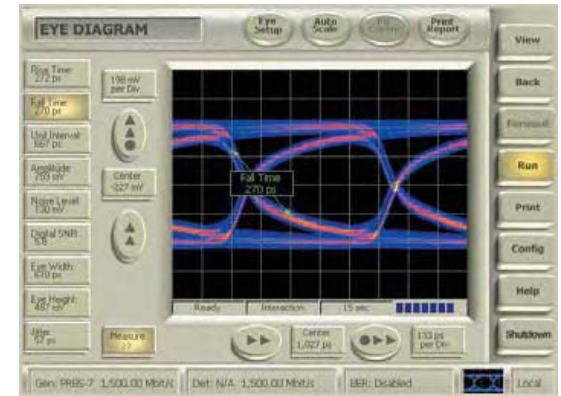**Tektronix**

# BitAlyzer® 1500/1600 Bit Error Rate Tester Fact Sheet
## Key Specs and Ordering Information

| Models | Data Rate | Description |
|---|---|---|
| BA1500 | 1.5 Gb/s | Bit Error Rate Analyzer |
| BA1600 | 1.6 Gb/s | Bit Error Rate Analyzer |

| Recommended Software Options | |
|---|---|
| ECC | Error Correction Coding Emulation |
| MAP | Error Mapping Analysis |
| PL | Physical Layer Test Suite Software |

| Fixture, Cable and Kit Options | |
|---|---|
| 100PSRTFILTER | 100 ps Rise Time Filter |
| BSA12500ISI | Differential ISI Board |
| PMCABLE1M | Phase Matched Cable Pr,1 m |
| SMAPOWERDIV | SMA Power Dividers |
| BARACK | BA Rackmount Kit |
| HDD | Add Hard Disk Drive |

| Service Options | Description |
|---|---|
| CA1 | Provides a single calibration event or coverage |
| C3 | Calibration service 3 years |
| R3 | Repair service 3 years (including warranty) |
| R1PW | Repair service coverage 1-years post warranty |
| R2PW | Repair service coverage 2-years post warranty |
| R3PW | Repair service coverage 3-years post warranty |



| Key Applications | Benefits |
|---|---|
| Silicon Verification & Debug | Enables quick movement from BER Testing to Debugging on silicon up to 1.6 Gb/s |
| Satellite and Wireless Communications | Complete functional test of BER performance with Error mapping and Forward Error Correction emulation |
| Signal Integrity of Serial Communications Systems | Support for Mask Testing, Jitter Peak, BER Contour, and Q-Factor Analysis enables a deep level of Signal Integrity insight. |

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