



Responding to Our Customers' Needs

3 JANUARY 2018

Company Background

Tektronix®

- Tektronix is a leading T&M company serving engineering and technical professionals
- Founded in 1946, acquired by Danaher in 2007, 2016 a Fortive company
- Headquartered in Beaverton, Oregon
- Leadership positions in key products and markets
- Highly-respected brand based on high quality innovative products, engineering excellence and global service and support
- Award winning:
 - Oscilloscopes
 - Signal Sources
 - Logic Analyzers
 - Spectrum Analyzers
 - Video Test

KEITHLEY
A Tektronix Company

- Keithley is a leader in precision electrical test
- Founded in 1946, acquired by Tektronix in 2010
- Headquartered in Solon, OH
- Offering instruments and systems to meet any measurement requirement from nanovolts to gigahertz
- 21 R&D 100 awards as well as honors from Semiconductor International, Solid State Technology, Electronic Products, Test & Measurement World magazines

Tektronix® – A Fortive Company FORTIVE

Professional Instrumentation

Revenue
\$3.0B
GM%
>50%
OP Margin >20%

Field Solutions*



Product Realization*



Sensing Technologies



Industrial Technologies

Revenue \$3.2B
GM% ~40%
OP Margin High teens

Transportation Technologies



Automation & Specialty



Franchise Distribution



Our Sales Team for GSI in Germany



Alexander Geissler
Key Account Manager- North-West
Aerospace & Defense



Nadja Lääperi
Inside Key Account Manager
North Germany



Jörn Höpfner
Sales Manager

Technical Support: Centre of Excellence

- Multilingual Technical Support:
 - English, French, German, Italian
 - Email: coe@tek.com
 - Phone: 0080022554835
 - Based in Cologne, Germany
- Demo and Training Centre
 - Tailored training courses and seminars
 - Fully equipped teaching laboratory
- Consultancy service to offer measurement and application solutions



Global Repair and Calibration Services

- Two Service locations in Germany
 - Cologne: Tektronix, Fluke and multivendor
 - Munich: Keithley
- On demand calibration and repair services
- Comprehensive Single Source Provider services
- Onsite calibration and repair service
- Superior quality and broad based accreditation



Tektronix High-End Solutions Overview

TEKTRONIX SIMPLIFIES SERIAL STANDARDS TESTING COMPLEXITY WITH MEASUREMENT EXPERTISE AND TOOLS THAT PROVIDE ACCURATE TEST RESULTS FOR HIGH-SPEED COMPUTER AND COMMUNICATIONS SYSTEM DESIGNS

DSA8300 Series Oscilloscopes



Characterizes the electrical and optical signal performance of components, boards & systems.

DPO7000SX ATI Performance Oscilloscopes



Performs pass/fail compliance test and debugging of high speed electrical components, boards & systems.

OM4000 Lightwave Signal Analyzers



Analyzes optical modulation formats used in next generation long-haul networks.

RF Signal Analyzers



Analyzes RF up to 26.5GHz at Real Time with 800MHz acquisition bandwidth

BERTScope Bit Error Rate Testers



Stress tests communication system receivers to ensure error-free operation in real-world environments.

TLA Series Logic Analyzers



Provides the speed and flexibility you need to capture logic detail on today's fastest microprocessors and memory.

AWG Arbitrary Waveform Generators



Aids research efforts by generating complex signal patterns that help evaluate communications system designs.

Parameter Analyzer



Synchronized I-V and C-V characteristic



ATI Performance Oscilloscopes

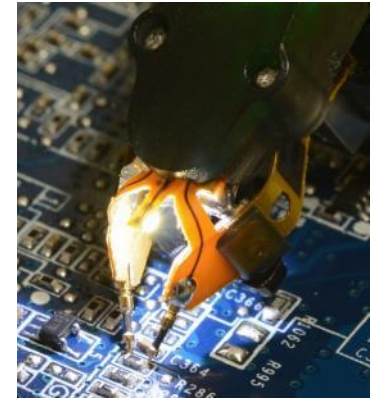
- Up to 70GHz Analog Bandwidth
- 4.3ps rise time (20%-80%)
- Compact 5 ¼" Oscilloscope package
- Up to 200GS/s sample rate
- 25GHz Edge trigger bandwidth
- Low-noise ATI architecture



P7700 Series Performance Probes, 8-20GHz

INDUSTRY'S BEST PROBING SOLUTION FOR NEW MOBILE DESIGNS

- **Innovative Chip-on-the-Tip**
 - P7700 Delivers active input directly at the probe tip
- **TekFlex™ Connector Technology**
 - Improve access to tight test locations
 - Light and flexible cable and tips
- **Best-in-Class** low loading for LPDDR and MIPI standards
- **Industry's first** probe and tips to be characterized with S-parameters
- **Industry's lowest** cost per connection

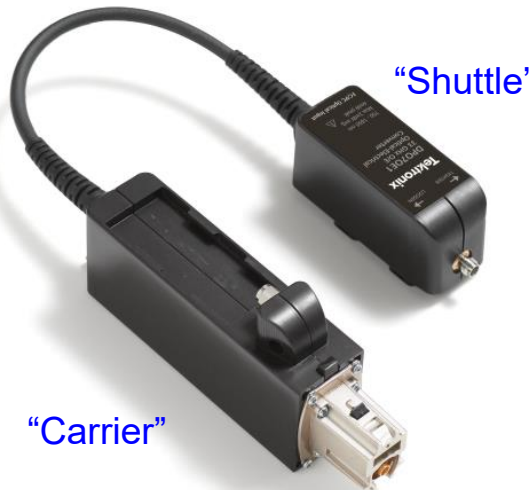


Introducing DPO70E1 Optical Probe

- Broad wavelength O/E optimized for 28G Data Center Network App's
- 33 GHz Optical bandwidth, 13.3ps rise time, DC coupled
- Single mode, multi-mode, 750nm – 1650nm
- Compatible with TekConnect and ATI inputs
- Use with DPO/MSO70kC/D/DX and DPO70kSX



TekConnect – 33 GHz O/E



ATI – 28G ORR



ATI – Mechanical support deck

Tektronix AWG Offerings

AWG'S (ARBITRARY WAVEFORM GENERATORS) ARE COMPLEX INSTRUMENTS THAT CAN GENERATE ALMOST ANY TYPE OF SIGNAL



Top Performance – AWG70000 Series

- 10 bit resolution, scalable sample rate 1.5kS/s - 50GS/s
- 1ch and 2ch models
- 500mV pp diff, 1ch up to 5V, Sequencing



Multi-Channel– AWG5200 Series

- 16 bit resolution
- 4ch, 6ch and 8ch models
- 8Vp-p, >3.0GHz analog BW
- Compact form factor



Basic Performance – AWG5000 Series

- 14 bit resolution
- 4 analog and 32 digital channels
- Up to 300MHz analog bandwidth
- Academic institutions – Quantum Computing

Tektronix Lab & Field Solutions Overview

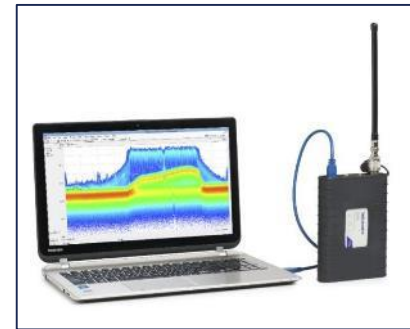
DPO/MDO/MSO Oscilloscopes



TTR500 Series VNA



Signal Analyzers



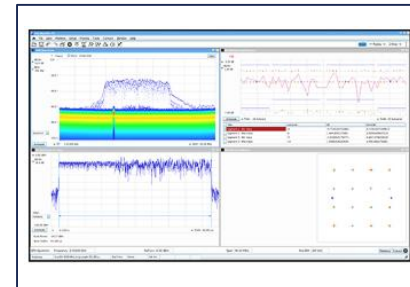
**Signal & Power Sources,
SourceMeter and Multimeters**



**Switching, Probing and
Accessories**



Software



Mixed Domain Oscilloscopes, MDO-Series

TIME CORRELATED SPECTRUM ANALYZER, OSCILLOSCOPE AND LOGIC ANALYZER ENABLE NEW VALUABLE INSIGHTS IN YOUR DUT

- 6 instruments in 1 small, portable package
 - Up to 6 GHz spectrum analyzer
 - 50MHz arbitrary function generator
 - Up to 1GHz oscilloscope
- Completely customizable and fully upgradeable
- Advanced trigger and analysis capabilities



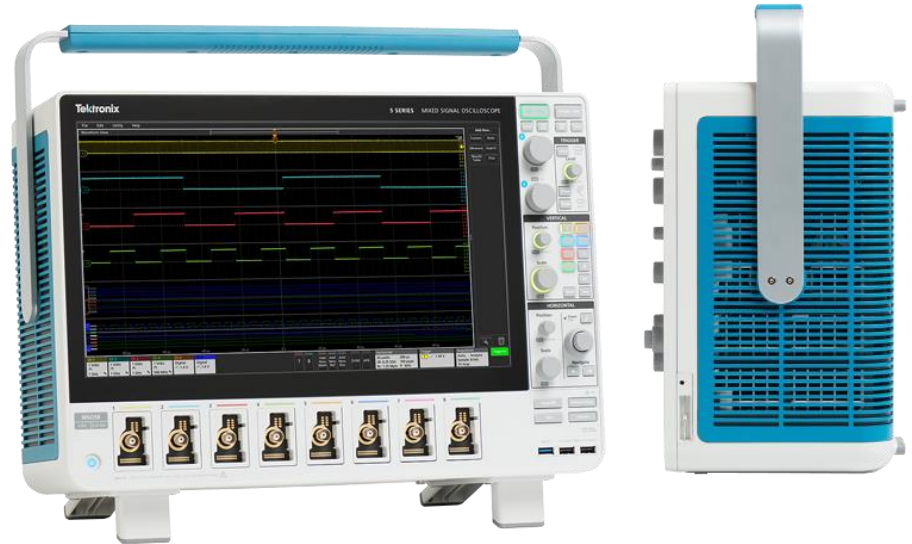
1. Oscilloscope
2. Spectrum Analyzer
3. Arbitrary Function Generator
4. Logic Analyzer
5. Protocol Analyzer
6. DVM/Counter

6 Instruments, 1 Oscilloscope, Infinite Versatility



5 Series MSO Oscilloscopes

- 4,6,8 analog / 64 dig. Channels
- FlexChannel™ Technology
- 12 Bit ADC/16 Bit HighRes Mode
- Compatible with probe portfolio
- 350 and 500 MHz, 1 and 2 GHz
- 6.25 GS/s, 62.5/125 Mpoints
- 15.6-inch TFT color HD display
- Capacitive (multi-touch) touchscreen
- [Watch the Video!](#)



IsoVu™ Probe

IsoVu™ technology is a radically new high voltage isolated differential probing solution that gives **Accurate** and **Repeatable** results

- Galvanically isolates the device-under-test from a Tektronix oscilloscope.
- **1 GHz** bandwidth (risetime <350ps)
- World's best Common Mode Rejection
 - Up to **160 dB** (100 Million to 1)
- **2500 V differential** voltage range
- **60 kV** common Mode voltage range
- Up to **40 MΩ** input resistance



TTR500 Series Vector Network Analyzer

FULL-FEATURED @ A FRACTION OF THE PRICE

Great all around Specifications:

- 100 kHz to 3/6 GHz
- 120 dB Dynamic Range
- -50 to +8 dBm Output Power
- < 0.01 dB Trace Noise
- Bias tee: 0 to ± 24 V, 0 to 200 mA, both ports, for active devices
- 42 H x 205 W x 274 D (mm)



- USB2, USB3 compatible
- Install firmware directly from instrument
- Control multiple VNAs from single PC
- Multiple language UI and documentation

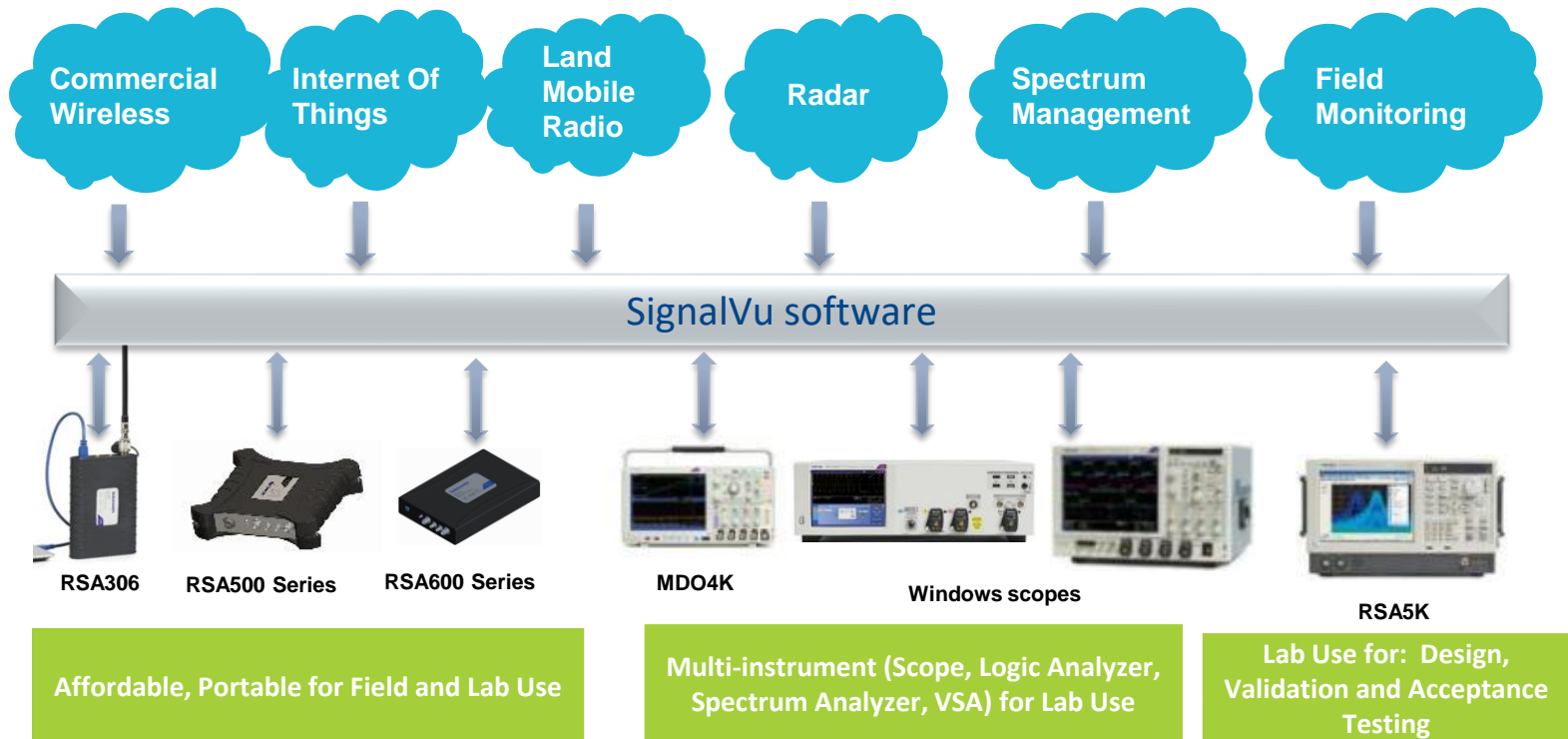
Disruptive USB Spectrum Analyzer Family

- Expanding USB Spectrum Analyzer offering
 - RSA306B for General Purpose Applications
 - RSA500A Series for Field RF
 - RSA600A Series for Wireless Lab Applications
- **Unmatched** PC controlled spectrum analyzer
- **State of the art** specifications
- **Industry leading** price/performance



SignalVu-PC Software

- One Software package: RF measurements for all Tektronix RF instruments
- Supports all our Analyzers (and high-end oscilloscopes)



Semiconductor Analyzer 4200A

FULLY INTEGRATED SOLUTION FOR CHARACTERIZATION OF MATERIALS, PROCESSES AND SEMICONDUCTOR DEVICES

- Easiest method to switch between IV and CV measurements
- 50% reduction in characterization complexity and test setup with new user interface
- Built-in measurement videos to minimize learning curve and for faster troubleshooting
- Industry's largest display on a Parameter Analyzer
 - 15.6" LCD widescreen
 - 1920x1080 HD display
 - Capacitive touchscreen

4200A-SCS Parameter Analyzer



KEITHLEY
A Tektronix Company

4200A-CVIV Multi-Switch

DMM7510 7½-Digit Graphical Multimeter

- **FIRST** in a new class of DMMs: the graphical sampling multimeter
- **FIRST** 7½-digit DMM with a capacitive touchscreen/display
- **FIRST** DMM to integrate a 1MS/sec, 18-bit digitizer and interactive display



- ✓ Higher accuracy
- ✓ Faster and easier to use
- ✓ Integrated signal capture
- ✓ Affordable price

Go Beyond the Numbers with a Graphical Sampling Multimeter



High Current Interactive SourceMeter® 2460

TOUCH TEST INVENT® CLASS OF KEITHLEY'S NEXT GENERATION INSTRUMENTS

- High Current DC Version of the highly successful Model 2450 SourceMeter
- **FIRST** touchscreen SMU to offer:
 - 7A DC, 7A Pulse, 100 Watt Source/Sink
 - Icon menu
 - built-in graphing to help learn faster and get results faster
- Integrates capabilities of I-V systems, curve tracers, and analyzers at a fraction of their cost



High Power Source & Measure in one Integrated Instrument



Tektronix

Thank you!

KEITHLEY
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