

# Tektronix

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## Who are we ?

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30 OCTOBER 2018

**KEITHLEY**  
A Tektronix Company



# Fortive Family of Brands



## A typical teaching lab

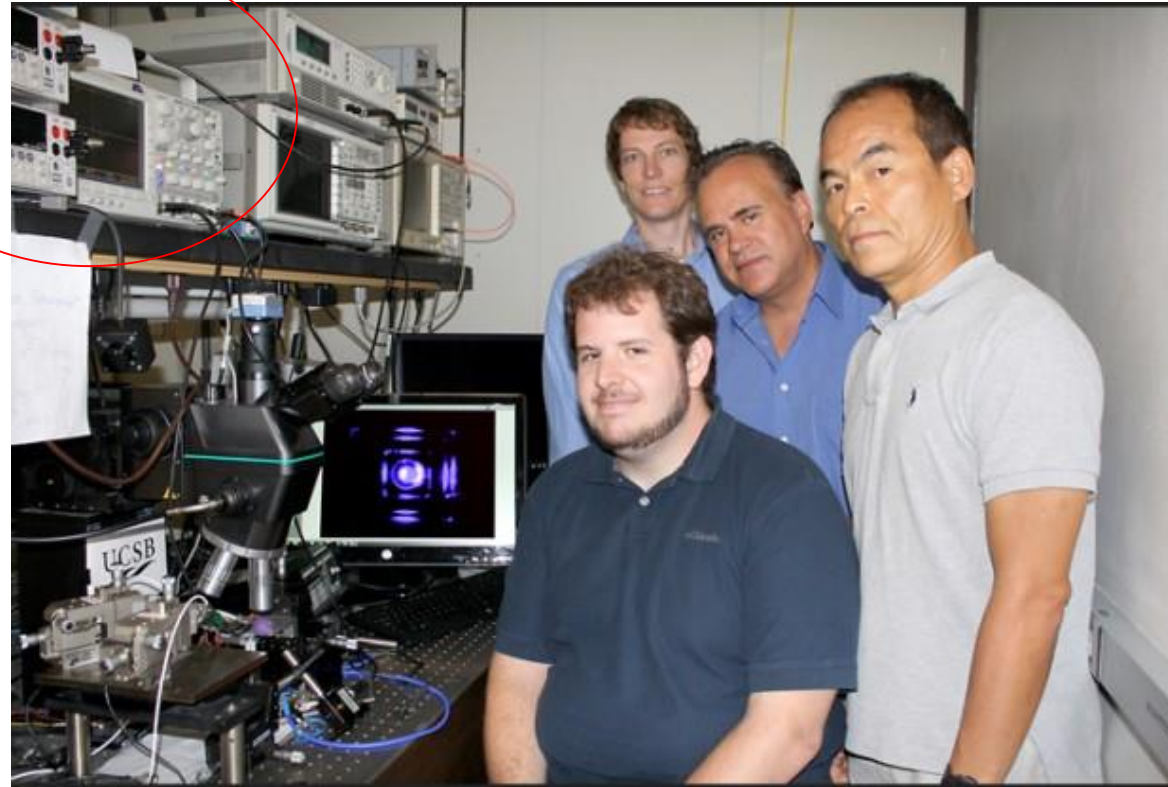




# A Typical Research Laboratory

Typical University /  
Research Lab

- SourceMeters
- Scopes
- Power Supplies
- Multimeters
- Other Equipment



Shuji Nakamura and his research group at UCSB.

Credit: UC Santa Barbara





# Company Overview

- Keithley is a leader in precision electrical test
- Founded in 1946, headquartered in Solon, OH
- Keithley enhances the Tektronix geographical footprint and provides inroads into new high-growth markets
- Creates a more complete toolset for design engineers, educators, and researchers around the world










KEITHLEY



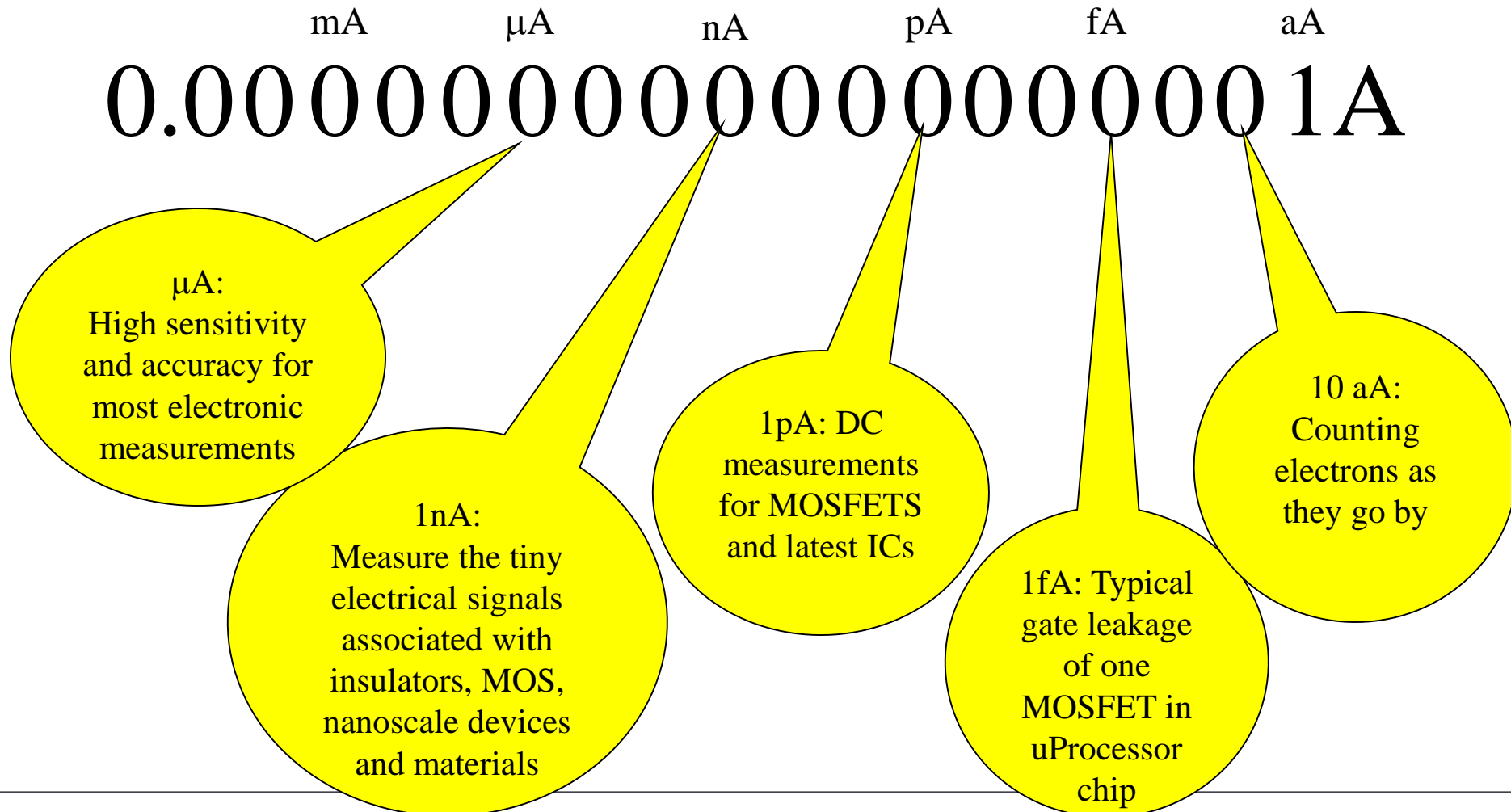
# Product Portfolio



World leader of precision DC electrical test instruments and integrated systems

Product Line		Description
<b>Source Measure Units (SMUs)</b>		Integrated DMMs and precision sources for broad IV source and measurements applications
<b>Fast Transient Power Supplies</b>		Specialty line of power supplies for emulating battery and charger circuitry during cell phone product test
<b>Precision Digital Multimeters (DMMs)</b>		General purpose meters for measuring DC voltage, current, resistance and AC voltage and current
<b>DMM / Switch</b>		Integrated switch and DMM for multi-channel measurements
<b>Switch Systems and Cards</b>		Signal routing and interconnect systems for multi-point / multi-channel applications
<b>Semiconductor Characterization Systems (SCS)</b>		Modular system including mainframe, SMU modules, C-V modules, and high speed pulse source and measure modules
<b>Automated Characterization Suite (ACS) Systems</b>		Standard and customizable software and integrated systems for semiconductor lab and parametric test applications
<b>Parametric Test</b>		Flexible scalable parametric test system built on ACS software and instruments, e.g. SMUs, 4200, Switching.
<b>Sensitive</b>		Precision instruments for sourcing and/or measuring very low levels of current/voltage or very high levels of resistance

# Realistically, What Can Be Measured?





# Tektronix Background

- Leading T&M company serving engineering and technical professionals
- Founded in 1946, acquired by Danaher in 2007
- 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, and Video Test



★ Major Worldwide Offices

# Oscilloscopes



## TBS1000B Series

- Education or Industrial
- Low cost
- 2 or 4 channels
- 5 years warranty
- PROMOTION



## TPS2000B Series Power oscilloscope

- Isolated channels
- Battery operation
- 2 or 4 channels up to 100 MHz



## THS3000 Series Field oscilloscope

- 4 channels isolated up to 200 MHz
- Battery operation

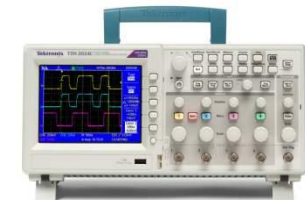
## TBS2000B Series

- Dedicated for teaching
- 2 or 4 channels up to 100 MHz
- 20 Millions pts / Large screen
- 5 years warranty
- First Wifi scope of the market.



## TDS2000C Series

- bandwidth → 200 MHz
- 2 or 4 channels
- Lifetimer warranty\*



+ Probes !!!

# Oscilloscopes de performance.

## MSO2000B and DPO2000B

2 or 4 Channels up to 200 MHz

- 1 Millions points
- Screen 7"

5 years warranty

- Decode and trigger on buses.



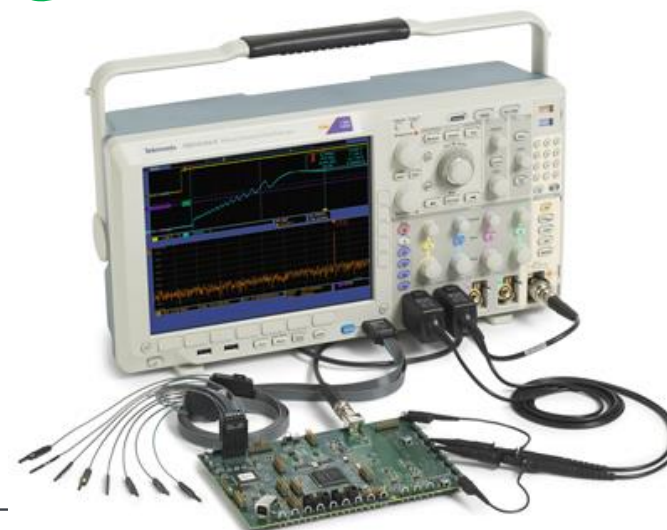
## MDO3000Series : 6 in 1 instruments

- Oscilloscope, Function generator, Logic analyzer, protocol Analyzer, voltmeter, **SPECTRUM ANALYZER**
- 2 or 4 channels up to 1GHz ( upgradable )
- 16 digital channels
- 10 Millions points
- 9" WVGA display



## MDO4000C Series

- Oscilloscope, Function generator, Logic analyzer, protocol Analyzer, voltmeter, **SPECTRUM ANALYZER**
- 2 or 4 channels up to 1GHz ( upgradable )
- 3 or 6 GHz RF & 16 Digital channels
- 20 Millions de points
- 10.4" XGA display





# Around the oscilloscope...

Generators, power supplies, Multimeters



# Arbitrary Function Generators

## AFG1022 ou AFG1062

Low cost ( from 688€ )

- Best for teaching labs
- 2 Channels 25MHz or 60MHz
- Arbitrary functions

To combine  
with  
TBS1000B/  
2000



## AFG3000C

- Performance → from 1560€ up to 10700 €
- Arbitrary functions
- Connectivity( USB/ LAN GPIB )
- 1 or 2 channels from 10MHz up to 240MHz
- AFG3011C                      AFG3151C
- AFG3012C                      AFG3152C
- AFG3021C                      AFG3022C                      AFG3101C
- AFG3102C



# Power supplies



**Tektronix®**

**KEITHLEY**

## PWS2000

1 channel 72V / 5 A

PWS2185, PWS2323, PWS2326, PWS2721

## PWS4000

1 channel 72V / 5 A- PROGRAMMABLE

PWS4205, PWS4305, PWS4323, PWS4602, PWS4721

## 2200 series

Up to 3 channels 10 000V / 72A.

**31** different models according :

- Voltage
- Current
- Power
- Number of channels

Tous dispos chez



# Digital multimeters

**Tektronix®**



**KEITHLEY**

**DMM4020**

5.5 digits

**DMM4040 ou DMM4050**

6,5 digits

**2110**

5.5 digits

**2100**

6.5 Digits

**DMM7510**

7.5 Digits

**2002**

8.5 Digits



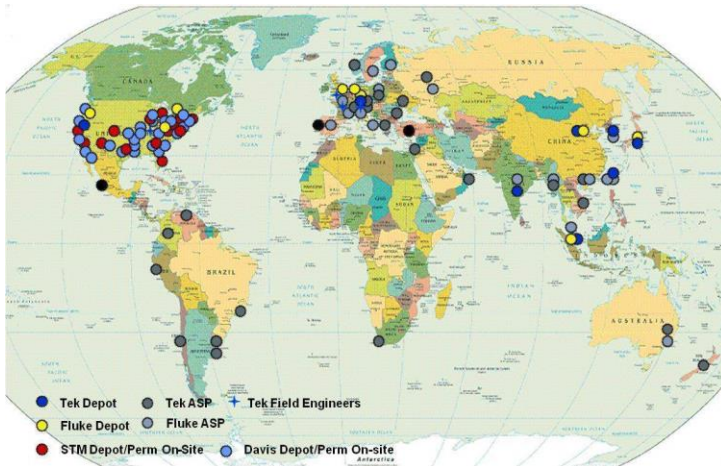
# Calibration, Repair and Asset Management Services

Comprehensive services for all test, measurement and control equipment



## Calibration and repair of any model Tektronix equipment

- Multi-year service contracts including Gold and Silver repair and Factory Certified calibration options
- Tektronix factory expertise, parts and calibration routines



## Comprehensive multi-vendor calibration solutions

- Purchased Davis Calibration and Sypris in 2009-2010
- Unmatched service capabilities - over 140,000 models across more than 9,000 vendors
- Convenient local locations with 28 laboratories in North America and an expanding global network
- Flexible delivery models - depot based, temporary onsite, full outsource solutions
- Superior quality - broad accreditation scope - 181 ISO/IEC 17025 accreditation parameters
- Custom-tailored solutions including CALWEB web-based asset management software