**Power Integrity and Power Sequencing**

WaveRunner 8000HD 12-bit oscilloscopes' high resolution, long memory and high channel count let you validate and debug all aspects of power supply, delivery and consumption - for complete confidence.

**Accurate PDN measurements**
Make sensitive measurements like rail collapse characterization with total confidence thanks to WaveRunner 8000HD's high dynamic range and 0.5% gain accuracy. Its HD4096 architecture means an exceptionally low noise floor, for easily pinpointing noise sources.

**Specialized power probes**
Combine WaveRunner 8000HD with the RP4030 4 GHz Power Rail Probe for unsurpassed insight into PDN behavior. The variety of probe tips ensures easy connectivity, and its low loading characteristics minimize disruption to the device under test.

**Power sequencing**
8 analog channels with 12-bit resolution and high offset capability give full visibility into power sequencing behavior - with 16 digital inputs available to decode and trigger on SPMI and other power management interfaces. Up to 5 Gpts of acquisition memory to capture every detail.
## Analog Channels
- **Teledyne LeCroy WaveRunner 8000HD**: 8 (16 with OscilloSYNC™)
- **Tektronix MSO58 (5 Series)**: 8 (without digital)

## Digital Channels
- **Teledyne LeCroy WaveRunner 8000HD**: 16 (with MSO option)
- **Tektronix MSO58 (5 Series)**: 8 to 64 (optional)
  - Each 8 digital channels consumes 1 analog channel
  - 12-bit ADC

## Resolution
- **Teledyne LeCroy WaveRunner 8000HD**: 12 bits
- **Tektronix MSO58 (5 Series)**: 12-bit ADC
  - but 8-bit real-world noise performance

## Bandwidth
- **Teledyne LeCroy WaveRunner 8000HD**: 350 MHz - 2 GHz
- **Tektronix MSO58 (5 Series)**: 350 MHz - 2 GHz
  - Resolution is 8 bits at 2 GHz

## Sample Rate
- **Teledyne LeCroy WaveRunner 8000HD**: 10 GS/s
- **Tektronix MSO58 (5 Series)**: 6.25 GS/s

## Memory
- **Teledyne LeCroy WaveRunner 8000HD**: 50 Mpts/Ch standard
  - 1.25 Gpts/Ch maximum
- **Tektronix MSO58 (5 Series)**: 62.5 Mpts/Ch standard
  - 125 Mpts/Ch maximum

## Display Size / Resolution
- **Teledyne LeCroy WaveRunner 8000HD**: 15.6", 1920 x 1080 pixels
  - Supports UHD (4096 x 2304) external monitor
- **Tektronix MSO58 (5 Series)**: 15.6", 1920 x 1080 pixels
  - Supports HD (1920 x 1080) external monitor

## Baseline Noise (rms, 2 GHz)
- **Teledyne LeCroy WaveRunner 8000HD**: 330 uV @ 50 mV/div
- **Tektronix MSO58 (5 Series)**: 1848 uV @ 50 mV/div (measured)

## Gain Accuracy
- **Teledyne LeCroy WaveRunner 8000HD**: ±(0.5%) of full scale
- **Tektronix MSO58 (5 Series)**: ±(0.6%) of full scale

## Offset Range
- **Teledyne LeCroy WaveRunner 8000HD**: ±8 V at 10 mV/div, ±160 V at 1 V/div
- **Tektronix MSO58 (5 Series)**: ±1 V at 10 mV/div, ±100 V at 1 V/div

## Rail Probe
- **Teledyne LeCroy WaveRunner 8000HD**: Yes
- **Tektronix MSO58 (5 Series)**: Yes

## Digital Power Management Application Package
- **Teledyne LeCroy WaveRunner 8000HD**: Yes
- **Tektronix MSO58 (5 Series)**: No

## Power Management Serial Data Support
- **Teledyne LeCroy WaveRunner 8000HD**: SPMI
- **Tektronix MSO58 (5 Series)**: SPMI

### A complete power sequencing and power integrity toolkit
Teledyne LeCroy’s HD4096 technology provides 12-bit resolution all the time. With 8 analog inputs and the most complete set of probes, triggers and software tools, the WaveRunner 8000HD gives unmatched insight into system power behavior.

#### Probe
Teledyne LeCroy’s RP4030 Active Voltage Rail probe provides pristine reproduction of rail behavior with extremely low loading, taking full advantage of low-noise HD4096 technology.

#### Capture
TDME (Trigger, Decode, Measure/Graph & Eye Diagram) options for all common power management interfaces make triggering on, capturing and viewing power sequencing events easy.

#### Analyze
The Digital Power Management software option enables powerful analysis of PDN behaviors such as load transient response, ground bounce and voltage rail noise.