

HD
4096

WaveRunner 8000HD
High Definition Oscilloscope



The only **8 channel,**
12 bit, 2 GHz oscilloscope

WaveRunner 8000HD offers the industry's lowest noise, for the highest signal fidelity and most accurate measurements.

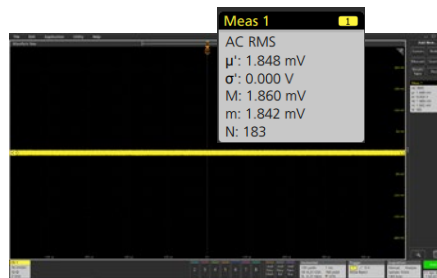
Baseline Noise (Full Bandwidth)	WaveRunner 8000HD (2 GHz Model)	Tektronix 5 Series (2 GHz Model)*
1 mV/div	✓ 170 μ V	X N/A**
10 mV/div	✓ 200 μ V	X 479 μ V
50 mV/div	✓ 330 μ V	X 1848 μ V
100 mV/div	✓ 510 μ V	X 4653 μ V
1000 mV/div	✓ 5.20 mV	X 30.3 mV

* As measured with 2 GHz bandwidth. Datasheet specification is for 1 GHz bandwidth high resolution mode.

** Bandwidth is limited to 175 MHz at this gain setting.



WaveRunner 8208HD
2 GHz, 10 GS/s, 12 bits



Tektronix MSO58 5 Series
2 GHz, 6.25 GS/s, 8 bits

	WaveRunner 8000HD	Tektronix 5 Series
Analog Channels	8 (16 with OscilloSYNC™)	8 ¹
Digital Channels	16 (with MSO option)	8 to 64 (optional) ¹
Resolution	12 bits	12-bit ADC ²
Bandwidth	350 MHz - 2 GHz	350 MHz - 2 GHz ³
Sample Rate	10 GS/s	6.25 GS/s
Memory	50 Mpts/Ch standard 5 Gpts maximum	62.5 Mpts/Ch standard 125 Mpts maximum
Display Size / Resolution	15.6", 1920 x 1080 pixels Supports UHD (4096 x 2304) external monitor	15.6", 1920 x 1080 pixels Supports HD (1920 x 1080) external monitor
ENOB at 2 GHz	8.4 bits	6.3 bits ⁴

1 - Each 8 digital channels consumes 1 analog channel.

2 - 8-bit real world noise performance.

3 - Resolution is 8 bits at 2 GHz.

4 - As measured with 2 GHz Bandwidth. ENOB is only specified for \leq 1 GHz Bandwidths.

12 bits all the time with no compromise

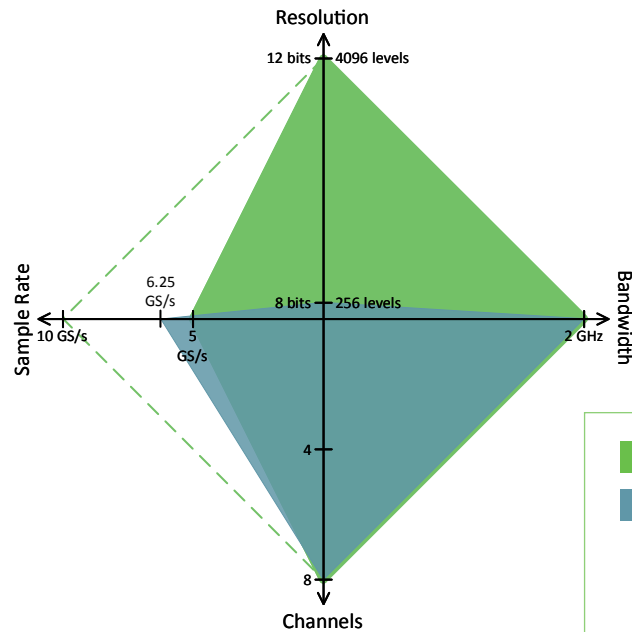
Teledyne LeCroy's HD4096 Technology
is always 12-bit resolution



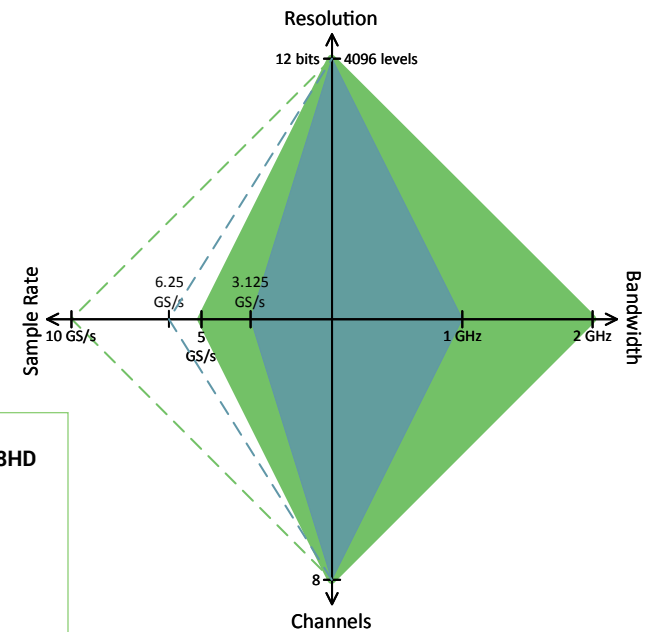
The Tektronix 5 Series 12-bit ADC defaults
to 8-bit resolution – why?



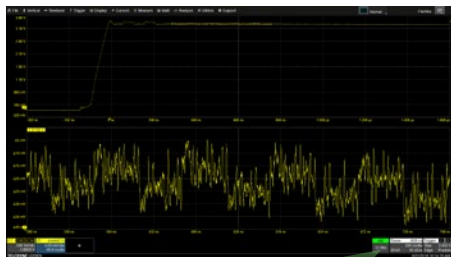
WaveRunner 8208HD vs. Tektronix MSO58: 2 GHz Bandwidth



WaveRunner 8208HD vs. Tektronix MSO58: 12-bit Resolution @ Highest Bandwidth

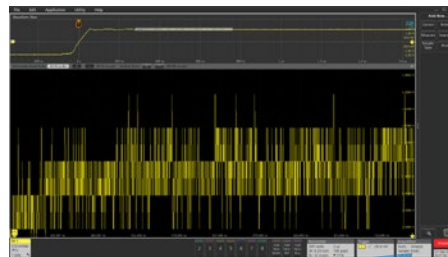


■ Teledyne LeCroy WaveRunner 8208HD
■ Tektronix MSO58 2 GHz Model
- - - ESR Mode
- - - IT Mode



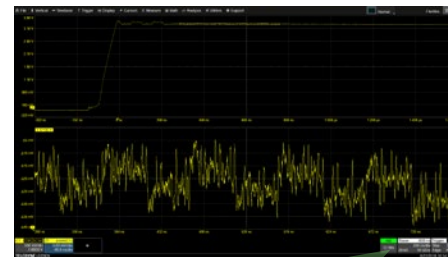
WaveRunner 8208HD

HD
12 Bits



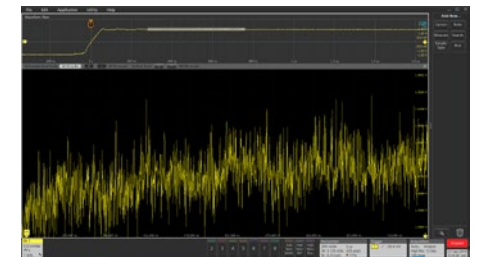
MSO58 2 GHz Model

Acquisition
Auto: Analyze
Sample: 8 bits
120 Acqs



WaveRunner 8208HD

HD
12 Bits



MSO58 2 GHz Model
In High Res Mode,
Bandwidth limited to 1 GHz

Acquisition
Auto: Analyze
High Res: 12 bits
169 Acqs

The Tektronix 5 Series is limited to 8-bit resolution at 2 GHz bandwidth.

The Tektronix 5 Series needs to enable High Res mode to achieve 12-bit resolution but the bandwidth is limited to 1 GHz and the noise is still very high.