

The combination of the ZTEC ZT4211 and TEGAM 4040A provides a high-performance differential oscilloscope in a 3U PXI format. The 4040A adds differential input signal conditioning to the advanced signal acquisition, measurement and mathematics processing of the ZT4211. The instrument combination is ideal for a wide range of applications in communications, military/aerospace, scientific research, and electronic test. ZTEC's ZScope™ software provides a graphical user interface with a benchtop oscilloscope look-and-feel. The key specifications for the combined instrument performance are depicted in the following figures. Refer to the individual datasheets for detailed specifications of the ZT4211 and 4040A.

Specifications

ZTEC ZT4211 PXI

Digital Storage Oscilloscope

- Sampling Rate: 1 GS/s
- Analog Bandwidth 300 MHz
- Resolution: 8 bit
- Record Length: 256M Samples
- 2 Channels

TEGAM 4040A PXI

DC - 50 MHz Instrumentation Amplifier

- Bandwidth: 50 MHz
- Attenuation: 1/100, 10/100, 100/100
- Gain: x1, x10, x100
- Input Voltage: +/- 100 V, Differential
- Input Impedance: 1 M Ω , 50 Ω
- Input Noise: 9nV / $\sqrt{\text{Hz}}$
- Filters: 100 kHz, 1 MHz
- Offset Control

Characteristics

Noise

Input Range	4040A Attenuator	4040A Gain	100 kHz Bandwidth RMS Noise	1 MHz Bandwidth RMS Noise	Full Bandwidth RMS Noise
ZT4211 Only	N/A	N/A	59.7 μ V	59.7 μ V	59.7 μ V
100V	$\div 100$	1	60.9 μ V	61.0 μ V	64.7 μ V
10V	$\div 100$	10	65.4 μ V	68.3 μ V	1.80 mV
10V	$\div 10$	1	60.9 μ V	61.1 μ V	64.1 μ V
1V	$\div 100$	100	1.16 mV	1.86 mV	9.75 mV
1V	$\div 10$	10	67.2 μ V	70.0 μ V	1.61 mV
0.1V	$\div 10$	100	1.54 mV	2.33 mV	8.85 mV
0.1V	$\div 1$	10	65.3 μ V	67.9 μ V	1.66 mV
0.01V	$\div 1$	100	1.02 mV	1.75 mV	8.81 mV

Table 1: Noise in addition to the ZT4211-only baseline noise at its 100 mV_{pp} range for all range and filter combinations on the 4040A

Bandwidth

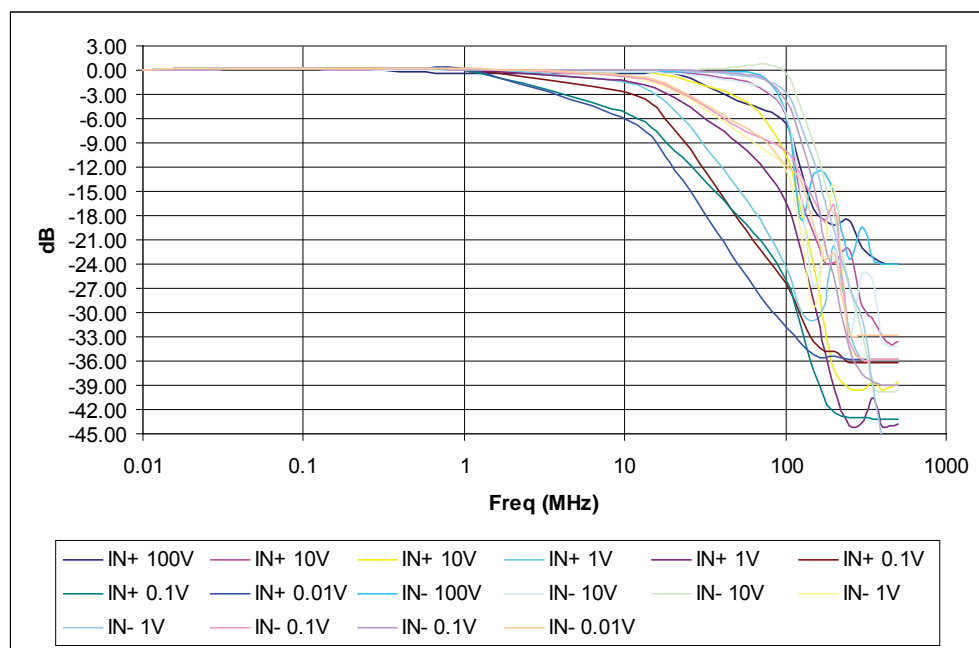


Figure 1: Bandwidth for all ranges with filter bypassed for both IN+ and IN- inputs

Characteristics

Filter

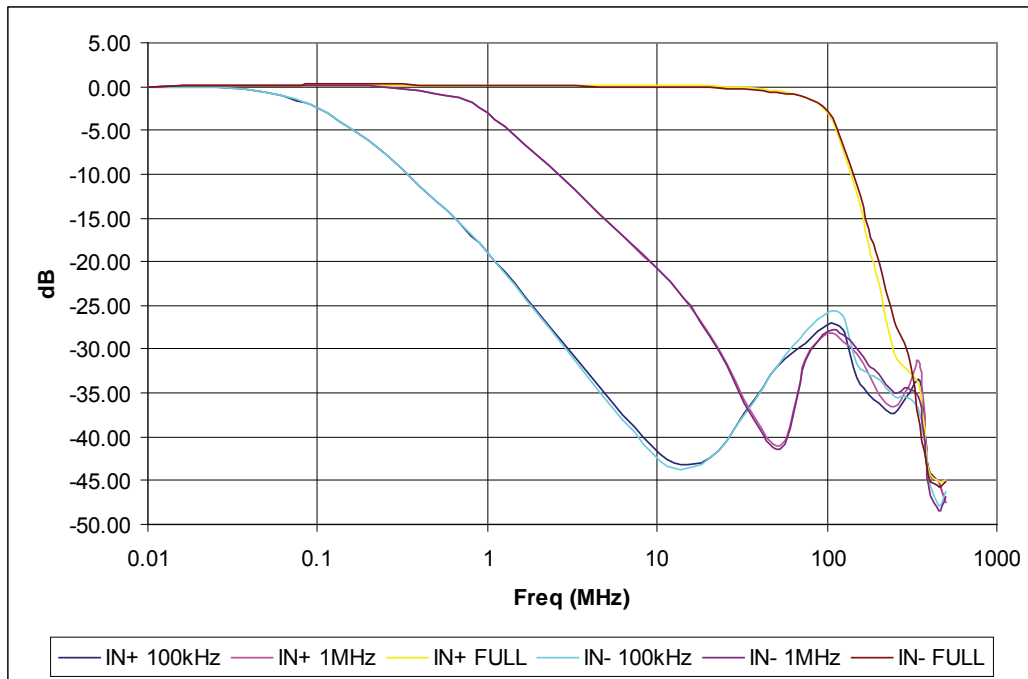


Figure 2: Filter Bandwidth for both IN+ and IN- inputs with 4040A set at divide by 10 with gain of 10, and ZT4211 range set at $2V_{pp}$

Ordering Information

ZTEC Instruments

Phone: 1-866-ZTEC-NOW
www.ztecinstruments.com

ZT4211 PXI Oscilloscope
Part Number: 01081-01
www.ztecinstruments.com/zt4211pxi

ZT6531 SMB to BNC Cable Kit
Part Number: ZT6531
www.ztecinstruments.com/zt6531

TEGAM

Phone: 1-440-466-6100
www.tegam.com

4040A PXI Instrumentation Amplifier
Part Number: 4040A
www.tegam.com

SMB to BNC Adapter Cables
Part Number: CA-3-12