

***Mixed Signal  
Resource for  
HiLevel Systems***



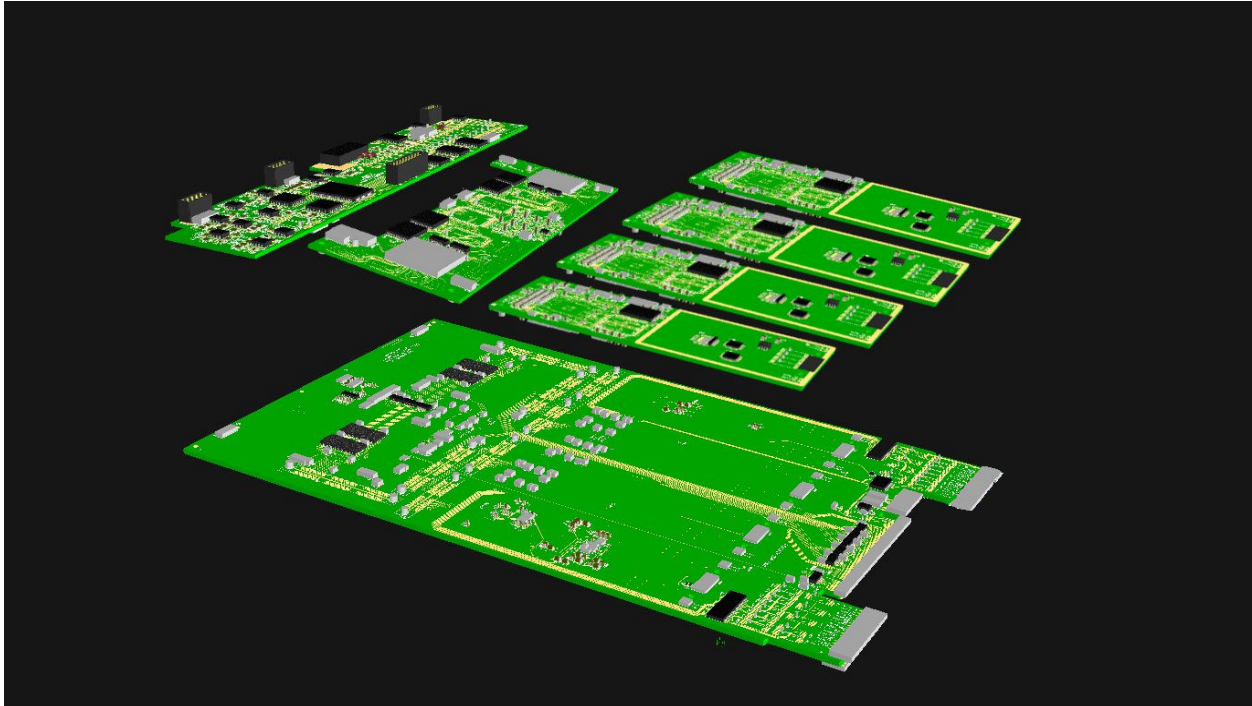
***A User-configurable Modular Solution  
To Support Your Mixed Signal Needs***



## **Analog Resources**

Enhance the flexibility of your **HILEVEL** system by adding analog resources to your powerful digital logic tester. Digitizers, AWGs, and high-voltage pins can be easily added and applied to your device without cables.

- 16-Bit Fast AWG
- 24-Bit Precision AWG
- 16-Bit Fast Digitizer
- 24-Bit Precision Digitizer
- Four High-Voltage Pins

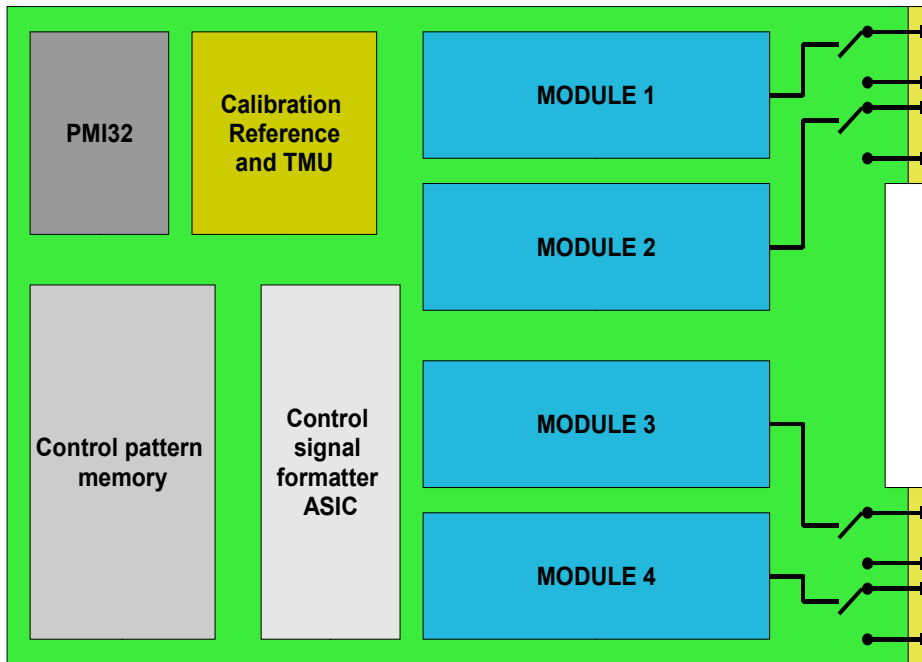


## **Modular Design**

**HILEVEL**'s Mixed Signal resource is more flexible than ever with the MX2. The modular design allows you to configure the MX2 with the analog resources that best fit your application.



## Analog Resources for Mixed-Signal Testing

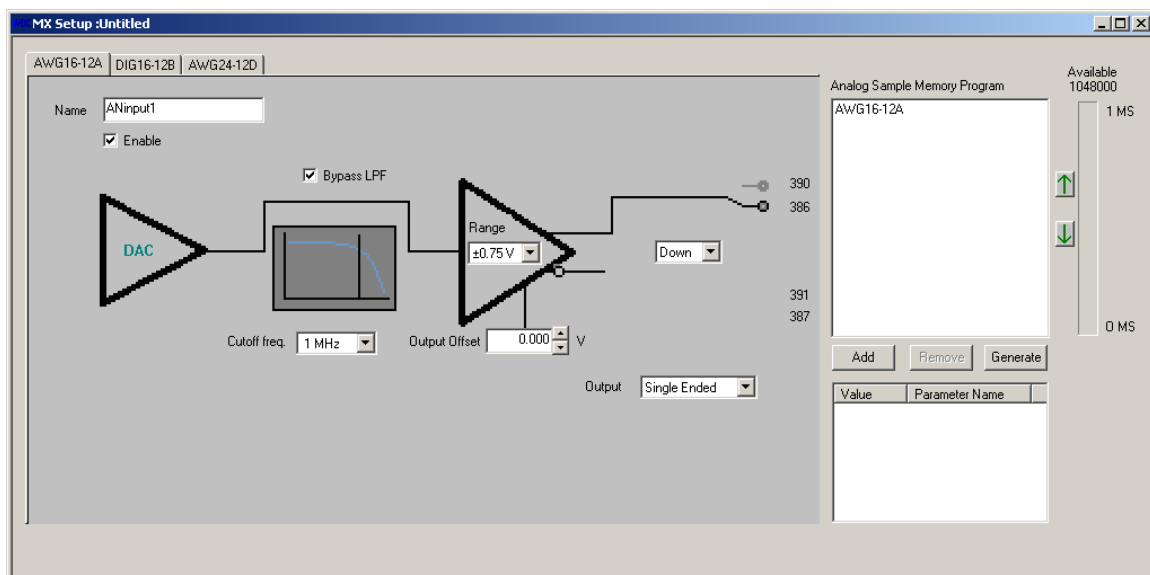


### Modular Design for Maximum Flexibility

Mix and match any resources:

- Three 24-bit AWG and one 24-bit Digitizer, or
- Two 16-bit AWG, one each of 16-bit and 24-bit Digitizers, or
- One 24-bit AWG, one Hi-V module and two 24-bit Digitizers, or
- One of everything
- Mix in any combination

## Easy To Use GUI Setup Software





## Specifications

### 16-Bit Fast AWG

Resolution: 16-bit  
Update rate: 80MSPS  
Pattern depth: 1M  
Output ranges: 0.75V, 1.5V, 2V, 3V,  
4V, 6V, 8V, 12V  
Output offset voltage: -3V to +3V  
Output filters: none, 10MHz, 25MHz  
 $DNL \leq \pm 0.5 \text{ LSB @ } +25^\circ \text{ C}$   
 $INL \leq \pm 1.0 \text{ LSB @ } +25^\circ \text{ C}$   
 $THD \leq -95 \text{ dB @ } f_{OUT} = 1 \text{ MHz}$   
 $SFDR \geq 78 \text{ dBc @ } f_{OUT} = 20 \text{ MHz}$

### 24-Bit Precision AWG

Resolution: 24-bit  
Update rate: 196kSPS  
Pattern depth: 1M  
Output ranges: 0.75V, 1.5V, 2V,  
3V, 4V, 6V, 8V, 12V  
Output offset voltage: -3V to +3V  
Output filters: none, 1.5kHz, 22kHz, 100kHz  
 $SNR/DNR \geq 120 \text{ dB}$   
 $THD + N \leq -110 \text{ dB}$

### 16-Bit Digitizer

Resolution: 16-bit  
Update rate: 80MSPS  
Pattern depth: 1M  
Input ranges: 0.75V, 1.5V, 2V, 3V,  
4V, 6V, 8V, 12V  
DC offset voltage: -3V to +3V  
Input filters: none, 1MHz, 10MHz, 25MHz  
Input impedance: 1M $\Omega$ , or 600  $\Omega$   
 $DNL \leq \pm 0.5 \text{ LSB @ } +25^\circ \text{ C}$   
 $INL \leq \pm 3.0 \text{ LSB @ } +25^\circ \text{ C}$   
 $S/N \geq 77 \text{ dB @ } f_{OUT} = 10 \text{ MHz}$   
 $SINAD \geq 75 \text{ dB @ } f_{OUT} = 10 \text{ MHz}$   
 $SFDR \geq 80 \text{ dBc @ } f_{OUT} = 10 \text{ MHz}$

### 24-Bit Digitizer

Resolution: 24-bit  
Update rate: 2.5MSPS  
Pattern depth: 1M  
Input ranges: 0.75V, 1.5V, 2V,  
3V, 4V, 6V, 8V, 12V  
DC offset voltage: -3V to +3V  
Input filters: none, programmable from  
19.2kHz up to 1.35MHz, 16- steps  
Input impedance: 1M $\Omega$ , or 600  $\Omega$   
DNL – guaranteed monotonic to 24 bits  
 $INL \leq 0.00076 \% \text{ FS}$   
 $S/N \geq 112 \text{ dB}$   
 $THD \leq -105 \text{ dB}$   
 $SFDR \geq 120 \text{ dBc}$

### High Voltage Digital Pins

Each Optional High-Voltage Module includes:

- Four high-voltage stimulus pins, range 0V to +15VDC
- All standard stimulus formats accepted
- High Impedance on/off time 60ns.
- 10mV resolution, +5mV accuracy, slew rate 2500V/us
- 50mA source, sink current
- 64M vectors depth

# Mixed Signal

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