Arbitrary Waveform Generator Amplifer Card Options
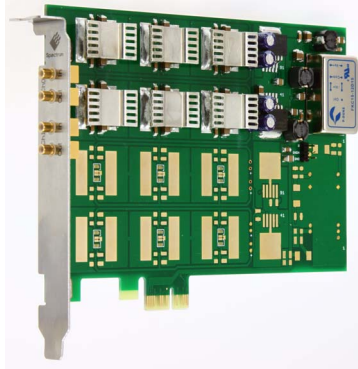
- **±10V output level into high impedance**
- **±5V output level into 50Ω**
- **30 MHz bandwidth**
- **Fixed amplification of G = 10/3 = 3.3$\overline{3}$**
- **Versions with one, two and four channels available**
- **Versions for PCIe x1, PCI 32 Bit and PXI 3U available**
- **Matches range of M2i/MX/MC/MI.60xx and 61xx AWG cards**
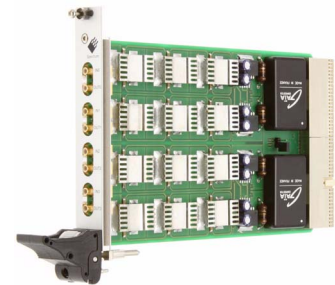- **Calibrated together with AWG card in factory**

1 to 4 channel PCIe x1 (2 ch version shown)
for arbitrary waveform generator card series:
M2i.60xx, M2i.61xx, M2i.60xx-exp, M2i.61xx-exp,
MI.60xx and MI.60xx
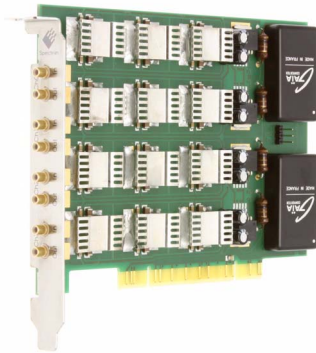
1 to 4 channel PCI (4 channel version shown)
for arbitrary waveform generator card series:
M2i.60xx, M2i.61xx, M2i.60xx-exp, M2i.61xx-exp,
MI.60xx and MI.60xx

1 to 4 channel PXI 3U (4 channel version shown)
for arbitrary waveform generator card series:
MX.60xx, MX.61xx, MC.60xx and MC.61xx

General Information

The amplifier cards are available as an additional option for all arbitrary waveform generators from Spectrum. Versions with 1, 2 or 4 parallel amplifier channels and a large signal bandwidth of 30 MHz are available. The ±3 V signal of the generator card is amplified by a fixed value of 3.3$\overline{3}$ to a maximum of ±10 V.

The output impedance is 50 Ohm resulting in an output level of ±5 V when terminated with 50 Ohm. The amplifiers are available as PCI, PCIe, PXI and CompactPCI versions and are calibrated together with the related output channel of the generator card to minimize offset and gain errors.

The arbitrary waveform generator card is shipped with two different calibration value sets. One calibration set is done with the AWG card without amplifier and one calibration set is done with AWG and amplifier together. A single software command switches between the two sets to allow usage with or without amplifier.

Technical Data

±10 V Amplifier Card Options

Bandwidth	30 MHz
Max. input voltage	±3 V
Output impedance	50 Ω
Fixed Amplification	x (10/3) = x 3.3$\overline{3}$
Max. Output Voltage (into high impedance load)	±10 V
Max. Output Voltage (into 50 Ohm load)	±5 V
Analog ground to PC system ground impedance	10 kΩ (with ground jumper unplugged), 0 Ω (when ground jumper is plugged)
Gain Error	≤ ±1 %
Offset Error	≤ ±50 mV

PCIe Version M2i.6-Exp-1Amp/2Amp/4Amp

Interface	PCIe x1 (power connection only)
Dimension (PCB without SMB connectors)	147 mm x 106 mm
Power Consumption 3.3 V	0.0 A
Power Consumption 12.0 V	-1Amp and -2Amp: 1.1 A, -4Amp: 2.1 A

PCI Version MI.6xxxx-1Amp/2Amp/4Amp

Interface	PCI 32 Bit 33 MHz (power connection only)
Dimension (PCB without SMB connectors)	147 mm x 106 mm
Power Consumption 3.3 V	0.0 A
Power Consumption 5.0 V	-1Amp and -2Amp: 2.5 A, -4Amp: 5.0 A

PXI Version MX.6xxxx-1Amp/2Amp/4Amp

Interface	PXI 32 Bit 33 MHz (power connection only)
Dimension (PCB without SMB connectors)	3U (160 mm x 100 mm)
Power Consumption 3.3 V	0.0 A
Power Consumption 5.0 V	-1Amp and -2Amp: 2.5 A, -4Amp: 5.0 A

Order Information

	Order no.	Option
PCI 32 Bit Version	MI.6xxx-1Amp	±10 V output amplifier PCI 32 bit card with 1 channel including SMB to SMB connection cable
	MI.6xxx-2Amp	±10 V output amplifier PCI 32 bit card with 2 channels including SMB to SMB connection cables
	MI.6xxx-4Amp	±10 V output amplifier PCI 32 bit card with 4 channels including SMB to SMB connection cables
PCIe x1 Version	M2i.6-Exp-1Amp	±10 V output amplifier PCIe x1 card with 1 channel including SMB to SMB connection cable
	M2i.6-Exp-2Amp	±10 V output amplifier PCIe x1 card with 2 channels including SMB to SMB connection cables
	M2i.6-Exp-4Amp	±10 V output amplifier PCIe x1 card with 4 channels including SMB to SMB connection cables
PXI 3U Version	MX.6xxx-1Amp	±10 V output amplifier PXI 3U card with 1 channel including SMB to SMB connection cable
	MX.6xxx-2Amp	±10 V output amplifier PXI 3U card with 2 channels including SMB to SMB connection cables
	MX.6xxx-4Amp	±10 V output amplifier PXI 3U card with 4 channels including SMB to SMB connection cables

Technical changes and printing errors possible