National Instruments™ DAQ-hardware Supported by PLATO

For NVH Test & Monitoring Systems (Analogue Sampling):

In CompactDAQ™ standalone chassis with Ethernet, USB or Wi-Fi connection to host PC:

Bus	Model	Channels	Max Sample Rate (KS/s/chan)	ADC bits	Anti-Alias Filters	Gain Settings	IEPE Sensor Powering	Coupling	Input Voltage Range
cDAQ	9205	32	250/nchans	16	NO	4	NO	DC	±10V
	9233	4	51.2	24	YES	0	YES¥	AC¥	±5V
	9234	4	51.2	24	YES	0	YES	AC/DC	±5V

Supported cDAQ Chassis:

Bus	Model	Slots
USB	9171	1
USB	9174	4
USB	9172	8
USB	9178	8
Ethernet	9188	8

Standalone unit with USB connection to host PC:

Bus	Model	Channels	Max Sample Rate (KS/s)	ADC bits	Anti-Alias Filters	Gain Settings	IEPE Sensor Powering	Coupling	Input Voltage Range
USB	4432	5	102.4	24	YES	0	YES$^\Delta$	AC/DC	±5V

Plug-In Cards for PCs:

Bus	Model	Channels	Max Sample Rate (KS/s)	ADC bits	Anti-Alias Filters	Gain Settings	IEPE Sensor Powering	Coupling	Input Voltage Range
PCI	4474	4	102.4	24	YES	0	YES	AC/DC	±10V
	4472	8	102.4	24	YES	0	YES	AC/DC	±10V

In standalone chassis with Ethernet or USB connection to host PC:

Bus	Model	Channels	Max Sample Rate (KS/s)	ADC bits	Anti-Alias Filters	Gain Settings	IEPE Sensor Powering	Coupling	Input Voltage Range
PXI	4474	4	102.4	24	YES	0	YES	AC/DC	±10V
	4472	8	102.4	24	YES	0	YES	AC/DC	±10V
	4495	16	204.8	24	YES	2	YES	DC	±10V
	4498	16	204.8	24	YES	4	YES	AC	±10V
PXIe	4497	16	204.8	24	YES	2	YES	AC/DC	±10V

¥ *not software switchable*		Current Product
$^\Delta$ *on 4-channels only*		Legacy Product

\\Helix\abd\Product Information\TMS\PLATO\Publicity & Sales Aids\Technical Details\PLATO DAQ & Logic I-O Hardware - issue 01.docx

Page 1 of 2

Counter/Timer Hardware for METKIT Add-On (Transmission Error & Backlash Measurement):

Plug-In Cards for PCs:

Bus	Model	Counter/ Timer Channels	Simultaneous High-Speed Transfer Channels	Clock Source (MHz)	Logic Level
PCI	6602	8 x 32-bit	3	80	TTL
PCIe	6612	8 x 32-bit	8	80	TTL

In standalone chassis with Ethernet or USB connection to host PC:

Bus	Model	Counter/ Timer Channels	Simultaneous High-Speed Transfer Channels	Clock Source (MHz)	Logic Level
PXI	6602	8 x 32-bit	3	80	TTL

In standalone chassis with USB connection to host PC:

Bus	Model	Counter/ Timer Channels	Simultaneous High-Speed Transfer Channels	Clock Source (MHz)	Logic Level
USB	6366	4 x 32-bit	4	100	TTL

Logic I/O Hardware Supported by PLATO

for Test Cycle Synchronisation via Logic Levels

Plug-In Cards for PCs:

Manufacturer	Bus	Model	Input Channels	Output Channels	Logic Level	Opto-Isolated Inputs	Relay Outputs
Advantech	PCI	720	16	16	TTL/DTL	YES – via daughterboard	YES – via daughterboard
Advantech	PCI	1730	16	16	TTL/DTL	YES – via daughterboard	YES – via daughterboard
Advantech	PCIe	1730	16	16	TTL/DTL	YES – via daughterboard	YES – via daughterboard
Advantech	PCI	1751	16	16	TTL/DTL	YES – via daughterboard	YES – via daughterboard

							Current Product
							Legacy Product

for General Communications with Other Systems via Logic Levels

Plug-In Cards for PCs:

Manufacturer	Bus	Model	Input Channels	Output Channels	Input Logic Level	Outputs
Advantech	USB	4761	8	8	Low <2V, High >5V	Relay 2A @ 30Vdc max
National Instruments	USB	6501	24 bi-directional		TTL	Current drive (8.5mA)
National Instruments	PCI	6509	96 bi-directional		5V TTL/CMOS	High current drive (24mA)
National Instruments	PCIe	6509	96 bi-directional		5V TTL/CMOS	High current drive (24mA)

\\Helix\abd\Product Information\TMS\PLATO\Publicity & Sales Aids\Technical Details\PLATO DAQ & Logic I-O Hardware - issue 01.docx

Page 2 of 2