

12-bit CompactPCI Digitizer Selection Table

Agilent model #	Call		
	U1066A	U1066A	U1066A
	DC436	DC438	DC440
Resolution	12 bits	12 bits	12 bits
Channels	2	2	2
Bandwidth	50 MHz	100 MHz	100 and 300 MHz ³⁾
Sample Rate	100 MS/s	200 MS/s	400 MS/s
Memory/ch	4 Mpts	4 Mpts	4 Mpts
Opt. Memory/ch	-	-	-
Impedance	50 Ω	50 Ω	50 Ω
Coupling	DC	DC	AC, DC
BWL	-	35 MHz	35 MHz
HV Protection	XA100 required	XA100 required	XA100 required
External Trigger	●	●	●
Trigger Modes	Edge	Edge	Edge
HRes SR	-	-	
HF In	-	-	
AS Bus			
Ctrl I/O ²⁾			
Seq. Dead Time	< 2000 ns	< 1000 ns	< 1000 ns
Power	< 22 W	< 25 W	< 25 W
Dimensions	cPCI 6U	cPCI 6U	cPCI 6U
Slots	1	1	1

¹⁾ Includes external clock/reference, trigger out and digital I/O.

²⁾ Linux OS, Pentium 4, 1 kpts.

³⁾ Through direct HF input.



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10-bit CompactPCI Digitizer Selection Table

Agilent model #	U1065A		U1065A		U1065A	
	DC222	DC252	DC252	DC282	DC282	DC282
Resolution	10 bits	10 bits	10 bits	10 bits	10 bits	10 bits
Channels	1	2	2	4	4	4
Sample Rate	8 GS/s	4-8 GS/s	4-8 GS/s	2-8 GS/s	2-8 GS/s	2-8 GS/s
Memory/ch	1024 kpts	512-1024 kpts	512-1024 kpts	256-1020 kpts	256-1020 kpts	256-1020 kpts
Opt. Memory/ch	1024 Mpts	512-1024 Mpts	512-1024 Mpts	32-128 Mpts, 256-1024 Mpts	32-128 Mpts, 256-1024 Mpts	32-128 Mpts, 256-1024 Mpts
Front-end ¹⁾	-HF	-STD	-HF	-STD	-HZ	-HZ
Bandwidth	3 GHz	2 GHz	3 GHz	2 GHz	1 GHz/300 MHz	1 GHz/300 MHz
Impedance	50 Ω	50 Ω	50 Ω	50 Ω	50 Ω/1 MΩ	50 Ω/1 MΩ
Coupling	DC	AC, DC	DC	AC, DC	AC, DC	AC, DC
BWL	-	20, 200, 700 MHz	-	20, 200, 700 MHz	20, 200, 700 MHz	20, 200, 700 MHz
HV Protection	-	XA100 required	-	XA100 required	± 300 V (1 MΩ)	± 300 V (1 MΩ)
External Trigger	●	●	●	●	●	●
Trigger Modes	Edge, HF Spike Stretcher, Window	Edge, HF Spike Stretcher, Window	Edge, HF Spike Stretcher, Window	Edge, HF Spike Stretcher, Window	Edge, HF Spike Stretcher, Window	Edge, HF Spike Stretcher, Window
HRes SR	-	-	-	-	-	-
HF In		-		-	-	-
AS Bus 2						
Ctrl I/O ²⁾						
Seq. Dead Time	< 350 ns	< 350 ns	< 350 ns	< 350 ns	< 350 ns	< 350 ns
Power	< 45 W	< 50 W	< 45 W	< 50 W	< 50 W	< 50 W
Dimensions	cPCI 6U	cPCI 6U	cPCI 6U	cPCI 6U	cPCI 6U	cPCI 6U
Slots	1	1	1	1	1	1

¹⁾ A front-end option must be selected with each base module at time of order.

²⁾ Includes external clock/reference, trigger out and digital I/O.



8-bit CompactPCI Digitizer Selection Table

Agilent model #	U1064A	U1064A	U1063A	U1063A	U1064A	U1064A
	DC211	DC241	DC265	DC270	DC271	DC271A
Resolution	8 bits	8 bits	8 bits	8 bits	8 bits	8 bits
Channels	1	2	4	4	4	4
Bandwidth	1 GHz	1 GHz	150 MHz	250 MHz	1 GHz	1 GHz
Sample Rate	4 GS/s	2 - 4 GS/s	500 MS/s	1 GS/s	1 - 4 GS/s	1 - 4 GS/s
Memory/ch	512 kpts	256 - 512 kpts	128 kpts	128 kpts	128 - 512 kpts	128 - 512 kpts
Opt. Memory/ch	32 Mpts	16 - 32 Mpts	2 Mpts	2 Mpts	8 - 32 Mpts	8 - 32 Mpts
Impedance	50 Ω	50 Ω	50 Ω / 1 MΩ	50 Ω / 1 MΩ	50 Ω	50 Ω / 1 MΩ
Coupling	AC, DC	AC, DC	AC, DC	AC, DC	AC, DC	AC, DC
BWL	20, 200, 700 MHz	20, 200, 700 MHz	-	-	20, 200, 700 MHz	20, 200, 700 MHz
HV Protection	XA100 required	XA100 required	-	-	XA100 required	± 300 V (1 MΩ)
External Trigger	●	●	●	●	●	●
Trigger Modes	Edge, Window, HF	Edge, Window, HF	Edge	Edge	Edge, Window, HF	Edge, Window, HF
HRes SR	-	-	-	-	-	-
HF In	-	-	-	-	-	-
AS Bus						
Ctrl I/O¹⁾			³⁾	³⁾		
Seq. Dead Time	< 800 ns	< 800 ns	< 800 ns	< 800 ns	< 800 ns	< 800 ns
Power	< 40 W	< 40 W	< 40 W	< 40 W	< 40 W	< 40 W
Dimensions	cPCI 6U	cPCI 6U	cPCI 6U	cPCI 6U	cPCI 6U	cPCI 6U
Slots	1	1	1	1	1	1

¹⁾ Includes external clock/reference, trigger out and digital I/O.

²⁾ Linux OS, Pentium 4, 1 kpts.

³⁾ External clock/reference only.



8-bit and 10-bit PXI Digitizer Selection Table

Agilent model #	U1091A	U1061A	U1061A	U1062A	U1062A
	DC110	DC135	DC140	DC122	DC152
Resolution	8 bits	8 bits	8 bits	10 bits	10 bits
Channels	1	2	2	1	2
Bandwidth	250 MHz	500 MHz	1 GHz	up to 3 GHz ³⁾	2 GHz
Sample Rate	1 GS/s	0,5 - 1 GS/s	1 - 2 GS/s	4 GS/s	2 - 4 GS/s
Memory/ch	128 kpts	64 - 128 kpts	128 - 256 kpts	512 kpts	256 - 512 kpts
Opt. Memory/ch	2 Mpts	2 - 4 Mpts	8 - 16 Mpts	-	-
Impedance	50 Ω / 1 MΩ	50 Ω	50 Ω	50 Ω	50 Ω
Coupling	AC, DC	AC, DC	AC, DC	AC, DC ³⁾	AC, DC
BWL	-	20 MHz, 200 MHz	20, 200, 700 MHz	20, 200, 700 MHz	20, 200, 700 MHz
HV Protection	100 V (1 MΩ)	XA100 required	XA100 required	XA100 required	XA100 required
External Trigger	●	●	●	●	●
Trigger Modes	Edge	Edge, Window	Edge, Window	Edge, HF, Spike Stretcher, Window	Edge, HF, Spike Stretcher, Window
HRes SR	-	-	-	-	-
HF In	-	-	-	³⁾	-
AS Bus		-	-		
AS Bus 2		-	-	-	
Ctrl I/O¹⁾	-				
Seq. Dead Time	< 500 ns	< 800 ns	< 1100 ns	350 ns	350 ns
Power	< 15 W	< 13 W	< 14 W	< 25 W	< 25 W
Dimensions	PXI 3U	PXI 3U	PXI 3U	PXI 3U	PXI 3U
Slots	1	1	1	1	1

Replaced by DC135






¹⁾ Includes external clock/reference, trigger out and digital I/O.

²⁾ Linux OS, Pentium 4, 1 kpts.

³⁾ Dependant on front-end option (-Std, -Hz)



12-bit PCI Digitizer Selection Table





Agilent model #	U1070A	U1070A	U1070A
	DP306	DP308	DP310
Resolution	12 bits	12 bits	12 bits
Channels	1	1	1
Bandwidth	50 MHz	100 MHz	100 and 300 MHz ³⁾
Sample Rate	100 MS/s	200 MS/s	400 MS/s
Memory/ch	4 Mpts	4 Mpts	4 Mpts
Opt. Memory/ch	-	-	-
Impedance	50 Ω	50 Ω	50 Ω
Coupling	DC	DC	AC, DC
BWL	-	35 MHz	35 MHz
HV Protection	XA100 required	XA100 required	XA100 required
External Trigger	●	●	●
Trigger Modes	Edge	Edge	Edge
HRes SR	-	-	
HF In	-	-	
AS Bus	-	-	-
Ctrl I/O¹⁾			
Seq. Dead Time	< 2000 ns	< 1000 ns	< 1000 ns
Power	< 15 W	< 17 W	< 17 W
Dimensions	PCI long card	PCI long card	PCI long card
Slots	1	1	1

¹⁾ Includes external clock/reference, trigger out and digital I/O.

²⁾ Linux OS, Pentium 4, 1 kpts.

³⁾ Through direct HF input.

**8-bit PCI Digitizer Selection Table**

Agilent model #	U1067A	U1067A	U1068A	U1068A	U1069A	U1069A	U1069A	U1071A
	DP105	DP110	DP210	DP211	DP214	DP235	DP240	DP1400
Resolution	8 bits	8 bits	8 bits	8 bits	8 bits	8 bits	8 bits	8 bits
Channels	1	1	1	Dual input	1	2	2	2
Bandwidth	150 MHz	250 MHz	500 MHz	500 MHz	1 GHz	500 MHz	1 GHz	1 GHz
Sample Rate	500 MS/s	1 GS/s	2 GS/s	2 GS/s	2 GS/s	0,5 - 1 GS/s	1 - 2 GS/s	1 - 2 GS/s
Memory/ch	128 kpts	128 kpts	256 kpts	256 kpts	256 kpts	128 - 256 kpts	128 - 256 kpts	128 - 256 kpts
Opt. Memory/ch	2 Mpts	2 or 8 Mpts	16 Mpts	-	16 Mpts	2 - 4 Mpts	8 - 16 Mpts	-
Impedance	50 Ω / 1 MΩ	50 Ω / 1 MΩ	50 Ω / 1 MΩ	50 Ω	50 Ω	50 Ω	50 Ω	50 Ω
Coupling	AC, DC	AC, DC	AC, DC	AC, DC	AC, DC	AC, DC	AC, DC	AC, DC
BWL	-	-	-	25 MHz	20, 200, 700 MHz	20, 200 MHz	20, 200, 700 MHz	20, 200, 700 MHz
HV Protection	-	-	-	XA100 required	XA100 required	XA100 required	XA100 required	XA100 required
External Trigger	●	●	●	●	●	●	●	●
Trigger Modes	Edge	Edge	Edge	Edge	Edge, Window, HF	Edge, Window, HF	Edge, Window, HF	Edge, Window, HF
HRes SR	-	-	-	-	-	-	-	-
HF In	-	-	-	-	-	-	-	-
AS Bus 2	-	-	-	-	-	-	-	
Ctrl I/O¹⁾	● ³⁾	● ³⁾	● ³⁾	● ³⁾				
Seq. Dead Time	< 800 ns	< 800 ns	< 800 ns	< 800 ns	< 800 ns	< 1100 ns	< 800 ns	< 350 ns
Power	< 15 W	< 15 W	< 20 W	< 20 W	< 22 W	< 24 W	< 24 W	< 15 W
Dimensions	PCI short card	PCI short card	PCI long card	PCI long card	PCI long card	PCI long card	PCI long card	PCI short card
Slots	1	1	1	1	1	1	1	1

¹⁾ Includes external clock/reference, trigger out and digital I/O.

²⁾ Linux OS, Pentium 4, 1 kpts.

³⁾ External clock/reference only.

8-bit Analyzer and Streamer Analyzer Selection Table

Agilent model #	U1080A	U1080A	U1082A	U1082A	U1080A	U1080A
	AC240	AC210	AP240	AP235	SC240	SC210
Resolution	8 bits	8 bits	8 bits	8 bits	8 bits	8 bits
Channels	2	1	2	2	2	1
Sample Rate	1 - 2 GS/s	1 GS/s	1 - 2 GS/s	0.5 - 1 GS/s	1 - 2 GS/s	1 GS/s
Processing Memory¹⁾	7 Mbits	7 Mbits	6 MB	6 MB	7 Mbits	7 Mbits
Opt. Processing Memory¹⁾	512 MB	512 MB	24 MB	24 MB	512 MB	512 MB
Bandwidth	1 GHz	1 GHz	1 GHz	500 GHz	1 GHz	1 GHz
Impedance	50 Ω	50 Ω	50 Ω	50 Ω	50 Ω	50 Ω
Coupling	AC, DC	AC, DC	AC, DC	AC, DC	AC, DC	AC, DC
BWL	20, 200, 700 MHz	20, 200, 700 MHz	20, 200, 700 MHz	20, 200, 700 MHz	20, 200, 700 MHz	20, 200, 700 MHz
External Trigger	•	•	•	•	•	•
Trigger Modes	Edge, HF, Window	Edge, HF, Window	Edge, HF, Window	Edge, HF, Window	Edge, HF, Window	Edge, HF, Window
On-board FPGA	Xilinx Virtex II Pro, XC2VP70	Xilinx Virtex II Pro, XC2VP70	Xilinx Virtex II, XC2V3000	Xilinx Virtex II, XC2V3000	Xilinx Virtex II Pro, XC2VP70	Xilinx Virtex II Pro, XC2VP70
Firmware Options²⁾	–	–	SSR, Avgr, Peak ^{TDC}	SSR, Avgr, Peak ^{TDC}	–	–
Firmware Development Kit³⁾	•	•	–	–	•	•
Optical Data Link	–	–	–	–		
DPU Ctrl DPU Ctrl²						
ASBus			–	–		
Ctrl I/O						
Max. Power Consumption⁴⁾	~ 38 W	~ 21 W	~ 20 - 43 W	~ 20 - 43 W	~ 34 W	~ 27 W
Dimensions	cPCI 6U	cPCI 6U	PCI long card	PCI long card	cPCI 6U	cPCI 6U
Slots	1	1	1	1	1	1

1) Available data point capacity of processing memory varies depending on the data handling by the applied firmware
 2) At least one firmware option must be ordered with each signal analyzer card
 3) Contact Acqiris for more details
 4) Power consumption varies depending on the data handling by the applied firmware



Acqiris Digitizer: Maximum Segments

The table below summarizes the characteristics discussed in the sections that follow:

Source: User Manual: Family of 12-bit Digitizers

12 BIT	Model	Max. Sampling Rate	Max. Converters / channel	Default Memory points/channel	Default Maximum Segments	Maximum Optional Memory/channel	Maximum Segments	SR Adjustment Granularity	Minimum Deadtime	SFDR	SNR
	DC440	420 MS/s	2	64K	100	4M	8000	< 0.25 %	1 μs	80 dB	>65dB
DC438	200 MS/s	2	64K	100	4M	8000	< 10 %	1 μs	>75dB	>62dB	
DC436	100 MS/s	1	64K	100	4M	8000	< 50 %	2 μs	>75dB	>62dB	
DP310	420 MS/s	2	64K	100	4M	8000	< 0.25 %	1 μs	78 dB	>64dB	
DP308	200 MS/s	2	32K	100	4M	8000	< 10 %	1 μs	73 dB	>61dB	
DP306	100 MS/s	1	32K	100	4M	8000	< 50 %	2 μs	78 dB	>61dB	

12 bit products are now offered with 4M points memory standard

10 BIT	Model Agilent #	Max. Sampling Rate	Max. CONVERTERS PER CHANNEL/ CHANNELS	Default Memory points/ channel	Maximum Optional Memory points/ channel	Maximum Segments
	DC122 U1062A	4 GS/s	1 / 1	512K	--	1K
	DC152 U1062A	4 GS/s	2 / 2	256K	--	1K
	DC222 U1065A	8 GS/s	1 / 1	1024K	1G	125K
	DC252 U1065A	8 GS/s	2 / 2	512K	512M	125K
	DC282 U1065A	8 GS/s	4 / 4	256K	256M	125K

SFDR & SNR for 10 bit cards depends on front end configuration and input frequency. Check data sheets.

Source: User Manual: Family of 10-bit Digitizers



3.3. Data Acquisition

The table below summarizes the characteristics discussed in the sections that follow:

Acqiris Digitizers:
Maximum Segments

8 BIT




Model	Max. Sampling Rate	Max. CONVERTERS PER CHANNEL/ CHANNELS	Default Memory points/ channel	Maximum Optional Memory/ channel	Maximum Segments	TTI Resolution	Timebase Accuracy	External Clock Max./ Min. Thresh.
DP105	500 MS/s	1 / 1	128K	2M	4000	80 ps	50 ppm	± 2 V
DP106	500 MS/s	1 / 1	128K	2M	4000	80 ps	50 ppm	± 2 V
DP110	1 GS/s	1 / 1	128K	8M	8000	80 ps	50 ppm	± 2 V
DP111	1 GS/s	1 / 1	128K	2M	4000	5 ps	2 ppm	± 3 V
DP210	2 GS/s	1 / 1	256K	16M	8000	5 ps	2 ppm	± 3 V
DP211	2 GS/s	1 / 1*	256K	16M	8000	5 ps	2 ppm	± 3 V
DP212	2 GS/s	1 / 1	256K	16M	8000	5 ps	2 ppm	± 3 V
DP214	2 GS/s	1 / 1	256K	16M	8000	5 ps	2 ppm	± 2 V
DP235	1 GS/s	2 / 2	128K	2M	4000	5 ps	2 ppm	± 2 V
DP240	2 GS/s	2 / 2	128K	8M	8000	5 ps	2 ppm	± 2 V
DP1400	2 GS/s	2 / 2	128K	NA	1000	~13ps	2 ppm	AC 0 V
DC110	1 GS/s	1 / 1	128K	8M	8000	5 ps	50 ppm	± 2 V
DC135	1 GS/s	2 / 2	128K	2M	4000	5 ps	2 ppm	± 2 V
DC140	2 GS/s	2 / 2	128K	8M	8000	5 ps	2 ppm	± 2 V
DC211	4 GS/s	1 / 1	512K	32M	8000	5 ps	2 ppm	± 2 V
DC211A	4 GS/s	1 / 1	128K	8M	8000	5 ps	2 ppm	± 2 V
DC240	2 GS/s	1 / 2	256K	16M	8000	5 ps	2 ppm	± 3 V
DC241	4 GS/s	2 / 2	256K	16M	8000	5 ps	2 ppm	± 2 V
DC241A	4 GS/s	2 / 2	128K	8M	8000	5 ps	2 ppm	± 2 V
DC265	500 MS/s	1 / 4	128K	2M	4000	5 ps	2 ppm	± 2 V
DC270	1 GS/s	1 / 4	128K	8M	8000	5 ps	2 ppm	± 2 V
DC271	4 GS/s	4 / 4	128K	8M	8000	5 ps	2 ppm	± 2 V
DC271A	4 GS/s	4 / 4	128K	8M	8000	5 ps	2 ppm	± 2 V
DC271AR	2 GS/s	2 / 2	128K	8M	8000	5 ps	2 ppm	± 2 V

Fixed Threshold

Source:
User Manual: Family of 8-bit Digitizers

MAQbox Selection Table

Agilent model #	U1056	U1056	U1056
	MAQbox3000	MAQbox5000	MAQbox8000
			
Crate	3 slots	5 slots	8 slots
Handle and feet	•	•	•
Power supply	400 W	400 W	600 W
AcqirisMAQS software	•	•	•
Processor	•	•	•
Free slots¹⁾	2	4	7

Agilent model #	U1056	U1056	U1056
	MAQlink3000	MAQlink5000	MAQlink8000
			
Crate	3 slots	5 slots	8 slots
Handle and feet	•	•	•
Power supply	400 W	400 W	600 W
AcqirisMAQS software	•	•	•
PC Interface	•	•	•
Free slots¹⁾	2	4	7

¹⁾ The controller slot is occupied by the PC interface.