

Cable Selection

Cable Selection Guide for NI 1424 and NI 1422 and Digital Cameras

Consult ni.com/imaq for updates to this list.

Camera Manufacturer	Model	Scan Type	Spatial Resolution	Rate	Pixel Depth	Color	1424	1422	Part Number
Basler	L120-1K	Line	1024x1	18.8 kHz	8	No	✓	✓	186690-02
	L120-2K	Line	2048x1	9.6 kHz	8	No	✓	✓	186690-02
	L130-1K	Line	1024x1	30.2 kHz	8	No	✓	✓	186690-02
	L130-2K	Line	2048x1	15.3 kHz	8	No	✓	✓	186690-02
	L140-1K	Line	1024x1	36 kHz	8	No	✓	✓	186690-02
	L140-2K	Line	2048x1	18 kHz	8	No	✓	✓	186690-02
	L160-1K	Line	1024x1	58 kHz	8	No	✓	✓	186690-02
	L160-2K	Line	2048x1	29.5 kHz	8	No	✓	✓	186690-02
	L220	Line	4096x1	4.8 kHz	8	No	✓	✓	186690-02
	L230	Line	4096x1	7.4 kHz	8	No	✓	✓	186690-02
	L240	Line	4096x1	9.6 kHz	8	No	✓	✓	186690-02
	A113	Line	1300x1030	11.75 f/s	8	No	✓	✓	186690-02
	A113P	Line	1300x1030	11.75 f/s	8	No	✓	✓	186690-02
	A113C	Line	1300x1030	11.75 f/s	8	Yes	✓	✓	186690-02
	A113CP	Line	1300x1030	11.75 f/s	8	Yes	✓	✓	186690-02
Cohu	4110	Area	739x484	30 f/s	8	No	✓	✓	184741-02
	DSPE-2000	Area	752x582	25 f/s	24	Yes	✓	-	185431-02
	DSPX-2000	Area	768x494	30 f/s	24	Yes	✓	-	185431-02
Dalsa	CA-D1-0064A	Area	64x64	2900 f/s	8	No	✓	✓	185488-02
	CA-D1-0128A	Area	128x128	830 f/s	8	No	✓	✓	185488-02
	CA-D1-0256A	Area	256x256	220 f/s	8	No	✓	✓	185488-02
	CL-C3-0256A	Line	256x1	98 kHz	8	No	✓	✓	185061-02
	CL-C3-0256N	Line	256x1	64 kHz	8	No	✓	✓	185061-02
	CL-C3-0512A	Line	512x1	53.3 kHz	8	No	✓	✓	185061-02
	CL-C3-0512N	Line	512x1	36 kHz	8	No	✓	✓	185061-02
	CL-C3-1728A	Line	1728x1	16.8 kHz	8	No	✓	✓	185061-02
	CL-C3-1728N	Line	1728x1	11 kHz	8	No	✓	✓	185061-02
	CL-C4-1024A	Line	1024x1	28 kHz	8	No	✓	✓	185061-02
	CL-C4-1024N	Line	1024x1	19 kHz	8	No	✓	✓	185061-02
	CL-C4-2048A	Line	2048x1	14.3 kHz	8	No	✓	✓	185061-02
	CL-C4-2048N	Line	2048x1	9.5 kHz	8	No	✓	✓	185061-02
	CL-C5-2048A	Line	2048x1	14.3 kHz	8	No	✓	✓	185061-02
	CL-C7-3456A	Line	3456x1	8.5 kHz	8	No	✓	✓	185061-02
	CL-C7-3456N	Line	3456x1	5.7 kHz	8	No	✓	✓	185061-02
	CL-C7-4096A	Line	4096x1	7.2 kHz	8	No	✓	✓	185061-02
	CL-C7-4096N	Line	4096x1	4.8 kHz	8	No	✓	✓	185061-02
	CL-C6-2048A	Line	2048x1	7.2 kHz	8	No	✓	✓	185061-02
	CL-C8-6000A	Line	6000x1	4.9 kHz	8	No	✓	✓	185061-02
	CL-C8-6000N	Line	6000x1	3.2 kHz	8	No	✓	✓	185061-02
	CL-E1-0512A	Line-TDI	512x1	23 kHz	8	No	✓	✓	185061-02
	CL-E1-1024A	Line-TDI	1024x1	13 kHz	8	No	✓	✓	185061-02
	CL-E1-2048A	Line-TDI	2048x1	6.9 kHz	8	No	✓	✓	185061-02
	CL-F2-0512A	Line-TDI	512x1	23 kHz	8	No	✓	✓	185061-02
	CL-F2-1024A	Line-TDI	1024x1	13 kHz	8	No	✓	✓	185061-02
	CL-F2-2048A	Line-TDI	2048x1	6.9 kHz	8	No	✓	✓	185061-02
	CL-E2-0512A	Line-TDI	512x1	31.2 kHz	8	No	✓	✓	185061-02
	CL-E2-1024A	Line-TDI	1024x1	17.3 kHz	8	No	✓	✓	185061-02
	CL-E2-2048A	Line-TDI	2048x1	8.9 kHz	8	No	✓	✓	185061-02
	CL-CB-0512A	Line	512x1	34.5 kHz	8	No	✓	✓	185061-02
	CL-CB-1024A	Line	1024x1	18.3 kHz	8	No	✓	✓	185061-02
	CL-CB-2048A	Line	2048x1	9.4 kHz	8	No	✓	✓	185061-02
	CL-P1-0512	Line	512x1	79 kHz	8	No	✓	✓	185788-02
	CL-P1-1024	Line	1024x1	43 kHz	8	No	✓	-	185788-02

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	CL-P1-2048	Line	2048x1	23 kHz	8	No	✓	–	185788-02
	CL-P1-4096	Line	4096x1	11 kHz	8	No	✓	–	185788-02
	CT-P1-1024	Line	1024x1	79 kHz	8	No	✓	✓	185788-02
	CT-P1-2048	Line	2048x1	43 kHz	8	No	✓	✓	185788-02
	CT-P1-4096	Line	4096x1	23 kHz	8	No	✓	✓	185788-02
	SP-11-05h40	Line	512x1	70 kHz	8	No	✓	✓	777915-01 ¹
	SP-11-01k40	Line	1024x1	36 kHz	8	No	✓	✓	777915-01 ¹
	SP-11-02k40	Line	2048x1	18 kHz	8	No	✓	✓	777915-01 ¹
	SP-11-05h30	Line	512x1	52 KHz	8	No	✓	✓	777915-01 ¹
	SP-11-01k30	Line	1024x1	27 kHz	8	No	✓	✓	777915-01 ¹
	SP-11-02k30	Line	2048x1	14 kHz	8	No	✓	✓	777915-01 ¹
	SP-12-05H40	Line	512x1	70 kHz	8	No	✓	✓	777915-01
	SP-12-01k40	Line	1024x1	36kHz	8	No	✓	✓	777915-01
	SP-12-02k40	Line	2048x1	18kHz	8	No	✓	✓	777915-01
	SP-12-05h30	Line	512x1	52kHz	8	No	✓	✓	777915-01
	SP-12-01k30	Line	1024x1	27kHz	8	No	✓	✓	777915-01
	SP-12-02k30	Line	2048x1	14kHz	8	No	✓	✓	777915-01
Hamamatsu	ORCA	Area	1280x1024	9 f/s	12	No	✓	✓	185232-02
	C7300	Area	1280x1024	13 f/s	12	No	✓	✓	185232-02
	Orca II	Area	1280x1024	10f/s	14	No	✓	✓	185232-02
Indigo Systems	Merlin	Area	328x240	60f/s	12	No	✓	✓	777915-01 ¹
Roper Scientific	1.4i	Area	1317x1035	6.9 f/s	8	No	✓	✓	185275-02
	1.6i	Area	1534x1024	5.5 f/s	10	No	✓	✓	185275-02
	16.8i	Area	4096x4096	0.5 f/s	8	No	✓	✓	185275-02
	4.2i	Area	2029x2044	2.1 f/s	8/10	No	✓	✓	185275-02
	6.3i	Area	3072x2048	1.2 f/s	10	No	✓	✓	185275-02
	ES 1.0	Area	1008x1018	30 f/s	8	No	✓	✓	185275-02
	ES 1.0/10 bit	Area	1008x1018	30 f/s	10	No	✓	–	185275-02
	ES 310	Area	640x480	85 f/s	8	No	✓	✓	185275-02
Pulnix	TM-1001	Area	1024x1024	15 f/s	8	No	✓	✓	184742-02
	TM-1010	Area	1024x1024	30 f/s	10	No	✓	✓	184750-02
	TM-1020	Area	1008x1018	15f/s	8	No	✓	✓	777915-01 ^{1,2}
	TM-1040	Area	1008x1018	30 f/s	10	No	✓	✓	184750-02
	TM-1300	Area	1300x1030	12 f/s	12	No	✓	✓	777915-01 ^{1,2}
	TM-6710	Area	640x480	120 f/s	8	No	✓	✓	777915-01 ¹
	TM-9701	Area	768x484	30 f/s	8	No	✓	✓	184742-02
Sensors Unlimited	SU320	Area	320x240	variable	12	No	✓	✓	777915-01 ^{1,2}

Other Camera Companies

¹Requires wiring to the IMAQ SCB-100 terminal block.

²No control with onboard serial port.

³Cable available from camera vendor.

IMAQ SCB-100

The IMAQ SCB-100 is a cable and terminal block for interfacing digital cameras to the 1424 or 1422 series boards in cases where a dedicated cable is not available. All control and data lines are available at the screw terminal block for easy connectivity.



Figure 1. IMAQ SCB-100

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Digital Camera Multiplexer

Lower the cost of your digital imaging system by using the digital camera multiplexer to acquire images from up to four digital cameras with one IMAQ board. To simultaneously acquire images use multiple cameras and multiple IMAQ boards. The digital camera multiplexer includes a 2 m cable for connecting the multiplexer to the IMAQ 1424 or 1422 boards.

Digital Triggering Accessory for Digital Camera Cables

The IMAQ D2504-01 has four BNC connectors for digital I/O trigger lines. For use with NI digital camera cables.



Figure 2. Extension Cable for Digital Cameras

IMAQ A6822

The IMAQ-A6822 Box provides 22 BNC connectors to all video signals (VIDEO0, VIDEO1, VIDEO2, and VIDEO3), the external digital I/O lines and triggers, and external synchronization signals. The IMAQ-A6822 includes a 1 m cable for connecting to the IMAQ 1409.

BNC

The external BNC connector is connected to Video 0 input. This BNC input connects to a single-ended video source. The IMAQ-BNC-1 is a single BNC cable that can be used with IMAQ 1408 and 1409 Series boards.

DAQ and Motion Synchronization

Synchronize timing and I/O between IMAQ, DAQ, and motion hardware with NI RTSI cables.

NI 1408 Cables

The IMAQ-A2504-1 has four BNC connectors – three inputs for video and one input for digital I/O. The IMAQ-A2514-1 has 14 BNC connectors for all video signals, digital I/O lines, and external synchronization lines.

Ordering Information

Digital IMAQ Cables

IMAQ SCB-100777915-01

Digital Camera Extension Cables

100 pin to 100 pin extension cable

2m184743-02

4m184743-04

Digital Trigger Accessory

IMAQ D2504-1 (1m)185298-01

Digital Camera Multiplexer778335-01

Camera Link

Camera Link Cable (2 m)187676-01

Digital Trigger Accessory (1 m)187663-01

Analog IMAQ Cables

IMAQ-A6822 (1 m)778135-01

IMAQ-BNC-1 (2 m)183882-02

RTSI Bus Cables

2 boards776249-02

3 boards776249-03

4 boards776249-04

5 boards776249-05

Previous Generation Products

Analog Cables for the NI 1408 Series

IMAQ-A2504-1 (1 m)183836-01

IMAQ-A2514-1 (1 m)184005-01