

4-channel multistandard frame grabber - mvSIGMA-SQ

Discontinued



- 4 channel multistandard frame grabber
- 16 CVBS/gray inputs
- 16 digital-In, 8 digital-Out
- Standard PCI
- Ideal solution for multi channel acquisition or split screen display in surveillance applications

The mvSIGMA-SQ is a four channel frame grabber for standard color or gray scale video signals. The 16 video inputs can be switched independently to each of the four channels. This makes it a product optimally suited for surveillance applications, either for live display of multiple inputs in parallel or by its ability to capture up to four video signals at the same time. The digital I/Os match the need to connect alarm input and output devices to the system. The optional watchdog ensures the reliability of the application by the ability to restart a system.

/* */

- Hardware

- Software
- Comparison mvDELTA / mvSIGMA
- Applications
- Downloads

- 16 gray / CVBS or 4 x YC video inputs
- Each channel equals one mvDELTA, but with 16 input analog MUX
- Automatic or fixed gain
- Scaler and color space conversion
- 16/8 digital I/O signals

- 4 parallel, independent acquisition channels
- Free input assignment to any channel
- Hardware assisted fast input switching
- Local PCI bus frees load on system PCI
- Opt. watchdog for automatic restart of the complete system

- [mvIMPACT Acquire](#) drivers for Windows® and Linux® (→)

Signal input

Family		mvDELTA		mvSIGMA	
Product		(Cinch)	BNC	SLC	SQ
Inputs	CVBS	4	4	4	16
	YC	1 + 3x CVBS	-	4	4
	Gray/VBS	4	4	4	16
	RGB	-	-	-	-
	Digital	-	-	-	-
Parallel acquisition inputs	Number	1	1	1	4
	RGB/ Multispectral	-	-	-	-
	Synchronous / asynchronous	-/-	-/-	-/-	yes / yes
A/D converter		8 bit	8 bit	8 bit	8 bit
Standards	CCIR-601, RS-170	yes	yes	yes	yes
	Variable/ Slow Scan	-	-	-	-
	PAL, NTSC, SECAM	yes	yes	yes	yes
	Low pass filter (analog) switchable	-	-	-	-
Restart / Reset		-	-	-	-
Sensor geometry	Area	yes	yes	yes	yes
	Line	-	-	-	-
Termination	Ohm / switchable	75 / no	75 / no	75 / no	75 / no optional: yes
Coupling / Level		AC	AC	AC	AC
Offset		-	-	-	-
Analog Gain	Manual / AGC	yes / yes	yes / yes	yes / yes	yes / yes
Plug connector		4 x Cinch + 1 x Mini-DIN4	4 x BNC	D-Sub 26 + 1 x Cinch + 1 x Mini-DIN4	2x D-Sub 26

Resolution

Family		mvDELTA		mvSIGMA	
Product		(Cinch)	BNC	SLC	SQ
Digitalization	Pixel H x V	768 x 576 (50 Hz)	768 x 576 (50 Hz)	768 x 576 (50 Hz)	768 x 576 (50 Hz)
		640 x 480 (60 Hz)	640 x 480 (60 Hz)	640 x 480 (60 Hz)	640 x 480 (60 Hz)
Memory	Pixel H x V	0..768 x 0..576 (50 Hz)	0..768 x 0..576 (50 Hz)	0..768 x 0..576 (50 Hz)	0..768 x 0..576 (50 Hz)
		0..640 x 0..480 (60 Hz)	0..640 x 0..480 (60 Hz)	0..640 x 0..480 (60 Hz)	0..640 x 0..480 (60 Hz)

Pixel clock

Family		mvDELTA		mvSIGMA	
Product		(Cinch)	BNC	SLC	SQ
Frequency	with 50 Hz	17.7 MHz	17.7 MHz	17.7 MHz	17.7 MHz
	with 60 Hz	14.3 MHz	14.3 MHz	14.3 MHz	14.3 MHz

Digital ports

Family		mvDELTA		mvSIGMA	
Product		(Cinch)	BNC	SLC	SQ
Inputs	Ext. pixel clock	-	-	-	-

Outputs	HD, VD	-	-	1	-
	Trigger	-	-	-	4 = 1 DigIn trigger capable ja
	Threshold programmable	-	-	-	-
	General inputs	-	-	4	16
	TTL outputs	-	-	4	-
	Relay	-	-	-	-
	Highside drivers	-	-	-	8 (12 V) or ext. VDD > 12 V

Image processing processor

Family	mvDELTA		mvSIGMA	
Product	(Cinch)	BNC	SLC	SQ
Name	-	-	-	-

Bus

Family	mvDELTA		mvSIGMA	
Product	(Cinch)	BNC	SLC	SQ
System	PCI 32 bit / 33 MHz rev. 2.1	PCI 32 bit / 33 MHz rev. 2.1	PCI 32 bit / 33 MHz rev. 2.1	PCI 32 bit / 33 MHz rev. 2.1
Signal levell	5V	5V	5V	3.3V or 5V
Transfer	DMA, 0-wait bursts, max. 132 MB/s	DMA, 0-wait bursts, max. 132 MB/s	DMA, 0-wait bursts, max. 132 MB/s	DMA, 0-wait bursts, max. 132 MB/s
CPCI version	-	-	-	-

Output processing

Family		mvDELTA		mvSIGMA	
Product		(Cinch)	BNC	SLC	SQ
Scaling	only down-scaling max. 1:16	yes	yes	yes	yes
Filtering	2,3,4 or 5 tap vertical filter	yes	yes	yes	yes
Pixel formats	RGB (8 / 15 / 16 / 24 / 32 bit)	yes	yes	yes	yes
	YC (16 bit planar / packed)	yes	yes	yes	yes
	GRAY (8 bit)	yes	yes	yes	yes

Video output

Family		mvDELTA		mvSIGMA	
Product		(Cinch)	BNC	SLC	SQ
Signal	RGB	-	-	-	-
	CVBS / YUV	-	-	yes (select. input signal)	-

Sync output

Family	mvDELTA	mvSIGMA
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Product Signal	(Cinch)	BNC	SLC	SQ
	-	-	-	-

Camera power supply

Family		mvDELTA		mvSIGMA
Product		(Cinch)	BNC	SLC
Via PCI	12V	-	-	700mA
Via additional power plug	12V	-	-	1.5A
				SQ
				700mA
				1.5A

Power requirements

Family		mvDELTA		mvSIGMA
Product		(Cinch)	BNC	SLC
PCI	5V	210mA	210mA	300mA
	12V	-	-	50mA
				SQ
				1.5A
				200mA

Dimensions

Family		mvDELTA		mvSIGMA
Product		(Cinch)	BNC	SLC
Board	Length (mm)	123	123	125
	Width (mm)	95	95	76
				SQ
				150
				106

Ambient conditions

Family	mvDELTA		mvSIGMA	
Product	(Cinch)	BNC	SLC	SQ
Permissible ambient temperature	0 .. 50 °C	0 .. 50 °C	0 .. 50 °C	0 .. 50 °C
Permissible storage temperature	-20 .. 70 °C	-20 .. 70 °C	-20 .. 70 °C	-20 .. 70 °C
Relative humidity	10-90%, non-condensing	10-90%, non-condensing	10-90%, non-condensing	10-90%, non-condensing

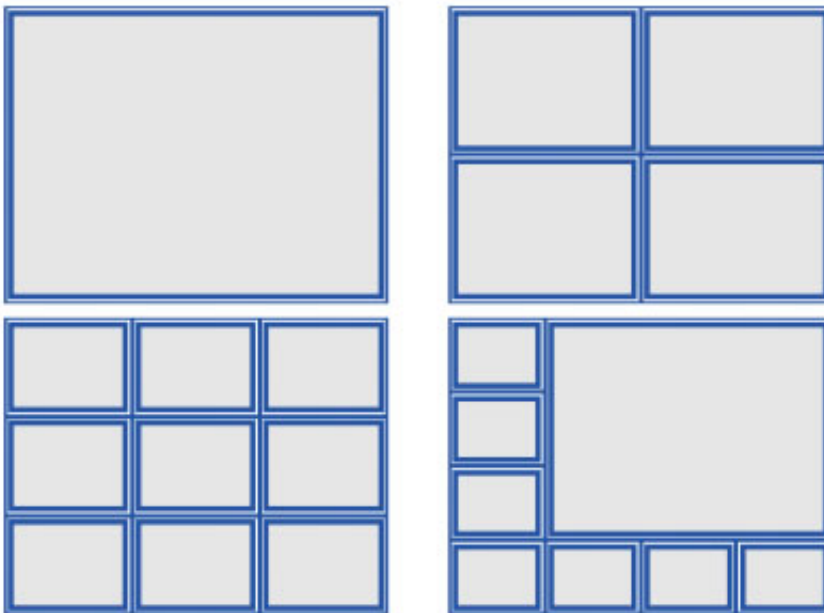
Software

Family		mvDELTA		mvSIGMA	
Product		(Cinch)	BNC	SLC	SQ
Drivers	Windows®	XP / Vista / 7 (32 bit / 64 bit)	XP / Vista / 7 (32 bit / 64 bit)	XP / Vista / 7 (32 bit / 64 bit)	XP / Vista / 7 (32 bit / 64 bit)
	Linux®	yes	yes	yes	yes
	Twain	yes	yes	yes	yes

All data refer to the current revision.

- Simultaneous capture of multiple cameras
- Visualization

- Fast input switching
- Live split screen display



Split screen samples

Drivers and applications for Windows 7, 8.1 (mvIMPACT Acquire)

Since version 2.10.1 of mvIMPACT Acquire the "Merge Modules for mvIMPACT Acquire" are available as a separate download.

For this reason the installation packages are smaller now. The Merge Modules are needed for private setup routines, which shall include mvIMPACT Acquire drivers. More details are available in the [mvIMPACT Acquire manuals](#).

 [mvDELTA_mvSIGMA_x86_2.36.0.msi](#) | 45,852.0 kB

mvDELTA / mvSIGMA 32 Bit Windows (7, 8.1, 10)

 [mvDELTA_mvSIGMA_x86_64_2.36.0.msi](#) | 73,020.0 kB

mvDELTA / mvSIGMA 64 Bit Windows (7, 8.1, 10)

Ab Version 2.5.0 ist der Treiber nicht mehr WHQL zertifiziert / Since version 2.5.0, the driver is not WHQL certified anymore

 [mvIMPACT_Acquire.history](#) | 882.5 kB

mvIMPACT Acquire History-Datei / mvIMPACT Acquire history file

Older driver versions

To be able to watch or download the drivers, you have to be [registered](#) or [logged in](#).

Drivers and applications for Linux 2.6 .. 3.x.x (mvIMPACT Acquire)

On request

Additional packages for LabVIEW, DirectShow, VisionPro and Halcon

Since version 1.10.69, the **DirectShow**[®] driver is part of the mvIMPACT Acquire installation package.

Since version 1.10.85, an interface to **VisionPro**[®] (Cognex) will be installed automatically when installing an MSI based mvIMPACT Acquire driver package.

mvIMPACT Acquire bindings for **HALCON** are available on MVTec's website:

<http://www.halcon.de/download/>

 [LabVIEW acquire-x86-1.6.8](#) | 9,028.0 kB

32 Bit mvIMPACT Acquire Binding für LabVIEW ab Version 6.1 / 32 Bit mvIMPACT Acquire binding for LabVIEW 6.1 or greater


 [LabVIEW acquire-x86 64-1.6.8](#) | 10,980.0 kB

64 Bit mvIMPACT Acquire Binding für LabVIEW ab Version 6.1 / 64 Bit mvIMPACT Acquire binding for LabVIEW 6.1 or greater

 [LabVIEW acquire.history](#) | 7.2 kB

32 Bit LabView Binding History-Datei / 32 Bit LabView binding history file

mvSDK for Windows (deprecated)

 [mvSL32 4.1.17.54](#) | 640.5 kB

mvDELTA / mvSIGMA 32 Bit Windows (XP, Vista, 7; mvSIGMA-SLC: > Hardware Revision 3.10)

Gerätetreiber (**nicht** mvIMPACT Acquire) / device driver (**not** mvIMPACT Acquire)

 [mvSL32 4.1.17.54.history](#) | 29.1 kB

32 Bit mvDELTA / mvSIGMA History-Datei / 32 Bit mvDELTA / mvSIGMA history file

mvSDK for Linux (deprecated)

 [README](#) | 5.3 kB

Readme-Datei mit Installationshinweisen des Gerätetreibers (nicht mvIMPACT Acquire) / Readme file with installation guide for device driver (not mvIMPACT Acquire)

 [dist_slx-4.1.17.54-1](#) | 3,392.7 kB

mvDELTA / mvSIGMA 32 Bit **Release** Linux

Gerätetreiber (**nicht** mvIMPACT Acquire) / device driver (**not** mvIMPACT Acquire)

 [dist_slx-4.1.17.54-1.history](#) | 28.7 kB

32 Bit mvDELTA / mvSIGMA History-Datei / 32 Bit mvDELTA / mvSIGMA history file

Manuals

 [mvDELTA / mvSIGMA technical manual \(chm\)](#) | 2,118.1 kB

mvDELTA / mvSIGMA Technisches Handbuch / Technical Manual

[Hinweis](#) / [Note](#)

 [mvDELTA / mvSIGMA technical manual \(pdf\)](#) | 1,733.4 kB

mvDELTA / mvSIGMA Technisches Handbuch / Technical Manual

[Hinweis](#) / [Note](#)

 [mvDELTA/mvSIGMA technical manual \(html\)](#)

mvDELTA/mvSIGMA Technisches Handbuch / Technical Manual

 [mvIMPACT Acquire API C++](#) | 9,889.5 kB

mvIMPACT Acquire API C++ Handbuch / Manual

 [mvIMPACT Acquire API C](#) | 3,730.2 kB

mvIMPACT Acquire API C Handbuch / Manual

 [mvIMPACT Acquire API .NET](#) | 6,893.7 kB

mvIMPACT Acquire API .NET Handbuch / Manual

Datasheets

 [mvDELTA e 2007-05 MR](#) | 247.6 kB

Datenblatt / Datasheet mvDELTA

 [mvSIGMA-SLC e 2006-09 MR](#) | 232.5 kB

Datenblatt / Datasheet mvSIGMA-SLC

 [mvSIGMA-SQ e 2007-05 MR](#) | 261.9 kB

Datenblatt / Datasheet mvSIGMA-SQ / mvSIGMA-SQe

Subject to change without notice, Date 09/2005