

mvGAMMA-CL

Abandonné




- Carte d'acquisition "CameraLink" flexible à faible coût
- Interface une caméra BASE matricielle ou linéaire
- Mémoire embarquée pour fiabiliser les transferts, dans le cas d'une charge CPU importante
- Conversion couleur Bayer embarquée

La carte d'acquisition mvGAMMA-CL utilise le processeur et l'interface PCI de la famille TITAN. Combinant les performances d'un chipset CameraLink hautement intégré, l'ensemble bénéficie d'un excellent ratio performance / prix. Son vaste espace mémoire embarqué vous permet de ne perdre aucune donnée, même dans le cas d'un encombrement temporaire du bus PCI, possible notamment dans le cas de l'utilisation de plusieurs cartes dans un seul PC. Pour beaucoup d'applications couleur ou Noir et Blanc, utilisant des caméras matricielles ou linéaires, la mvGAMMA-CL est une solution sans rivale.

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- Sommaire

- Matériel
- Logiciel
- Comp. de cartes d'acq. "mvGAMMA"
- Téléchargem.

Product	mvGAMMA-CL
PCI	PCI 32 bit / 33 MHz rev. 2.1
Interfaces	1x BASE
Continuous data rate	Approx. 95 MB/s
Peak data rate	132 MB/s (DMA, 0-wait bursts)
Max. CL data clock	66 MHz
Digital In/Out	1/4
Permissible ambient temperature	0 .. 45 °C
Permissible storage temperature	-20 .. 70 °C
Supported standards	

- 1 CameraLink BASE input
- Trigger/sync input opto-isolated, 5..24 V
- Camera power supply 12 V, 750 mA / 1.5 A
- Image format not limitede
- Continuous capturing of all types of image sources
- Additional connector for trigger + sync input flash output and camera power
- Flash output opto-isolated, max. 30 V
- Camera control signals generated by timing generator or by software
- Supports area and line scan cameras
- Input LUT, 3 channels, 10 → 8 bit

- 1 serial port + 4 dig. outputs for camera control

- Other real time transformation by software

Image Processor

- Flexible acquisition control
- Pixel processing with 3.9 GOPS

- 8 MB local memory for images, programs and data
- Real-time color space conversion of Bayer mosaic color data to RGB without host CPU load

Host interface

- Direct image transfer with color space conversion to display and overlay buffer
- Local pixel depth per color component 8 to 16 bit, per pixel 8 to 32 bit

- Parallel display and capturing in independent pixel formats
- E2PROM usable for user data

- Drivers for Windows® and Linux®

- Free [mvIMPACT Base](#) image processing library

Signal input

Family	mvTITAN							mvGAMMA	
Product	C16/C8	2C16	G1	RGB/G3	RGB/G4	DIG	CL	G	CL
Inputs	CVBS	16 / 8	16	-	-	8	-	-	-
	YC	8 / 4	8	-	-	4	-	-	-
	Gray/VBS	16 / 8	16	4	2x3	2x4	-	-	4
	RGB	4 / 2	4	-	2	2	-	-	-
	Digital	-	-	-	-	-	1	2	-
Parallel acquisition inputs	Number	1	2	1	3	4	1	1	1
	RGB/multispectral	1	2	-	1	1	-	1	-
	Synchronous / asynchronous	-/-	yes/yes	-/-	pixel-synch./-	pixel-synch./-	-/-	-/-	-/-
Bits depth (max.)		9 bit	9 bit	10 bit	10 bit	10 bit	16 bit	48 bit	10 bit
Standards	CCIR-601, RS-170	yes	yes	yes	yes	yes	-	-	yes
	Variable-slow scan	-	-	yes	yes	yes	yes	yes	yes
	PAL, NTSC, SECAM	yes	yes	-	-	yes	-	-	-
Low pass filter (analog) switchable		1x	1x	1x	1x	1x	-	-	4x
Restart /		-	-	yes	yes	yes	yes	yes	yes

Sensor geometry	Area	yes	yes	yes	yes	yes	yes	yes	yes	yes
Line	-	-	yes	yes	yes	yes	yes	yes	yes	yes
Resolution	Pixel H x V	720 x 576	720 x 576	4K x unlimited	4K x unlimited	4K x unlimited	limited by max. memory	64K x unlimited	2K x unlimited	64K x unlimited
Termination	Ohm / switchable	75 / yes	75 / yes	75 / yes	75 / yes	75 / yes	100 / yes	100 / yes	75 / yes	100 / yes
Coupling / Level	AC	AC	AC / DC switch.	AC / DC switch.	AC / DC switch.	Differential / RS-644	Differential / LVDS	AC	Differential / LVDS	Differential / LVDS
Offset	-	-	+/- 1 V	+/- 1 V	+/- 1 V	-	-	+/- 0.3 V	-	-
Analog Gain	Manual / AGC	-3dB .. +6dB / ja	-3dB .. +6dB / yes	-6dB .. +8dB / no	-6dB .. +8dB / no	-6dB .. +8dB / no	-	-2.5dB .. +12dB / no	-	-
Plug connector		2x D-Sub 26	2x D-Sub 26	1x D-Sub 26 a. 15	2x D-Sub 26	2x D-Sub 26	1x MD68 (AIA) / SCSI II	2x MDR26 (2x BASE or MED.)	1x Hirose (EIAJ)	2x MDR26 (1x BASE) Binder 8p

Pixel clock

Family		mvTITA						mvGAM			
Product		N							MA		
Frequency	Internal	C16/C8	2C16	G1	RGB/G3	RGB/G4	DIG	CL	G	CL	
	External	13.5 MHz	13.5 MHz	0.01 .. 400 MHz	0.01 .. 400 MHz	0.01 .. 400 MHz	0.01 .. 400 MHz	max. 80 MHz	max. 66 MHz	10 .. 28 MHz	max. 66 MHz

Clock delay programmable	-	-	yes	yes	yes	-	-	-	-
PLL	Analog	yes	yes	12 .. 40 MHz, 1ns Jitter	12 .. 40 MHz, 1ns Jitter	12 .. 40 MHz, 1ns Jitter	-	-	-
	Digital	-	-	0 .. 40 MHz, < 12ns Jitter	0 .. 40 MHz, < 12ns Jitter	0 .. 40 MHz, < 12ns Jitter	-	-	0 .. 28 MHz, < 12ns Jitter

Digital ports

Family		mvTITAN							mvGAMMA	
Product		C16/C8	2C16	G1	RGB/G3	RGB/G4	DIG	CL	G	CL
Inputs	Ext. pixel clock	-	-	1	2	2	1	2	1	1
	HD, VD	-	-	1	2	2	1	2	1	1
	Trigger	-	-	1	2	2	1	1	1	1
	Threshold programmable	-	-	yes	-	yes	-	-	-	-
Outputs	General inputs	16 / 8	16	1	2	2	3	1	1	1
	General outputs	-	-	3	6	6	3	2x4	3	4
	Relay	8 / 4	8	-	-	-	-	-	-	-

Image processing processor

Family	mvTITAN							mvGAMMA		
Product Name	C16/C8	2C16	G1	RGB/G3	RGB/G4	DIG	CL	G	CL	
	PNX	2x PNX	PNX	PNX	PNX	PNX	PNX	PNX	PNX	
Clock	1300	1311	1300	1300	1300	1300	1311	1311	1300	
	143 MHz	2x 166 MHz	143 MHz	143 MHz	143 MHz	143 MHz	166 MHz	166 MHz	143 MHz	
Type	-	-	-	-	-	-	-	-	-	
Performance (max.)	3.9	2x 4.5	3.9	3.9	3.9	3.9	4.5	4.5	3.9	
	MIPS	715	2x 830	715	715	715	715	830	830	715
	MFLOPS	458	2x 531	458	458	458	458	531	531	458

Local Memory

Family	mvTITAN							mvGAMMA	
Product	C16/C8	2C16	G1	RGB/G3	RGB/G4	DIG	CL	G	CL
SDRAM	16 MB	2x 8 MB	8 / 32 MB	16 MB	16 / 32 MB	8 / 32 MB	8 / 32 MB	8 MB	8 MB
Transfer rate	572	2x 533	572	572	572	572	533	533	572
	MB/s	MB/s	MB/s	MB/s	MB/s	MB/s	MB/s	MB/s	MB/s

Bus

Family	mvTITAN							mvGAMMA	
Product System	C16/C8	2C16	G1	RGB/G3	RGB/G4	DIG	CL	G	CL
	PCI 32 bit / 33 MHz rev.	PCI 32 bit / 33 MHz rev.	PCI 32 bit / 33 MHz rev.	PCI 32 bit / 33 MHz rev.	PCI 32 bit / 33 MHz rev.	PCI 32 bit / 33 MHz rev.	PCI 32 bit / 33 MHz rev.	PCI 32 bit / 33 MHz rev.	PCI 32 bit / 33 MHz rev.
Signal level	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1
Transfer	3.3V or 5V	3.3V or 5V	3.3V or 5V	3.3V or 5V	3.3V or 5V	3.3V or 5V	3.3V or 5V	3.3V or 5V	3.3V or 5V
	DMA, 0-wait bursts, 132 MB/s max.	DMA, 0-wait bursts, 132 MB/s max.	DMA, 0-wait bursts, 132 MB/s max.	DMA, 0-wait bursts, 132 MB/s max.	DMA, 0-wait bursts, 132 MB/s max.	DMA, 0-wait bursts, 132 MB/s max.	DMA, 0-wait bursts, 132 MB/s max.	DMA, 0-wait bursts, 132 MB/s max.	DMA, 0-wait bursts, 132 MB/s max.
CPCI version	on request	on request	on request	on request	on request	on request	on request	on request	on request

Input processing

Family	mvTITAN							mvGAMMA	
Product	C16/C8	2C16	G1	RGB/G3	RGB/G4	DIG	CL	G	CL
Input LUT	Hardware (bit)	-	-	10 → 8	10 → 8	-	10 → 8	10 → 8	10 → 8
	Software (bit)	-	10 → 8 / 10 → 16	-	-	16 → 8 / 16 → 16	-	10 → 16	-

Output processing

Family	mvTITA							mvGAM	
Product	N							MA	
Scaling	C16/C8	2C16	G1	RGB/G3	RGB/G4	DIG	CL	G	CL
separate HW unit, no load on VLIW / CPU	yes	yes	yes	yes	yes	yes	yes	yes	yes
Filtering	yes	yes	yes	yes	yes	yes	yes	yes	yes
separate HW unit, no load on VLIW / CPU	yes	yes	yes	yes	yes	yes	yes	yes	yes
Interpolation	yes	yes	yes	yes	yes	yes	yes	yes	yes
separate HW unit, no load on VLIW / CPU	yes	yes	yes	yes	yes	yes	yes	yes	yes
Color space conversion	yes	yes	yes	yes	yes	yes	yes	yes	yes
separate HW unit, no load on VLIW / CPU	yes	yes	yes	yes	yes	yes	yes	yes	yes
Display	yes	yes	yes	yes	yes	yes	yes	yes	yes
separate HW unit, no load on VLIW / CPU	yes	yes	yes	yes	yes	yes	yes	yes	yes
Pixel formats	yes	yes	yes	yes	yes	yes	yes	yes	yes
RGB (8 / 15 / 16 / 24 / 32 bit)	yes	yes	yes	yes	yes	yes	yes	yes	yes
YC (4:2:2, any other formats in SW)	yes	yes	yes	yes	yes	yes	yes	yes	yes

Video output

Family		mvTITA						mvGAM		
Product		N		MA						
Signal		C16/C8	2C16	G1	RGB/G3	RGB/G4	DIG	CL	G	CL
Signal	RGB	-	-	yes	-	-	-	-	-	-
	VBS	yes	-	yes	-	-	-	-	-	-
	CVBS, YC; PAL, NTSC	yes	-	-	-	-	-	-	-	-
	Clock	13.5 MHz	-	max. 40 MHz	-	-	max. 40 MHz	-	-	-
Synchronization	Internal	yes	-	yes	-	-	-	-	-	-
	Genlock on video input	-	-	-	-	-	-	-	-	-
Plug connector	D-Sub 26 / int.	-	D-Sub 15 VGA	-	-	-	-	-	-	-

Sync output

Family		mvTITA						mvGAM		
Product		N		MA						
Signal		C16/C8	2C16	G1	RGB/G3	RGB/G4	DIG	CL	G	CL
Signal	HS, VS as TTL signal	-	-	yes	yes	yes	yes	-	yes	-
	CSYNC, VBS	via video output	-	via video output	-	-	-	-	-	-

Camera power supply

Family	mvTITA						mvGAM		
	N						MA		
Product	C16/C8	2C16	G1	RGB/G3	RGB/G4	DIG	CL	G	CL
Via PCI 12V	max. 0.75A, fused	max. 0.75A, fused	max. 0.75A, fused	max. 0.75A, fused	max. 0.75A, fused	-	max. 0.75A, on Binder 8p Bu.	max. 0.75A, fused	max. 0.75A, on Binder 8p Bu.
Via addit 12V ional power plug	-	-	max. 2A, fused	max. 2A, fused	max. 2A, fused	-	max. 2A, on Binder 8p Bu.	max. 2A, fused	max. 2A, on Binder 8p Bu.

Power requirements

Family	mvTITA						mvGAM		
	N						MA		
Product	C16/C8	2C16	G1	RGB/G3	RGB/G4	DIG	CL	G	CL
PCI 5V	max. 2.2A	max. 3A	max. 1.5A	max. 1.5A	max. 1.5A	max. 1.5A	max. 1.5A	max. 1.5A	max. 1.5A
+ 12V (without camera)	max. 0.1A	max. 0.2A	max. 0.2A	max. 0.5A	max. 0.5A	-	-	-	-
- 12V	-	-	max. 0.1A	max. 0.1A	max. 0.1A	-	-	-	-

Dimensions

Family		mvTITA							mvGAM	
		N							MA	
Product		C16/C8	2C16	G1	RGB/G3	RGB/G4	DIG	CL	G	CL
Board	Length (mm)	128	186	171	171	171	128	147	123	147
	Height (mm)	106	106	106	106	106	106	95	75	95

Ambient conditions

Family		mvTITA							mvGAM	
		N							MA	
Product		C16/C8	2C16	G1	RGB/G3	RGB/G4	DIG	CL	G	CL
Permissible ambient temperature	°C	0 .. 45	0 .. 50	0 .. 45	0 .. 40	0 .. 40	0 .. 45	0 .. 50	0 .. 50	0 .. 45
Permissible storage temperature	°C	-20 .. 70	-20 .. 70	-20 .. 70	-20 .. 70	-20 .. 70	-20 .. 70	-20 .. 70	-20 .. 70	-20 .. 70
Relative humidity		10-90%, non-condensing	10-90%, non-condensing	10-90%, non-condensing	10-90%, non-condensing	10-90%, non-condensing	10-90%, non-condensing	10-90%, non-condensing	10-90%, non-condensing	10-90%, non-condensing

Software

Family	mvTITA							mvGAM	
Product	N							MA	
Drivers	C16/C8	2C16	G1	RGB/G3	RGB/G4	DIG	CL	G	CL
Windows®	XP / Vista / 7 (32 bit)	XP / Vista / 7 (32 bit)	XP / Vista / 7 (32 bit)	XP / Vista / 7 (32 bit)	XP / Vista / 7 (32 bit)	XP / Vista / 7 (32 bit)	XP / Vista / 7 (32 bit)	XP / Vista / 7 (32 bit)	XP / Vista / 7 (32 bit)
Linux®	yes	yes	yes	yes	yes	yes	yes	yes	yes
Twain	yes	yes	yes	yes	yes	yes	yes	yes	yes
Development tools for host	yes	yes	yes	ja	yes	yes	yes	yes	yes
Compilers (Visual Studio®, C++ Builder®, Delphi™, Visual Basic®)	yes	yes	yes	yes	yes	yes	yes	yes	yes
Libraries (MV driver, acquire, display, camera controls)	yes	yes	yes	yes	yes	yes	yes	yes	yes
IP functions (Compression (M-JPEG, run length, others planned))	yes	yes	yes	yes	yes	yes	yes	yes	yes
Filters	div.	div.	div.	div.	div.	div.	div.	div.	div.
Pixel operations (accumulation, averaging, other arithmetical)	yes	yes	yes	yes	yes	yes	yes	yes	yes
Image operations	yes	yes	yes	yes	yes	yes	yes	yes	yes

	(scaling, rotating, mirroring , histogram m)									
Development tools for IP	Compiler s	C, C++	C, C++	C, C++	C, C++	C, C++	C, C++	C, C++	C, C++	C, C++
	Libraries (components, base functions)	yes	yes	yes	yes	yes	yes	yes	yes	yes

All data refer to the current revision.

Pilotes et applications pour Windows 7, 8.1 (mvIMPACT Acquire)

Depuis la version 2.10.1 de mvIMPACT Acquire, les "Merge Modules for mvIMPACT Acquire" sont disponibles en téléchargement séparé.

Pour cette raison, les pilotes sont plus petits. Les "Merge Modules" ont besoin pour créer des séquences de

configuration privés avec les pilotes "mvIMPACT Acquire". Plus de détails sont disponibles dans le [manuel mvIMPACT Acquire](#).

 [mvTITAN_mvGAMMA_x86_2.43.0.msi](#) | 72,212.0 kB

mvTITAN / mvGAMMA 32 Bit Windows (7, 8.1, 10)

 [mvTITAN_mvGAMMA_x86_64_2.43.0.msi](#) | 91,212.0 kB

mvTITAN / mvGAMMA 64 Bit Windows (7, 8.1, 10)

 [mvIMPACT_Acquire.history](#) | 916.2 kB

mvIMPACT Acquire History-Datei / mvIMPACT Acquire history file

Versions antérieures des pilotes

Pour visualiser ou télécharger les pilotes, vous devez être [enregistré](#) ou [connecté](#).


Logiciels additionnels pour NeuroCheck, LabVIEW, DirectShow, VisionPro et 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 pour Windows (désapprouver)

Release versions are extensively tested on several platforms, components and operating systems. You should prefer to use the Release versions. MATRIX VISION transfers Beta versions to Release versions regularly.

Beta driver versions are functionally complete and tested on selected platforms. We publish them in order to allow expert users the use of the newest products with the latest features. Due to the multitude of possible combinations of components and operating systems, the user acts at his or her own risk.

 [beta mvTITAN 1.5.32.9](#) | 3,141.2 kB

mvTITAN / mvGAMMA 32 Bit **Beta** Windows (XP, Vista, 7)

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

 [mvTITAN 1.5.27.98](#) | 3,135.0 kB

mvTITAN / mvGAMMA 32 Bit **Release** Windows (XP, Vista, 7)

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

mvSDK pour Linux (désapprouver)

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 [README](#) | 5.3 kB

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

 [beta_dist_titan-1.5.32.9-4](#) | 4,377.5 kB

mvTITAN / mvGAMMA 32 Bit **Beta** Linux

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

 [dist_titan-1.5.27.78-2](#) | 4,264.0 kB

mvTITAN / mvGAMMA 32 Bit **Release** Linux

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

Documentations

 [mvTITAN / mvGAMMA technical manual](#) | 847.1 kB

mvTITAN / mvGAMMA Technisches Handbuch / Technical Manual

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

 [mvTITAN/mvGAMMA technical manual \(html\)](#)

mvTITAN/mvGAMMA Technisches Handbuch / Technical Manual

 [mvIMPACT Acquire API C++](#) | 10,312.6 kB

mvIMPACT Acquire API C++ Handbuch / Manual

 [mvIMPACT Acquire API C](#) | 3,986.0 kB

mvIMPACT Acquire API C Handbuch / Manual

 [mvIMPACT Acquire API .NET](#) | 7,193.2 kB

mvIMPACT Acquire API .NET Handbuch / Manual

Brochures commerciales

 [mvGAMMA-CL e 2007-05](#) | 245.1 kB

Datenblatt / Datasheet mvGAMMA-CL

 [mvGAMMA-G e 2006-09](#) | 247.1 kB

Datenblatt / Datasheet mvGAMMA-G

 [mvTITAN-CL e 2006-09 MR](#) | 219.8 kB

Datenblatt / Datasheet mvTITAN-CL

 [mvTITAN-Series e 2007-05 MR](#) | 227.9 kB

Datenblatt / Datasheet mvTITAN-Series

Modifications possibles sans préavis, date 04/2010