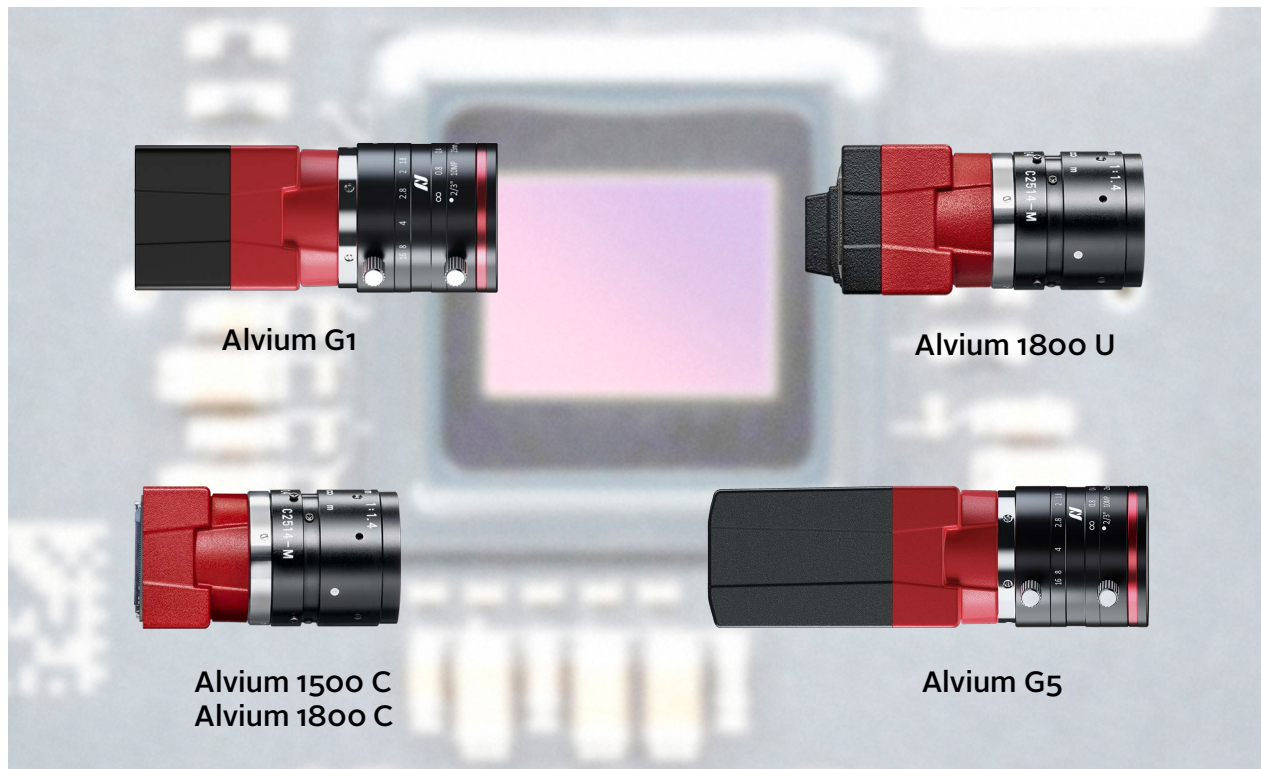


QUICK REFERENCE

Pin Assignment for Alvium Cameras

V1.2.0
2025-Jul-21



Scope

This document gives an overview for camera connections with I/O cables for GigE and USB cameras and with FPC cables for CSI-2 cameras. To avoid damage to your cameras and connected peripherals, see the corresponding Alvium user guide for instructions and further information.

Helpful downloads

Download	Link
User guides for Alvium cameras	www.alliedvision.com/en/support
Additional documentation	
Accessories, such as I/O cables	www.alliedvision.com/en/products/accessories

Table 1: Helpful downloadss

Alvium USB cameras

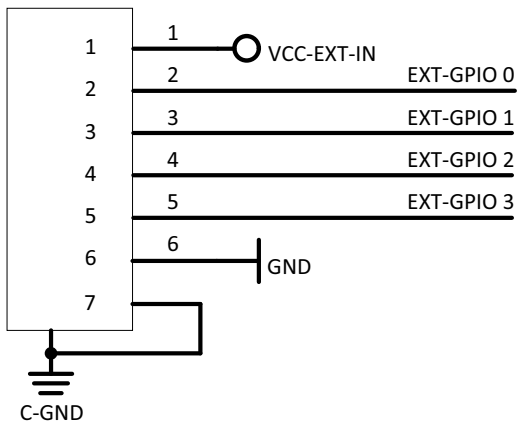


NOTICE

Damage to camera electronics

The color coding shown in [Table 2](#) applies to Allied Vision I/O cables with screw locks for Alvium USB cameras. When using third party cables, the camera can be damaged if you do not observe different color codings.

- Use only cables shown in [Compatible I/O cables](#) on page 3.
- For 12319 I/O cables without screw locks, observe that all cable lines are blue.
- For third-party cables, see the manufacturer data sheet.

	Pin	Signal	Direction	I/O cable color*
	1	VCC-EXT-IN	PWR IN	Red
	2	EXT-GPIO 0	IN/OUT	Brown
	3	EXT-GPIO 1	IN/OUT	Orange
	4	EXT-GPIO 2	IN/OUT	Yellow
	5	EXT-GPIO 3	IN/OUT	Green
	6	GND	—	Black
	7	C-GND	—	Transparent

*Color coding applies only to Allied Vision I/O cables with screw locks.

Table 2: 7-pin JST BM07B-SRSS-TBT I/O connector pin assignment

Compatible I/O cables



I/O cables for Alvium USB cameras

- 12319: 7-pin JST I/O cable without screw locks 0.4 m
Observe for connecting: All lines are blue.
- 12322: 7-pin JST I/O cable with screw locks 3.0 m
- 17070: 7-pin JST I/O cable with screw locks 5.0 m

See www.alliedvision.com/en/products/accessories.

Alvium G1 and G5 cameras



NOTICE

Damage to camera electronics

The color coding shown in [Table 3](#) applies to Allied Vision I/O cables for Alvium G1 and Alvium G5 cameras. When using third party cables, the camera can be damaged if you do not observe different color codings.

- Use only cables shown in [Compatible I/O cables](#) on page 3.
- For third-party cables, see the manufacturer data sheet.

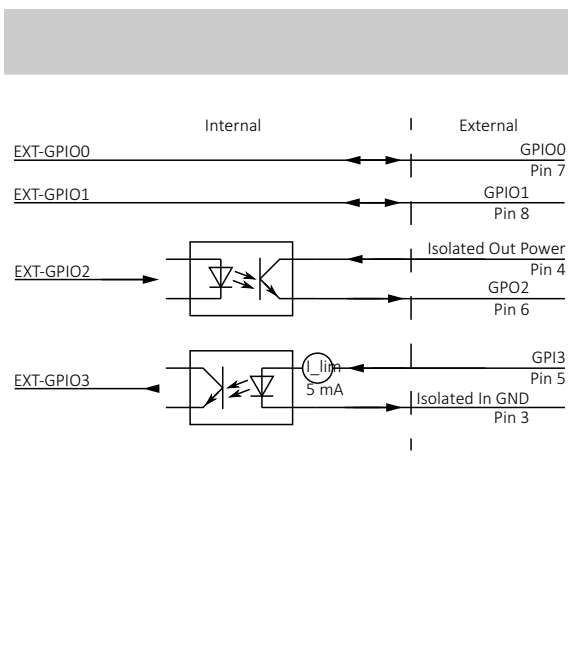
	Pin	Signal	Direction	I/O cable color
	1	PWR-GND	—	Black
	2	PWR-IN	In	Red
	3	OPTO-IN-GND	—	Brown
	4	OPTO-OUT-PWR	In	Orange
	5	GPI03	In	Yellow
	6	GPO2	Out	Green
	7	GPI00	In/Out	Blue
	8	GPI01	See Pin 7 GPI00	Violet
	9	Reserved		Gray
	10	C-GND	—	Transparent

Table 3: 10-pin TFM I/O connector pin assignment

Compatible I/O cables



I/O cables for Alvium G1 and Alvium G5 cameras

- 16167: 10-pin TFM I/O cable 3.0 m
- 16189: 10-pin TFM I/O cable 5.0 m
- 16190: 10-pin TFM I/O cable 10.0 m

see www.alliedvision.com/en/products/accessories.

Alvium CSI-2 cameras

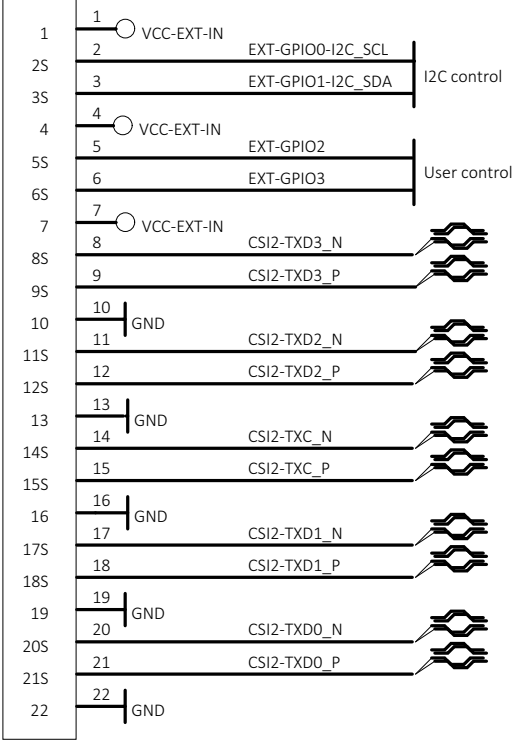
	Pin	Signal	Direction
	1	VCC-EXT-IN	PWR IN
	2	EXT-GPIO0-I2C_SCL	IN/OUT
	3	EXT-GPIO1-I2C_SDA	IN/OUT
	4	VCC-EXT-IN	PWR IN
	5	EXT-GPIO2	IN/OUT
	6	EXT-GPIO3	IN/OUT
	7	VCC-EXT-IN	PWR IN
	8	CSI2-TXD3_N	OUT
	9	CSI2-TXD3_P	OUT
	10	GND	—
	11	CSI2-TXD2_N	OUT
	12	CSI2-TXD2_P	OUT
	13	GND	—
	14	CSI2-TXC_N	OUT
	15	CSI2-TXC_P	OUT
	16	GND	—
	17	CSI2-TXD1_N	OUT
	18	CSI2-TXD1_P	OUT
	19	GND	—
	20	CSI2-TXD0_N	OUT
	21	CSI2-TXD0_P	OUT
	22	GND	—

Table 4: 22-pin TFM Hirose FH55-22S-0.5SH connector pin assignment

Compatible FPC cables



FPC cables for Alvium CSI-2 cameras

- 12316: 22-pin FPC cable 120 mm
- 12317: 22-pin FPC cable 220 mm
- 12318: 22-pin FPC cable 420 mm

see www.alliedvision.com/en/products/accessories.

Contact us

Website, email

General

www.alliedvision.com/en/contact

info@alliedvision.com

Distribution partners

www.alliedvision.com/en/avt-locations/avt-distributors

Support

www.alliedvision.com/en/support

www.alliedvision.com/en/about-us/contact-us/technical-support-repair/-rma

Offices

Europe, Middle East, and Africa (Headquarters)

Allied Vision Technologies GmbH

Taschenweg 2a

07646 Stadtroda, Germany

T// +49 36428 677-0 (Reception)

T// +49 36428 677-230 (Sales)

F// +49 36428 677-28

North, Central, and South America, Canada

Allied Vision Technologies Canada Inc.

300 – 4621 Canada Way

Burnaby, BC V5G 4X8, Canada

T// +1 604 875 8855

USA

Allied Vision Technologies, Inc.

102 Pickering Way- Suite 502

Exton, PA 19341, USA

Toll-free// +1-877-USA-1394

T// +1 978 225 2030

Asia-Pacific

China

Allied Vision Technologies Shanghai Co Ltd.

B-510, Venture International Business Park

2679 Hechuan Road

Minhang District, Shanghai 201103

People's Republic of China

T// +86 21 64861133

Japan

Allied Vision Technologies

Yokohama Portside Bldg. 10F

8-1 Sakae-cho, Kanagawa-ku

Yokohama-shi, Kanagawa, 221-0052

T// +81 (0) 45 577 9527

Singapore

Allied Vision Technologies Asia Pte. Ltd

82 Playfair Rd, #07-01 D'Lithium

Singapore 368001

T// +65 6634 9027

Liability, trademarks, and copyright

Allied Vision has tested the product under the described conditions. The customer assumes all risk of product damage, application compromise or potential failure, and Sales Warranty loss related to deviation from the described conditions. Allied Vision's acknowledgement of such deviations in the customer's modified product or applications does not constitute advice for use. No Warranty is offered or implied by Allied Vision regarding the customer's assumed risk or legal responsibilities with such modified products or applications.

All text, pictures, and graphics are protected by copyright and other laws protecting intellectual property. All content is subject to change without notice. All trademarks, logos, and brands cited in this document are property and/or copyright material of their respective owners. Use of these trademarks, logos, and brands does not imply endorsement.

Copyright © 2025 Allied Vision Technologies GmbH. All rights reserved.