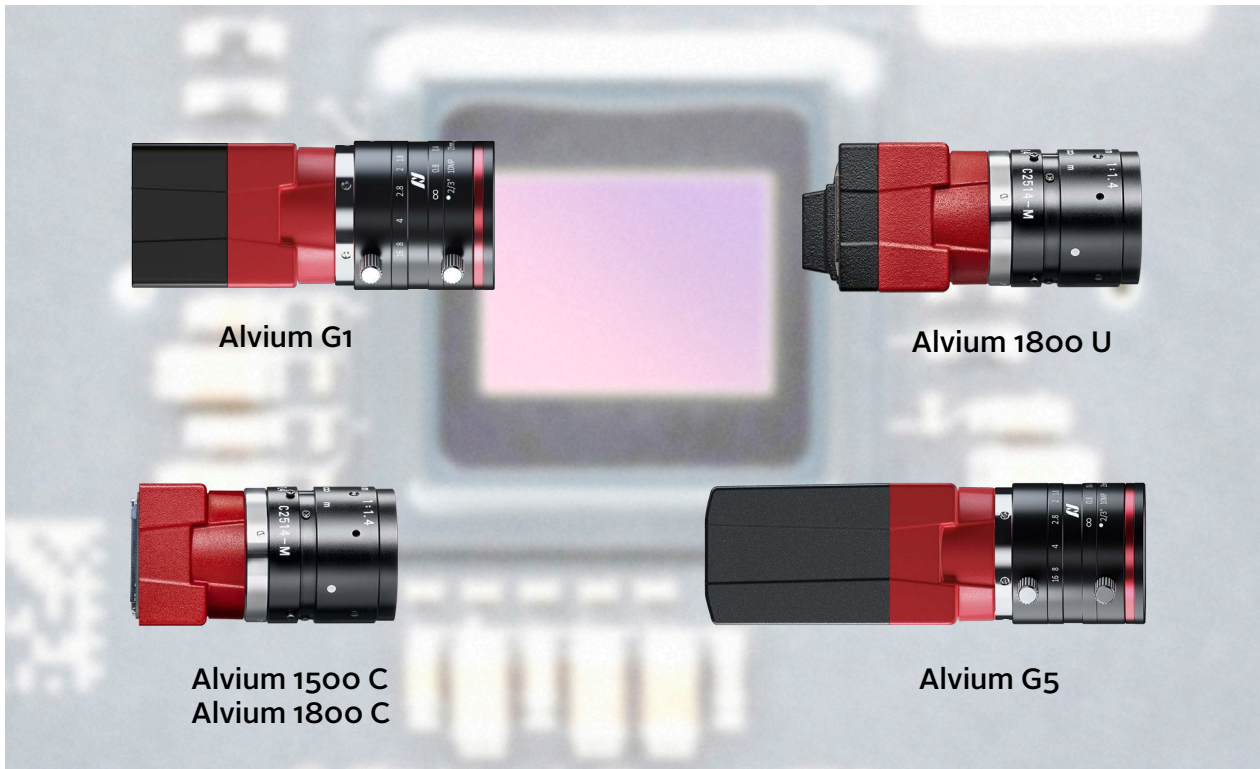


QUICK REFERENCE

Pin Assignment for Alvium Cameras

V1.0.0
2023-Feb-13



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 downloads

Alvium USB cameras

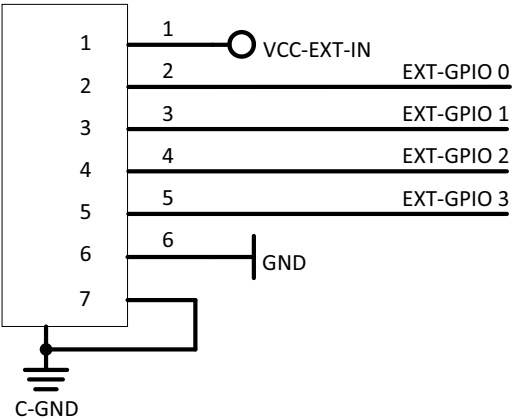


NOTICE

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	PWR	Black
	7	C-GND	PWR	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 5.0 m
- 17070: 7-pin JST I/O cable with screw locks 10.0 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.

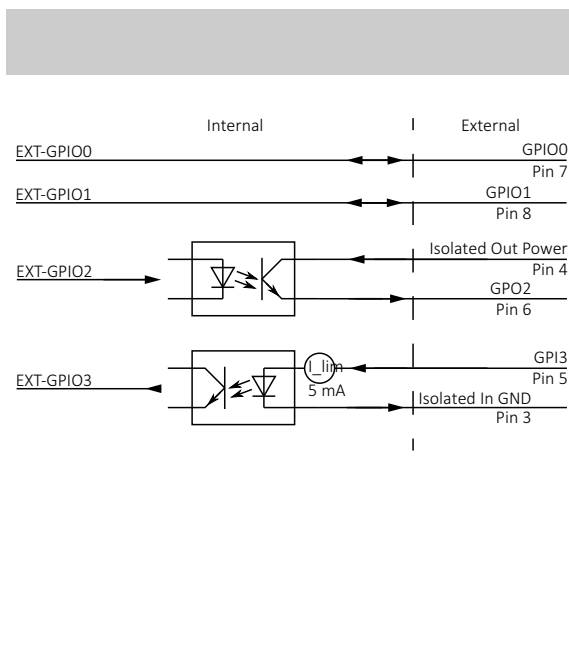
	Pin	Signal	Direction	I/O cable color
 <p>The diagram shows the internal and external connections for the 10-pin TFM I/O connector. It includes labels for EXT-GPIO0 through EXT-GPIO3, Internal and External connections, and specific signal names like GPIO0, GPIO1, GPO2, GPI3, and Isolated In GND. A 5 mA current source is also indicated.</p>	1	PWR-GND	In	Black
	2	PWR-IN	In	Red
	3	OPTO-IN-GND	In	Brown
	4	OPTO-OUT-PWR	In	Orange
	5	GPI3	In	Yellow
	6	GPO2	Out	Green
	7	GPIO0	In/Out	Blue
	8	GPIO1	See Pin 7 GPIO0	Violet
	9	Reserved		Gray
	10	C-GND	PWR	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	PWR
	11	CSI2-TXD2_N	OUT
	12	CSI2-TXD2_P	OUT
	13	GND	PWR
	14	CSI2-TXC_N	OUT
	15	CSI2-TXC_P	OUT
	16	GND	PWR
	17	CSI2-TXD1_N	OUT
	18	CSI2-TXD1_P	OUT
	19	GND	PWR
	20	CSI2-TXD0_N	OUT
	21	CSI2-TXD0_P	OUT
	22	GND	PWR

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.

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