



Instruction Leaflet

V2.2.0

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CE conformity

- Info**
- AVT STINGRAY cameras are in conformity with the CE standard and its underlying directions.
 - Board level models are delivered without housing. Because housing design is critical to the electromagnetic interference characteristics of a camera, no CE certification tests regarding electromagnetic interference have been performed for board level models. Users who design board level models into their systems should perform appropriate testing regarding electromagnetic interference after the product design is completed.



Technical and ordering info

- Info**
- **Technical information:**
support@alliedvisiontec.com
phone (for Germany): +49 (0)36428 677-270
phone (for USA): +1 978-225-2030
outside Germany/USA: Please check the link for your local dealer.
<http://www.alliedvisiontec.com/partner.html>
 - **Ordering and commercial information:**
customer-care@alliedvisiontec.com
phone (for Germany): +49 (0)36428 677-230
phone (for USA): +1 978-225-2030
outside Germany/USA: Please check the link for your local dealer.
<http://www.alliedvisiontec.com/partner.html>
Please note order number/text given in the following tables.



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Scope of delivery

Each camera package consists of the following system components:



AVT Stingray camera



5 m cable with screw locking



Color version:
Hoya C-5000 IR cut filter (built-in)
B/w version:
Standard glass, no filter (built-in)



CD with driver and documentation



Optional: tripod adapter



Optional: GOF cable



Optional: HIROSE connector for cable mount HR10A-10P-12S

Figure 1: System components

www

For more accessories visit the AVT website at:
<http://www.alliedvisiontec.com/avt-products/accessories.html>



Camera I/O connector

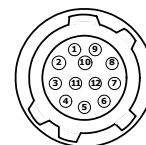


Figure 2: Camera I/O connector pin assignment

Pin	Signal	Direction	Level	Description
1	External GND		GND for RS232 and ext. power	External Ground for RS232 and external power
2	External Power		+8...+36 V DC	Power supply
3	Camera Out 4	Out	Open emitter	Camera Output 4 (GPOut4) default: -
4	Camera In 1	In	$U_{in}(high) = 3 V...24 V$ $U_{in}(low) = 0 V...1.5 V$	Camera Input 1 (GPIIn1) default: Trigger
5	Camera Out 3	Out	Open emitter	Camera Output 3 (GPOut3) default: Busy
6	Camera Out 1	Out	Open emitter	Camera Output 1 (GPOut1) default: IntEna
7	Camera In GND	In	Common GND for inputs	Camera Common Input Ground (In GND)
8	RxD RS232	In	RS232	Terminal Receive Data
9	TxD RS232	Out	RS232	Terminal Transmit Data
10	Camera Out Power	In	Common VCC for outputs max. 36 V DC	Camera Output Power for digital outputs (OutVCC)
11	Camera In 2	In	$U_{in}(high) = 3 V...24 V$ $U_{in}(low) = 0 V...1.5 V$	Camera Input 2 (GPIIn2) default: -
12	Camera Out 2	Out	Open emitter	Camera Output 2 (GPOut2) default: -

Table 1: Camera I/O connector pinning

For maximum voltage levels see **Hardware Installation Guide**, Chapter *STINGRAY input descriptions*.

Hardware Installation

To install hardware read **Hardware Installation Guide**.

Note You will find this document in the following directory:

- <CD ROM>:\products\cameras-general
- All_HardInst_Vx.y.z_en.pdf



Software Installation

To install software read (depending on your system):

- FirePackage User Guide
- FirePackage64 User Guide
- Fire4Linux User Guide

Note You will find these documents in the following directory:

- <CD ROM>:\products\AVT_FirePackage_x_y_z
- FirePackage_UserGuide_Vx.y.z_en.pdf
 - FirePackage_x64_UserGuide_Vx.y.z_en.pdf
- <CD ROM>:\products\linux



Caution Hot-plug precautions



- The physical ports **may be damaged by excessive ESD** (electrostatic discharge), when connected under powered conditions. It is good practice to ensure proper grounding of computer case and camera case to the same ground potential, before plugging the camera cable into the port of the computer. This ensures that no excessive difference of electrical potential exists between computer and camera.
- It is **very important not** to exceed an inrush current of 18 mJoule in 3 ms. (This means that a device, when powered via 12 V bus power must **never** draw more than 1.5 A, even not in the first 3 ms.)
- Higher inrush current may damage the physical interface chip of the camera and/or the phy chip in your PC.**
- Whereas inrush current is not a problem for one Pike/Stingray camera, daisy chaining multiple cameras or supplying bus power via (optional) HIROSE power out to circuitry with unknown inrush currents needs careful design considerations to be on the safe side.

Screw-lock and other precautions

- Also, all AVT 1394b camera and cables have **industrial screw-lock fasteners**, to insure a tight electrical connection that is resistant to vibration and gravity.
- We strongly recommend using only 1394b adapter cards with screw-locks.**
- Make sure **not** to touch the shield of the camera cable connected to a computer and the ground terminal of the lines at the same time.
- If you are charged: before touching the shield of the camera cable, make sure to discharge first (by touching the ground terminal of the lines).
- Use only DC power supplies with insulated cases. These are identified by having **only two** power connectors.
- If you feel uncomfortable with the previous advice or if you have no knowledge about the connectivity of an installation, **we strongly recommend powering down all systems before connecting or disconnecting a camera.**

Safety instructions

Note



- There are no switches or parts inside the camera that require adjustment. The guarantee becomes void upon opening the camera casing.
- If the product is disassembled, reworked or repaired by other than a recommended service person, AVT or its suppliers will take no responsibility for the subsequent performance or quality of the camera.
- The camera does NOT generate dangerous voltages internally. However, because the IEEE 1394b standard permits cable power distribution at voltages higher than 24 V, various international safety standards apply.

Note



- All **color models** are equipped with an **optical filter** to eliminate the influence of infrared light hitting the sensor. Please be advised that, as a side effect, this filter reduces sensitivity in the visible spectrum. The optical filter is part of the back focus ring, which is threaded into the C-Mount.
- B/w models** come with a **sensor protection glass** mounted in the back focus ring.

Cautions

Caution



Hot-plug precautions

- Although FireWire devices can **theoretically** be hot-plugged without powering down equipment, **we strongly recommend turning the computer power off, before connecting a digital camera** to it via a FireWire cable.
- Static electricity or slight plug misalignment during insertion may short-circuit and damage components.**

Caution



- Mount/dismount lenses and filters in a **dust-free environment**, and **do not** use compressed air (which can push dust into cameras and lenses).
- Use only **optical quality tissue**/cloth if you must clean a lens or filter.
- Read Hardware Installation Guide, Chapter Cleaning instructions.**

Environmental conditions

- Ambient temperature (when camera in use): + 5 °C ... + 45 °C
- Ambient temperature during storage: - 10 °C ... + 60 °C
- Relative humidity: 20 % ... 80 % without condensation
- Protection: IP 30

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