

Mounting Heat Sinks on the CP Camera

Version: 1.0

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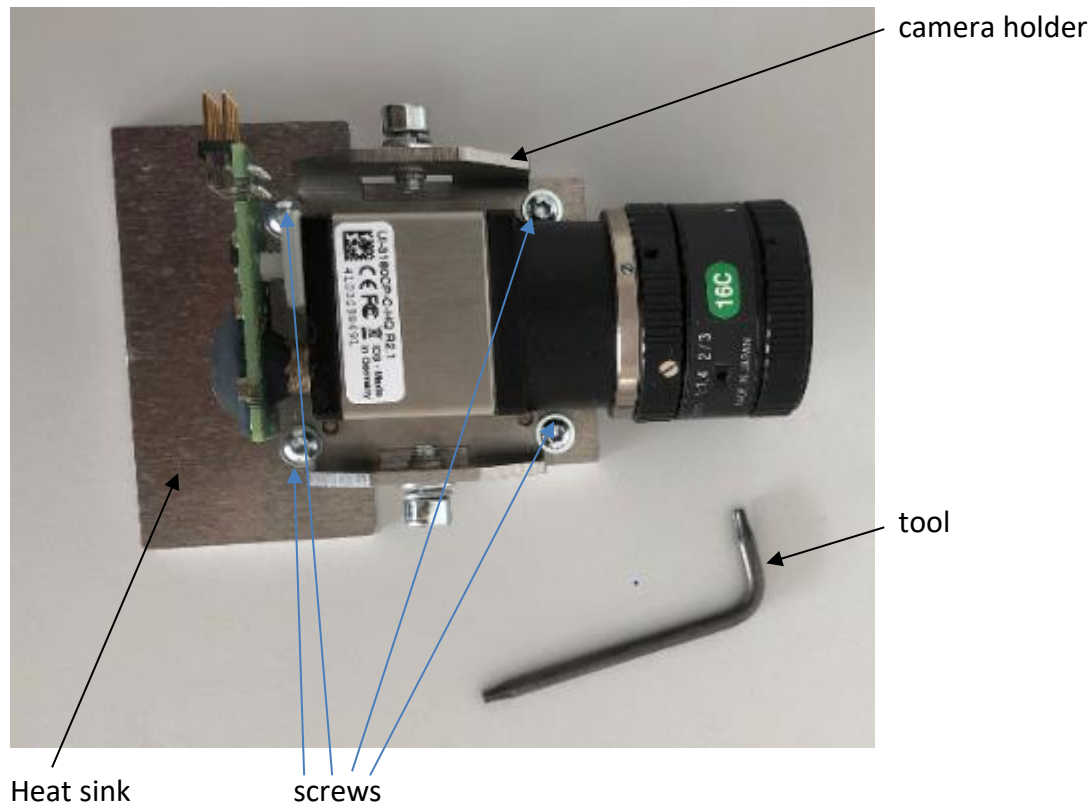
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1 Preparation

With enabling the internal memory of the camera as a buffer for data transfer, USB transfer failures can be significantly reduced. But the temperature of the camera gets very near to the upper operating limits, therefore heat sinks should be mounted.

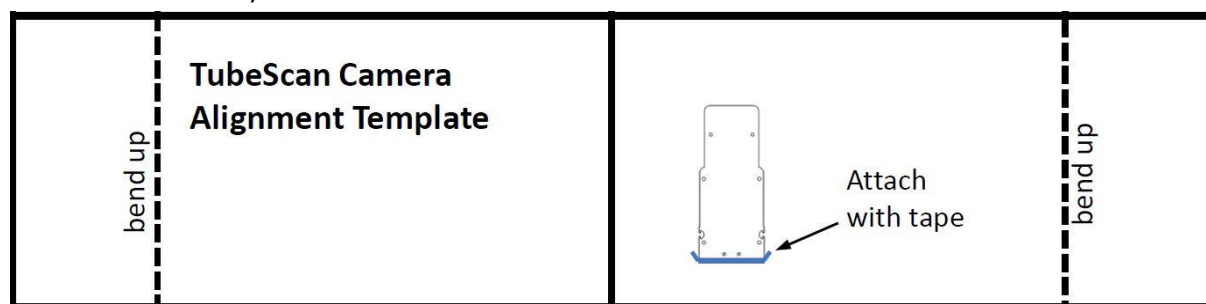
The system can be further improved against disturbances, which also could introduce USB transfer failures, when ferrites are mounted on the V+ lines.

You need for each camera a **heat sink**, which is mounted with **4 screws** and **heat conducting paste**. The heat sink is pushed behind the camera and screwed down from the front. An ideal tool for this work is shown in the picture below, where the heat sink is shown already mounted on the camera holder.



It could happen that it will be necessary to move the camera out of position, when it is screwed very near at the side wall. For this case you should have a permanent marker for marking original position.

In case you should not get cameras back into correct position, it would be good to have templates for alignment with you, which are used for Exchange of CP Camera (see according service instruction).



You need for every V+ line connecting to the LED's one ferrite and a cable strap for fixation.

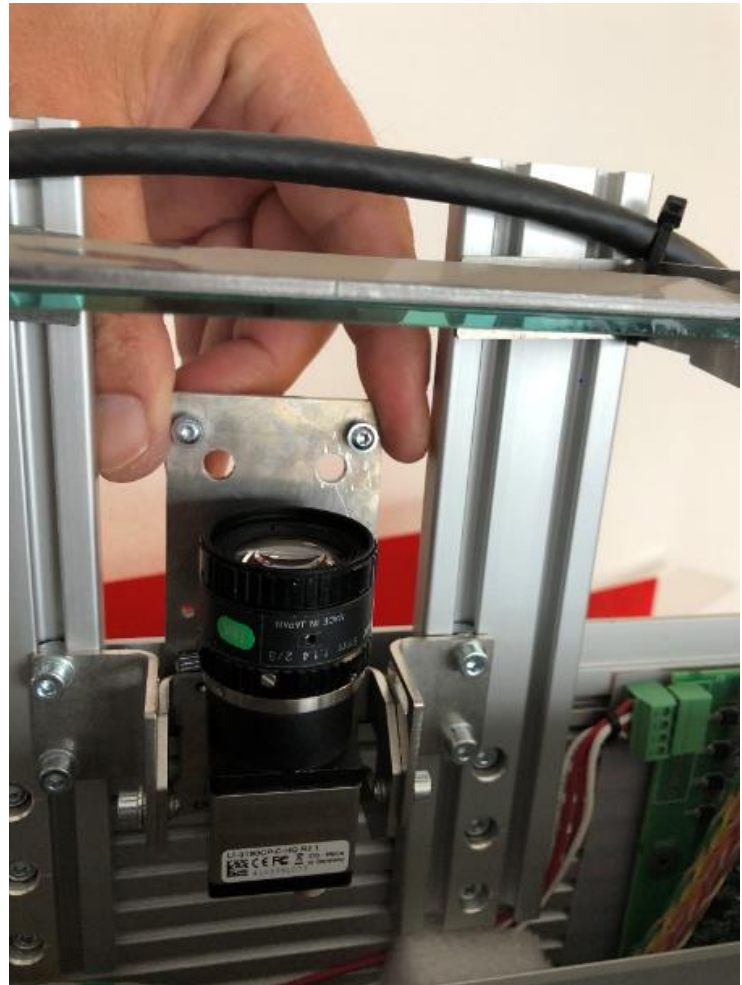
2 Mounting the heat sink

Turn in the upper 2 screws for a few turns and apply the heat conducting paste (in the region, where the yellow dot is in the picture below). Try to place the heat sink below the camera without loosening the camera holder.

Upper two screws



Heat conducting paste



It could be that the securing screws which are securing adjustment of brightness and focus are in the way to bring in the heat sink plate. If this should be the case, unscrew the whole objective lens for a moment that you can place the heat sink plate behind the camera. Take care that no dust falls into the camera and immediately screw back the objective lens as soon as you have placed the heat sink!

Screw for securing adjusted focus

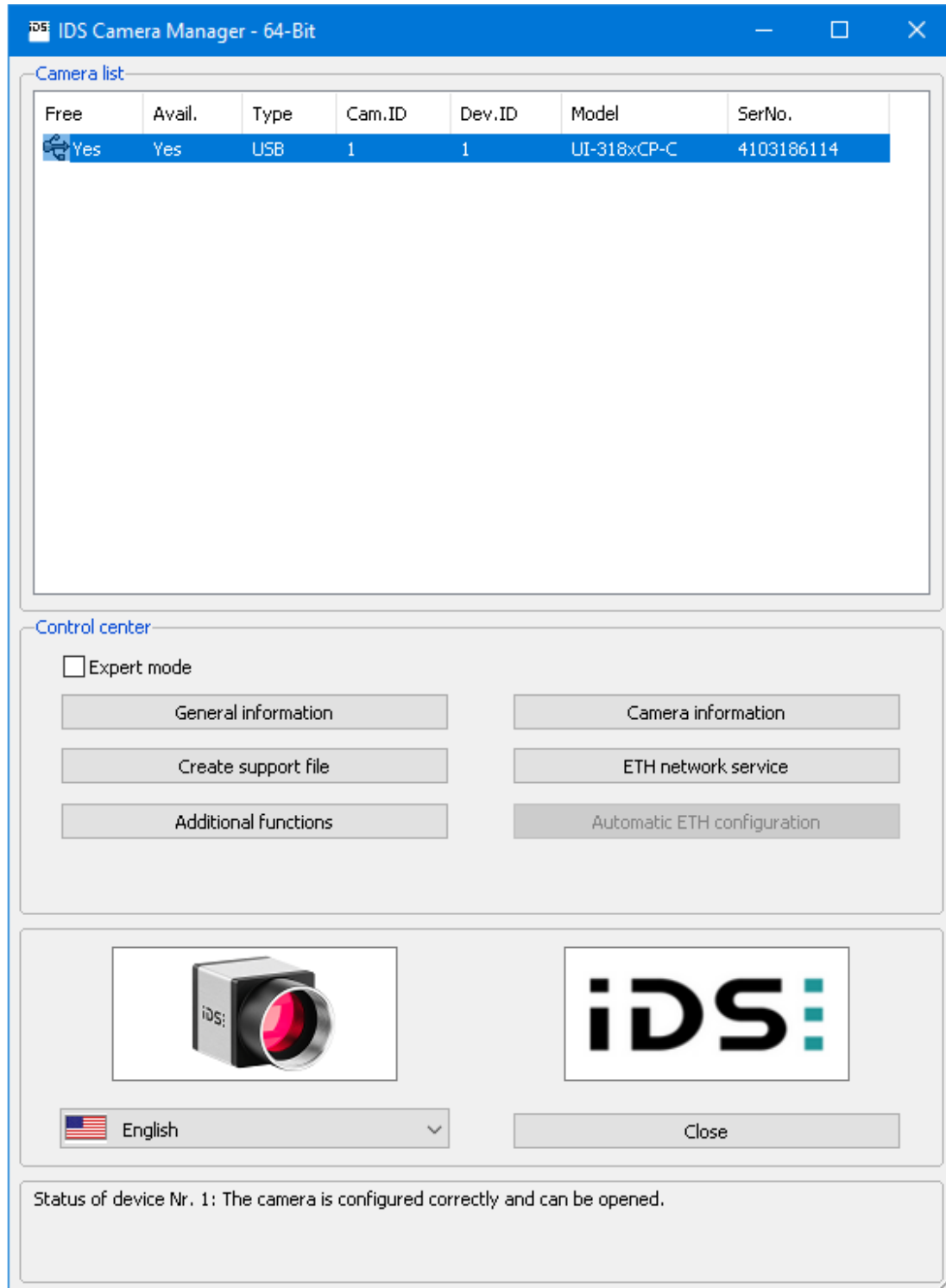


Mount the lower 2 screws and tighten all 4 screws that the heat sink is pressed against the camera holder.

Only loosen camera holder when the distance to the side wall is too short to get the heat sink behind the camera. Mark position of the holder before you loosen the camera holder. Refer to service instruction "Exchange of CP Camera", when you had to loosen camera holder and need a realignment of the camera(s).

3 Enabling the internal memory of the camera

Start “IDS Camera Manager”, which is already installed on the TubeScan PC.
The camera manager will show all connected cameras with serial number.



Select the camera and select “Additional Functions”. Control that “Compatibility mode” is unchecked and “Enabled” is checked. You will have to reboot the system, when you changed this setting.

Additional functions [X]

Camera memory

☐ Compatibility mode ☒ Enabled

Bulk transfer size

[Dropdown menu]

Camera parameter when camera is opened

☒ Default ☐ Parameter set **Erase parameter set**

Boot boost

☐ Enable [Text field] **Set ID list** **Clear ID list** **Add ID** **Remove ID**

Current boot boost IDs: [Text field]

CPU idle states

☐ Disable (battery power) ☐ Disable (mains power)

☒ Allow thread to optimize image acquisition performance (IPO)

Virtual COM port

COM port: [COM100] [v]

Install COM port on the computer (COM100) **Save COM port in the camera (COM100)**

Delete COM port on the computer (COM100) **Send / Receive**

By default the camera is connected to COM port 100. This COM port is not installed on the computer system. You can install COM100 or another COM port on your computer and save the port number in this camera.

Read-only Multicast Configuration

☐ Enable Read-only Multicast

Add read-only Device **Camera Id** [100] **Error Handling** [Refuse incomplete Images] [v]

Remove read-only Device

Open the NYCAMConfig folder and open the file ueye_UI318xCP-C_Stripe_xxxxxxxxx.ini file (xxxxxxxxxx = serial number of the camera). Change Camera memory mode=1 (last setting in this file). If the system had 2 cameras, you need to change the setting in both -.ini files.

4 Mounting of the ferrites

The ferrites are mounted on the red V+ lines as near as possible to the controller board. Fixate the ferrites with cable straps, that they cannot come into the inspection field of the camera.



Ferrite

5 History

Version	Changes	Autor	Control	Approval
1.0	First revision	Andreas Volz	Alexander Bednarsky	Alexander Bednarsky