
User Manual

AGEMA900 Kit

AT-Automation Technology GmbH



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General

Introduction

This user manual describes the hardware of your AGEMA900 upgrade Kit which was developed for connecting infrared-cameras of the series AGEMA900 LW and SW to a PC. The Kit replaces the obsolete OS9-Controller and enables the use of the camera under the latest Windows™ operating systems (e.g. Windows™ XP). The software package Researcher (FLIR Systems) is included, that enables you to grab and process camera images in real time. The documentation of the Researcher-software is delivered with a separate manual.

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Hardware installation

System requirements

In the following table, the system requirements are described for your AGEMA900 Kit

Camera	Infrared camera of the series AGEMA THERMOVISION900 SW or LW
Computer	PC oder Notebook with x86-based 32-Bit-Microprocessor, e.g. Intel Pentium VI. 1 free PCI-Slot
Operating system	Windows™ XP, 2000, ME, 98 Windows™ NT Workstation oder Windows™ NT Server with Service Pack 4 or later installed

Package contents

The AGEMA900 Kit includes the following items :

- Multifunction-PCI-Board IRFlashLink
- Power box
- Cable set
- User manual



Figure 1: Package contents of the Agema900 Kit

The PCI-Board is installed in the PC. It serves for grabbing of the digital image data and control of the camera. Further it includes trigger- and synchronization functions in order to be able to trigger the image acquisition exactly on an event.

The PowerBox delivers the power required for the AGEMA900-Camera and adapts the image signals and communication signals between camera and PC.

PCI-Board Installation

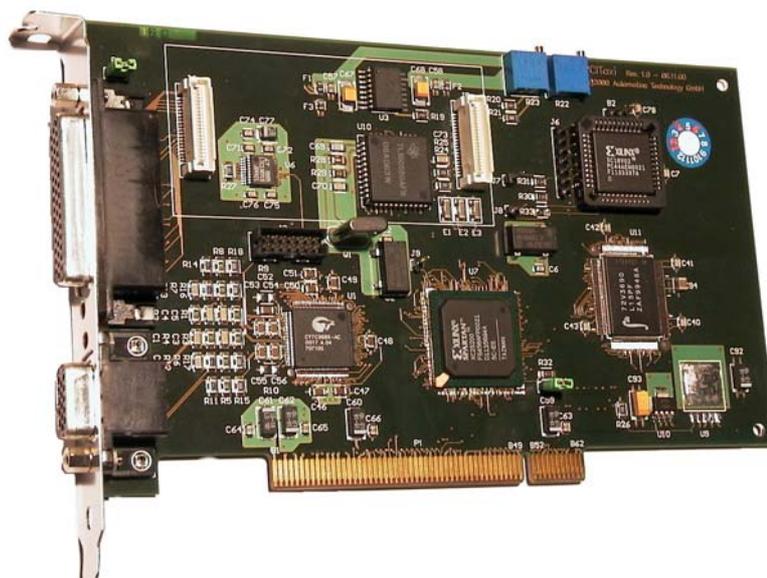


Figure 2: Multifunction PCI-board IRFlashLink

Please read first the user's guide of your computer regarding the installation of additional hardware components.

Observe the following safety precautions when installing or removing system components :

- Turn your computer off.
- **WARNING!:** Computer boards and components contain very delicate Integrated Circuit (IC) chips. To protect the computer and other components against damage from static electricity, follow these precautions.
- System unit cover is closed, power cable is connected.
- Touch a grounded wrist strap before handling computer components. If you do not have one, touch both of your hands to a safely grounded object or to a metal object, such as the power supply case.
- Unplug all power cables from the wall sockets.
- Locate a free PCI expansion slot on the motherboard which is suitable for the card installation and as far away from the graphic card as possible.
- Take the PCI board carefully with both hands. Align the golden connectors of the board over the PCI slot. Insert one end of the card and press it down firmly. Press down the other end and take care that the card is completely seated in the slot. Otherwise a short circuit can happen. Do not use force - the card should move into the PCI slot slightly.
- Replace the system unit cover.

Driver installation

Windows XP and 2000

- After the installation of the IRFlashLink PCI board start your PC and login as administrator.
- Windows(TM) will detect the IRFlashLink PCI card automatically and will guide you through the IRFlashLink PCI card driver installation.
- Put your IRFlashLink CD-ROM in the CD-ROM drive. Windows selects the suitable drivers from the CD-ROM automatically. Proceed the driver installation by accepting the Windows message that the driver has no digital signature. Windows will now identify new devices and installs the required device drivers.

Windows NT4

- After the installation of the IRFlashLink PCI board start your PC and login as administrator.
- Put your IRFlashLink CD-ROM in the CD-ROM drive and change the directory to <CD-ROM drive>\IRFlashLink\NT4.
- Run the program irfl_install_nt4.bat. The IRFlashLink PCI card driver installation will proceed automatically.

Connection of the camera to the computer

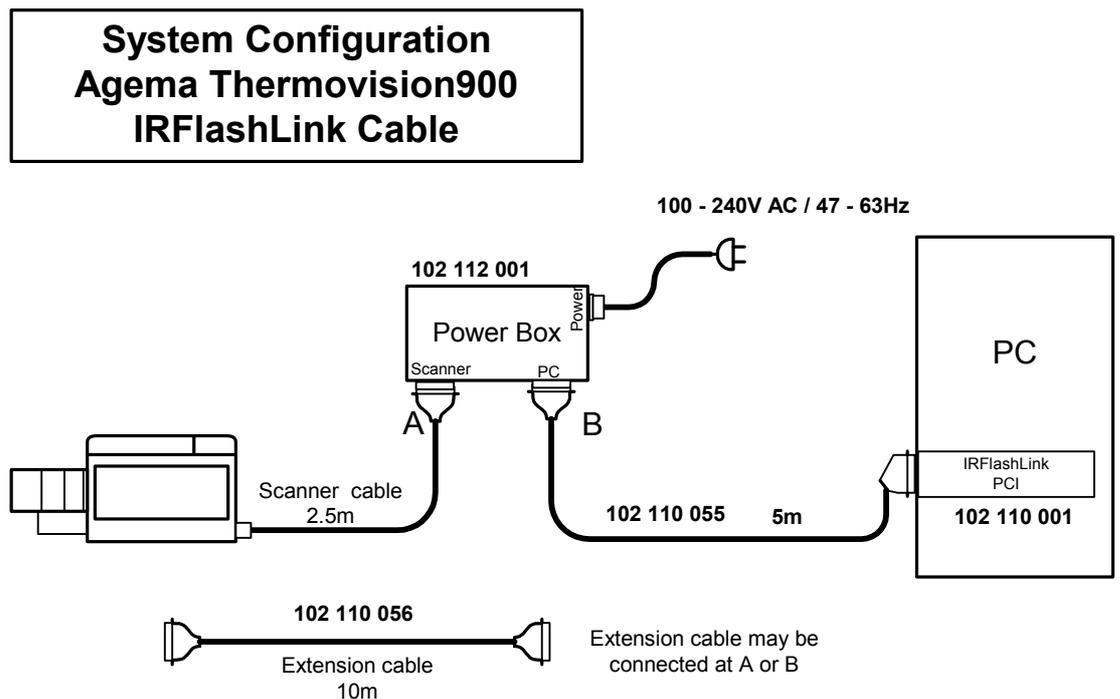


Figure 3: System configuration

- Connect the cable of the AGEMA900 camera to the **Scanner** connector of the PowerBox (Figure 4,1).

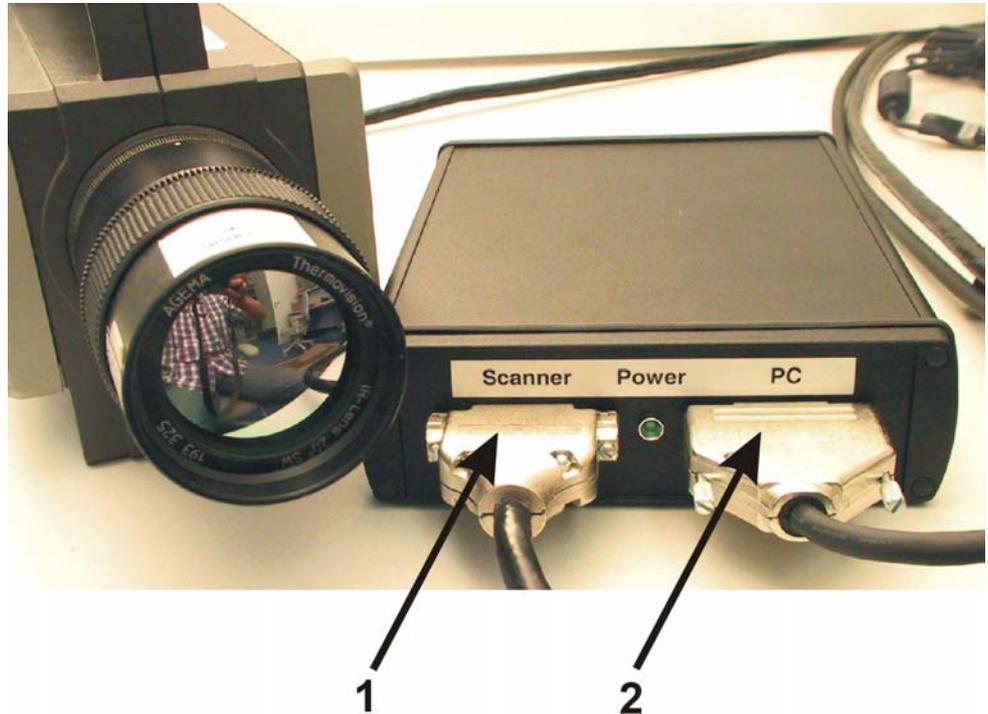


Figure 4: Front connectors of the PowerBox

- Connect the supplied cable with the **PC** connector of the PowerBox (Figure 4, 2) and the other end with the 15-pin DSUB-Connector of your multifunction IRFlashLink board (Figure 5, 1).

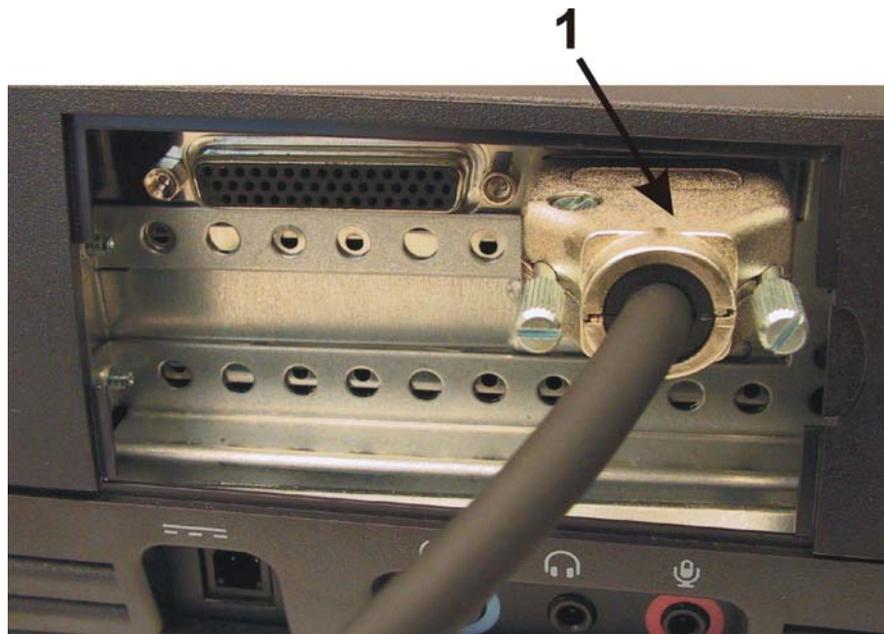


Figure 5: Camera connector IRFlashLink

- Plug the supplied power cable to the power connector on the rear of the PowerBox (Figure6, 1) and connect it to a wall socket. The PowerBox can operate from 100 – 240 VAC / 47 -63 Hz. You can use the PowerBox with AC voltages of european standard (230 VAC) and US standard (110 VAC)

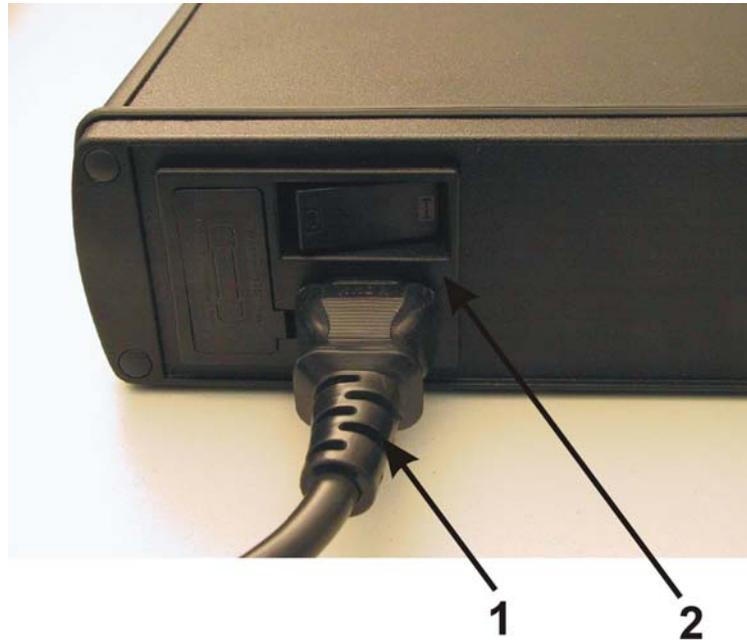


Figure 6: Power connector and On-/Off-switch at the rear of the PowerBox

- Switch the PowerBox on with the On-/Off-switch located at the rear (Figure 6, 2). The power LED (Figure 7) lights and the camera starts.



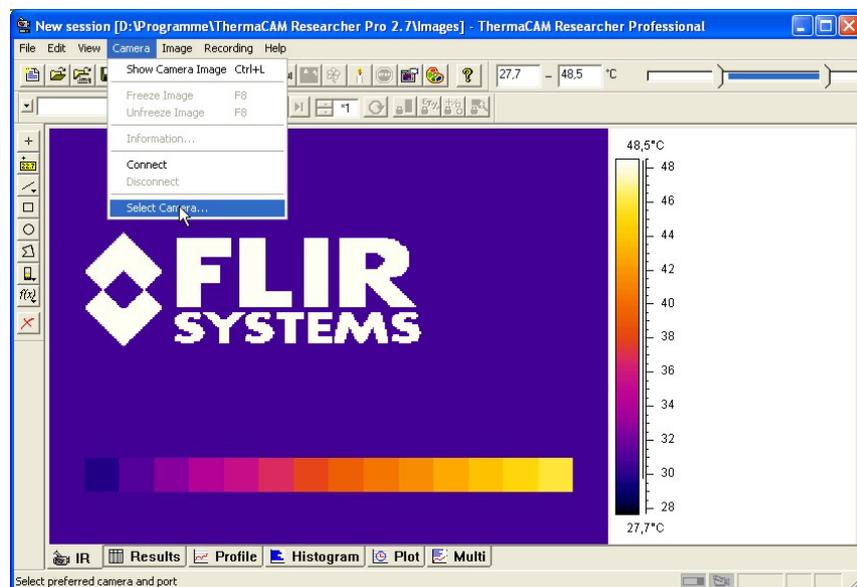
Figure 7: Power LED at the front of the PowerBox

Configuration of the Researcher- software

First install the Researcher- software on your PC as described in the software handbook and then start the Researcher- software.

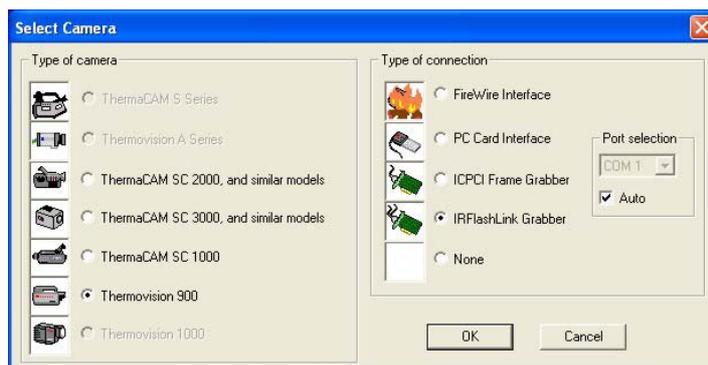
Camera selection

In the menu of the Researcher-software select **Camera / Select Camera...**



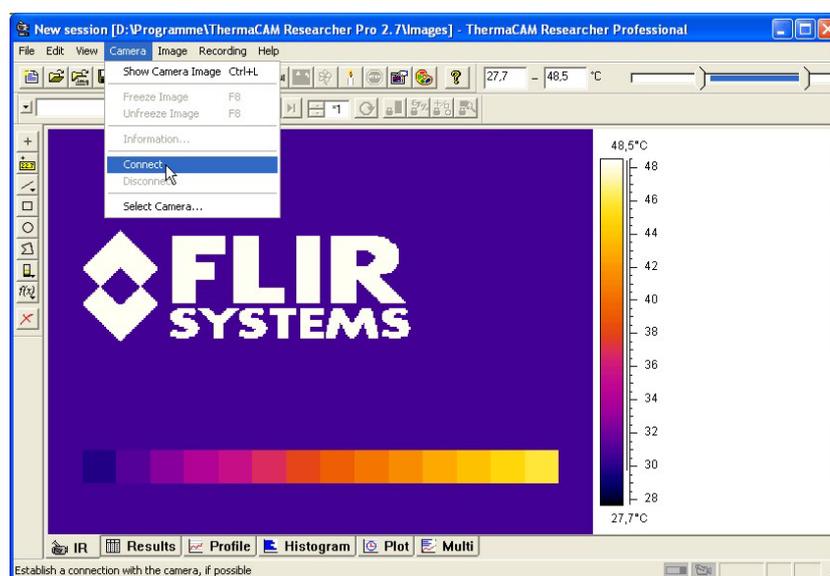
In the configuration window select **Thermovision 900** in the frame **Type of camera**. Then select the **IRFlashLink Grabber** in the frame **Type of connection**. Finally activate the check box **Port selection to Auto**.

Now the configuration of the camera connection is done. Press the **OK** button with a mouse click to accept the new configuration.

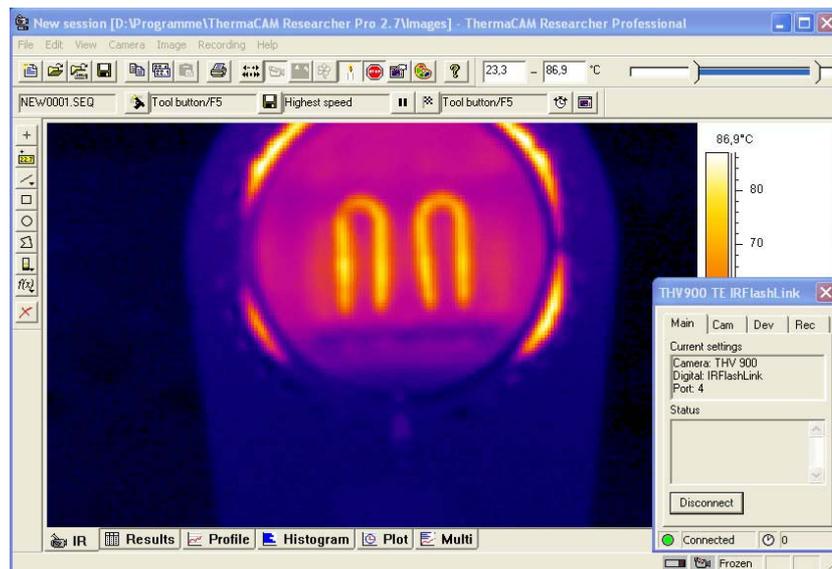


Connect the camera

Select **Camera / Connect** in the menu of the Researcher- software



The live image of the camera is now shown in the main window of the Researcher- software. At the same time the camera control window opens, where the type of the used camera, the type of the used framegrabber and the used serial communication port for controlling the camera is shown.



Now your camera is ready to work with the Researcher-program. A detailed description of the operation and functions of the Researcher-program can be found in the Researcher software manual.

Appendix A

PowerBox

Technical specification

Input voltage	85 – 264VAC / 47 – 63Hz
Input current	1.0A typ. bei $V_{in} = 115VAC$ 0.6A typ. bei $V_{in} = 230VAC$
Power rating	<ul style="list-style-type: none">• +5.0VDC / 7.0A• +12.0VDC / 3.5A• -12.0VDC / 1.0A
Max. total power	60W
Temperature	0°C - 70°C
