



WORKSWELL WIRIS PRO

QUICK START GUIDE

Release date: 5th April, 2019

Revision : 1.3 EN

Standard Package Content

Confirm that the package contains the items listed below:

- WIRIS Pro camera head with lens and WIRIS OS
- Lens protection cap
- Calibration certificate
- Download card
- Micro SD card
- Micro HDMI video cable
- Micro USB data cable
- 10-pin standard peripheral cable
- Power supply cable
- 2x Software license
- Hard transport case
- This Quick Start guide

Package can be extended by additional accessories:

- GPS
- Temperature filter
- Lenses
- Focusing tool

Product Article

The WIRIS Pro device will have an assigned article number depending on the configuration delivered.

Article Number is typically structured like this

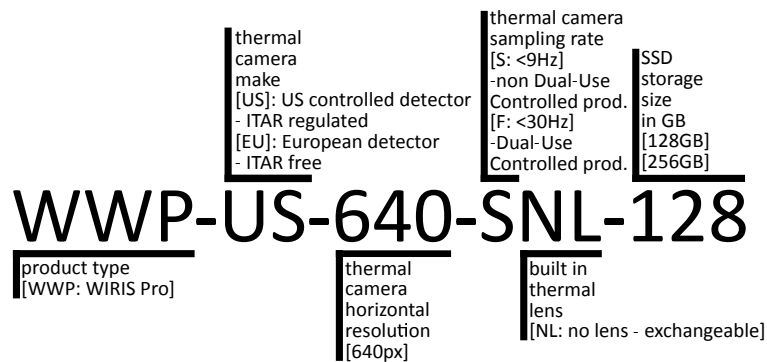


Figure 1 – Product article label structure.

EXPORT STATEMENT:

These commodities are for commercial end use only. They may not be used in the design, development, production, or use of nuclear, chemical or biological weapons or missiles and not be sold transferred or exported to Belarus, Burma (Myanmar), Ivory Coast (Côte d’Ivoire), Libya, Zimbabwe, Cuba, Iran, North Korea, Sudan, Russia and Syria.

System Assembly

To prepare the system please follow these steps:

1. Connect the system to a display or to a wireless video link using HDMI micro cable (included).
2. Connect the system to a RC receiver using S.BUS or connect it to a generic USB keyboard via the rear USB port.
3. Connect the power supply to the system using power supply cable (included). Powered wire is +9 to +36 VDC, ground wire is GND.

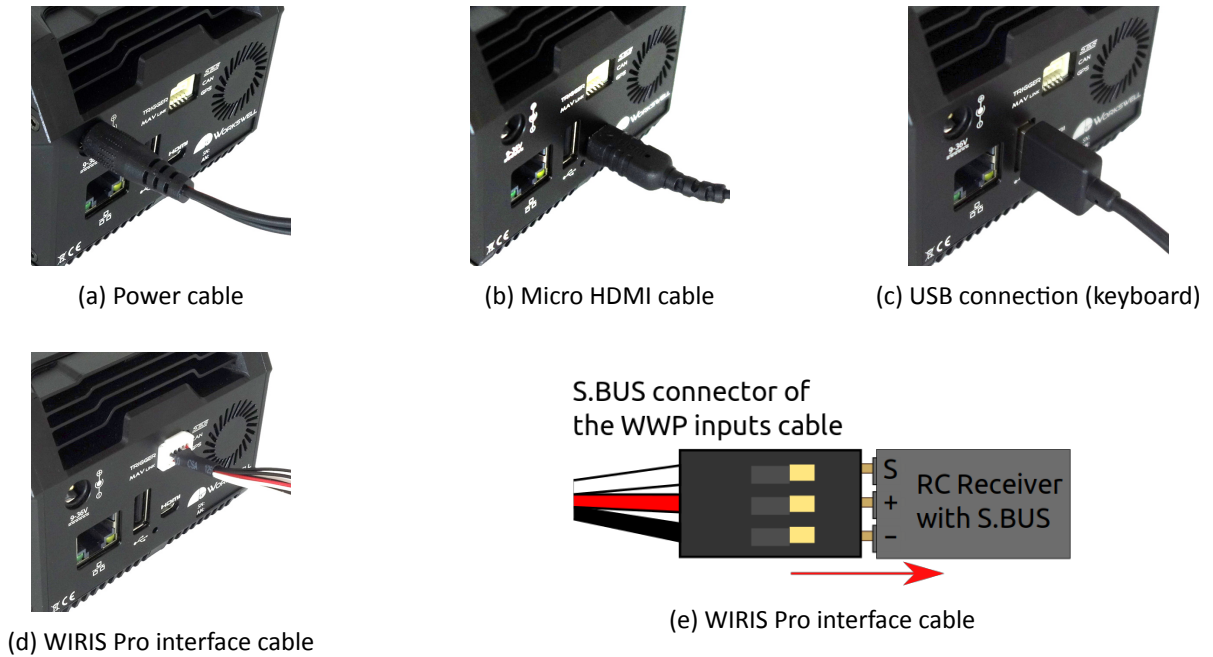


Figure 2 – WIRIS Pro system connectors.

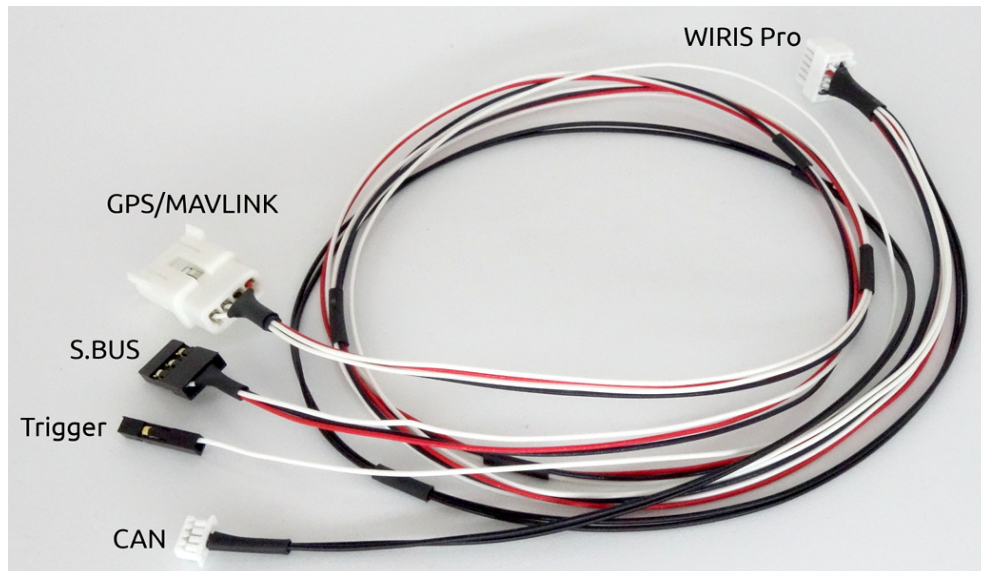


Figure 3 – WIRIS Pro interface cable pinout.

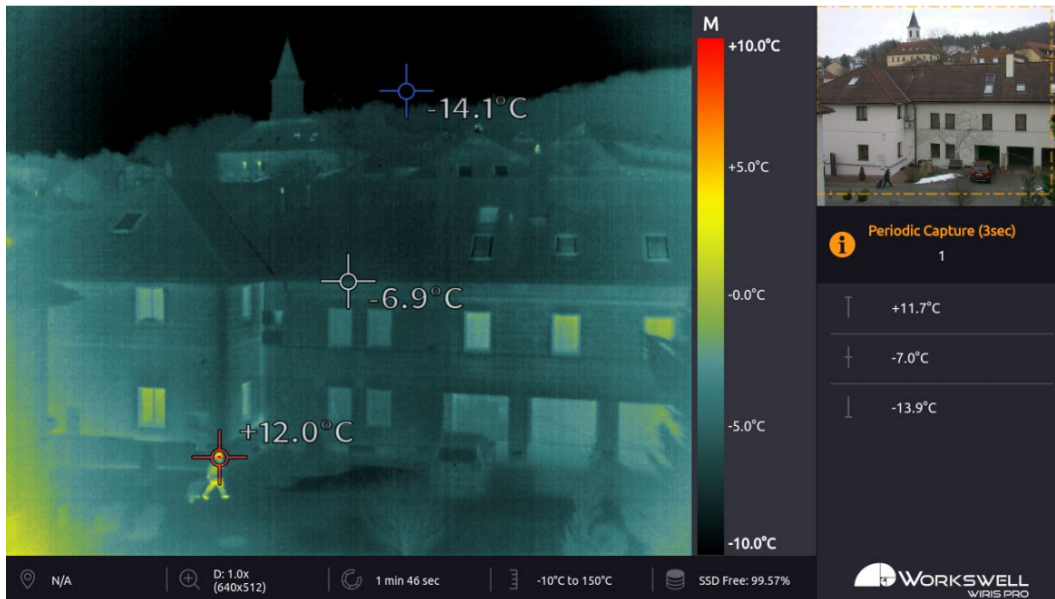


Figure 4 – Appearance of the default application screen.

System Appearance

After connecting the power supply WIRIS Pro will automatically start within seconds. The default WIRIS Pro application screen consists of the following parts:

- PRIMARY CAMERA SCREEN - live stream from the camera currently selected as primary (thermal by default).
- SECONDARY CAMERA SCREEN - live stream from the other camera (visible by default).
- DATA PANEL - customizable display of system status information.
- INSPECTION PANEL - displays summary information about state of the device.

Main Menu (Settings)

The WIRIS Pro system offers many customization options. All the configuration can be done through the MAIN MENU. To open the menu, move the joystick to the right or press the USB keyboard ENTER button. The MAIN MENU will appear on the left side of PRIMARY CAMERA SCREEN.

The MAIN MENU is divided into 6 categories

- RANGE - Automatic or manual temperature range, temperature limits.
- FUNCTIONS - Zoom, Primary camera screen selection, Layout selection.
- PALETTE - Choice from countless different color palette options.
- CAPTURE - Option to manually trigger immediate capture or recording, Image Correction (NUC) and to toggle capture between periodic and one-off.

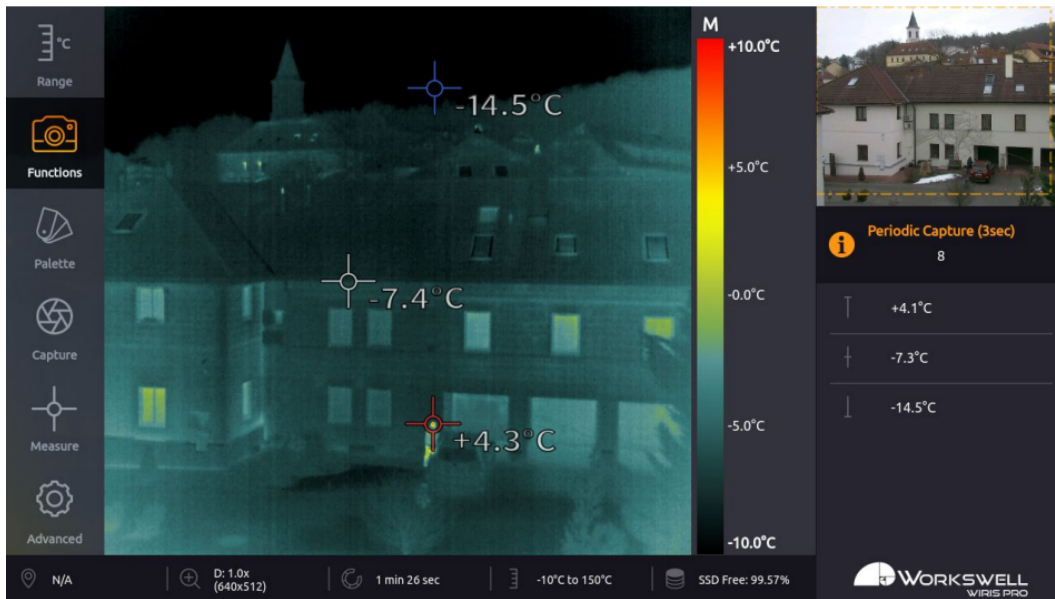


Figure 5 – Main menu of the WIRIS Pro.

- MEASURE - Option to toggle the temperature extreme marking crosses on and off and to activate the temperature threshold based alarm display.
- ADVANCED - Measurement, Display, Save Images, Isotherms, Communication Interface, Memory, System and Info.

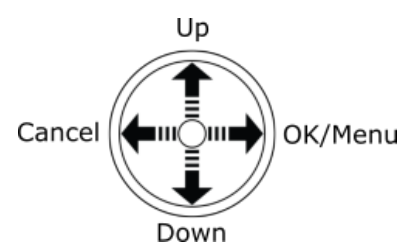
System Control

RC Receiver

For interfacing with RC receivers, WIRIS Pro is equipped with a S.BUS input. The S.BUS input, communicating control of multiple servo inputs allows user to control the system remotely in flight.

It is recommended to use a joystick for navigation in the system menu. If connected as recommended, then the behavior of the joystick is as shown on the following image.

Digital Input	Function
1	Up/Down
2	OK/Cancel
3-4	Optional (shorcuts)



S.BUS receivers tested as functional are:

- FUTABA SBE-1
- HITEC OPTIMA D

USB Keyboard

Besides the digital inputs, the Workswell WIRIS Pro system can be controlled also via USB keyboard.

Digital Input	Function
Up	Up
Down	Down
Enter	OK/Menu
Escape	Cancel
F5	Mode switch
F6	Image capture
F7	Video record
F8	Thermal Camera Correction (NUC)
+	Zoom in
-	Zoom out

Table 1 – RC Receiver behavior table

Data Transfer and Memory Manipulation

Workswell WIRIS Pro system is equipped with internal SSD storage for captured images and recorded video. This storage can be further extended and copied from using an optional SD Card and a Flash Drive.

There's two ways of extracting recorded data from the device. Either through a direct connection to another device acting as an USB Host is made, which makes the internal SSD accessible as a generic Mass Storage device, or by using the removeable SD Card or Flash Drive to transfer the files. Images can be either captured directly to these removeable storage devices, or moved to them manually from the internal SSD storage. Videos can be recorded only to the SSD, but still can be transferred to the removeable devices once finished.

Application Menu

All of the three storage media (SSD, SD Card, Flash Disk) can be managed within the menu through the options ADVANCED > MEMORY > SET [SSD/SD Card/Flash Drive].

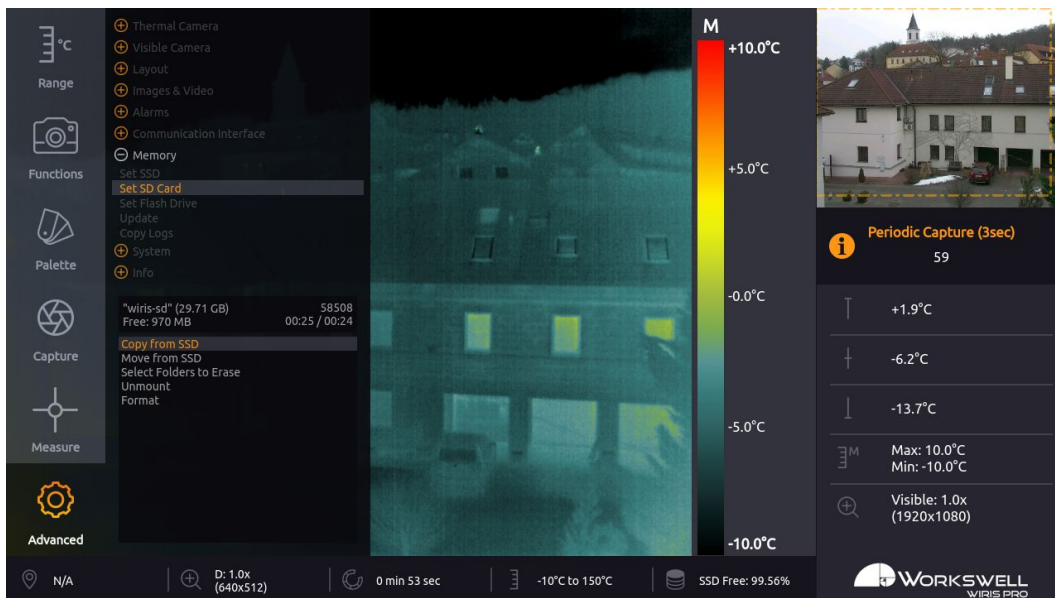


Figure 6 – Storage manipulation submenu.

Mass Storage (USB OTG)

WIRIS Pro can be connected directly to PC or Mac with Micro USB cable and act as a Mass Storage. Thus the data from connected memory can be accessed, copied, moved or deleted.

The WIRIS must be started and running the entire time. When connected, the warning window on the WIRIS display informing about the connection should appear, once disconnected the WIRIS Pro will reboot automatically.

Warning: Only connect external host devices (PC/Mac) to USB Type Micro B slot on side of the device; the rear USB Type A slot is only intended to be used with peripheral devices like the keyboard and Flash Drives. Connecting powered devices to the rear slot could lead to damage of either device.

Editing Images and Video

The Workswell WIRIS Pro system can capture radiometric images and record radiometric video compatible with Workswell CorePlayer (supplied with Workswell WIRIS Pro system). Workswell CorePlayer offers the user many functions for editing and processing radiometric images and videos.

Workswell CorePlayer is available at <http://www.workswell.eu/CorePlayer>

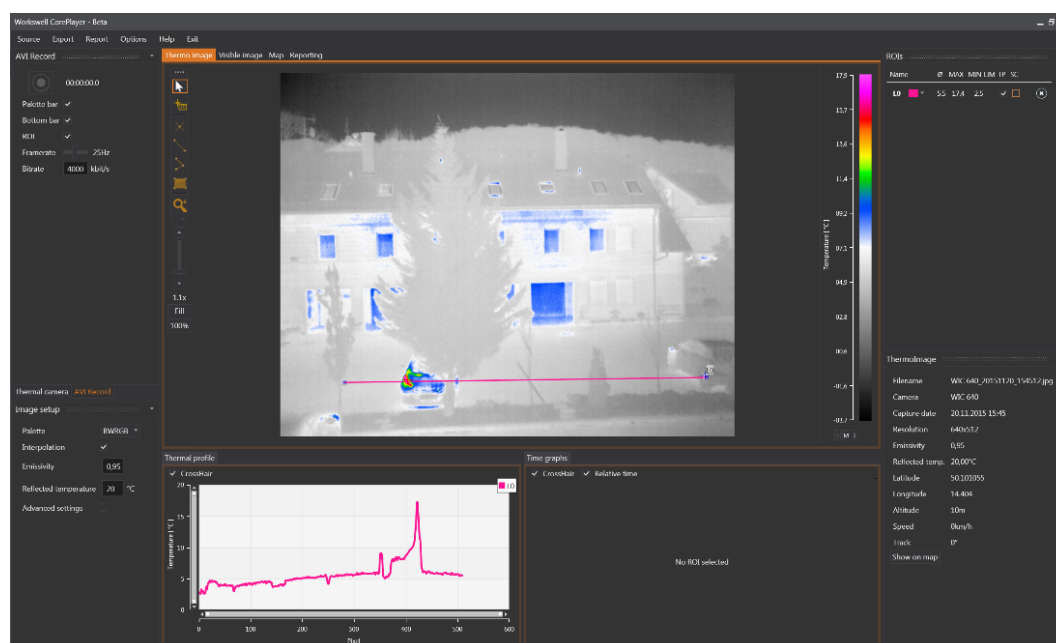


Figure 7 – Workswell CorePlayer

Workswell CorePlayer allows the user to

- Change measurement parameters (emissivity, ...)
- Change temperature range, colour palette
- Use multiple isotherms
- Use measurement functions in multiple ROIs (region of interest)
- Export images and .avi video
- Generate PDF reports and much more...

To learn more, please refer to CorePlayer manual.

Turning System Off

To turn the WIRIS Pro off, simply unplug the powering cable from the power supply.

System Update

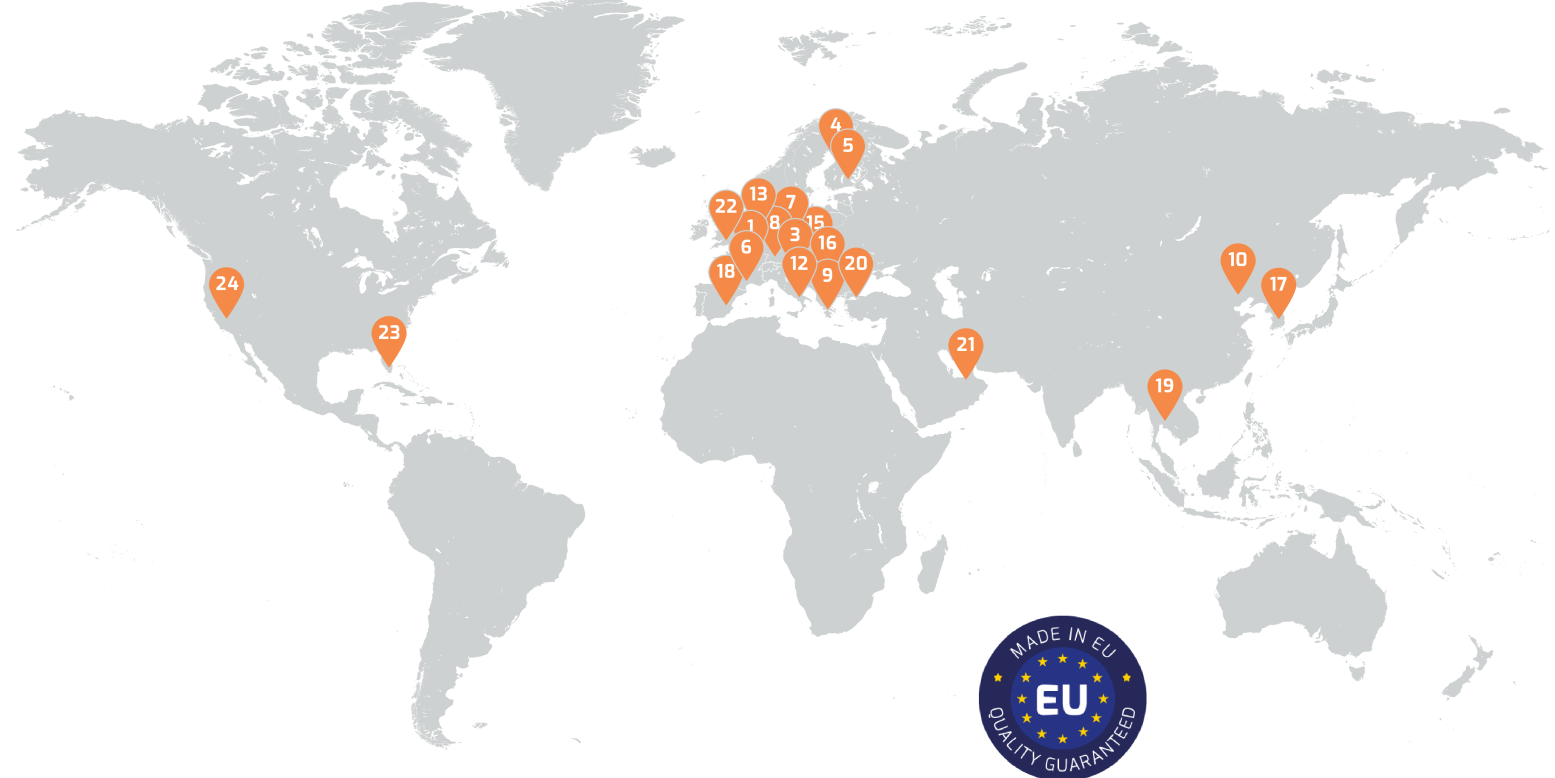
Make sure that the WIRIS Pro version is up to date. The information about the current version can be found on the website: <https://www.workswell-thermal-camera.com/firmware-update/>

User Manual

It is highly recommended to read the WIRIS Pro User Manual before using the device. It contains detailed information including:

- System assembly and control
- Connectors and interface
- Detailed menu description
- Image and video format description
- Data transfer and memory manipulation
- Maintenance
- Troubleshooting

The manual is available in electronic form on the website: <http://www.workswell-thermal-camera.com/documents/>



Contacts

Sales Department

Mobile: +420 725 955 464

E-mail: sales@workswell.eu

Company contact details

Mobile: +420 725 877 063

E-mail: info@workswell.eu

Web: www.workswell.eu

Headquarters

Workswell s.r.o.

U Albrechtova vrchu 12

155 00, Prague 13

Czech Republic

Partners Worldwide

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