

# Xplus



Xplus - the innovative  
industrial endoscope

The all-round tool,  
convincing in value  
and performance

**ND-TEC**

[www.ndtec.net](http://www.ndtec.net)

# Xplus

## Video endoscopy on a new level

The new Xplus videoendoscope has been enhanced with numerous functions, offering brand new opportunities for use. Specially developed for the demands of tough industrial application,

the Xplus is exceptionally robust. Razor-sharp images, simple intuitive operation and an unbeatable price/equipment ratio make the Xplus an all-rounder for many inspections.



## NEW FUNCTIONS

### System/hardware components

- 8GB RAM (Random Access Memory), upgradeable
- Built-in 128 GB SSD (Solid State Disk)
- Microphone connection audio socket for video dubbing
- Two USB-A and one USB-C socket
- HDMI output for external HD screens
- Real-time clock (RTC) for dating images and videos

### Cameras and camera heads

- Probes with MPT (multi-pixel technology) CMOS image sensors, with different depth-of-field ranges and viewing directions as well as multi-camera heads
- New camera heads with diverse lighting technologies (white light fibers/LED/infrared/ultraviolet)
- Built-in sensors, such as temperature sensors (optional)
- Various probe diameters from 1.0mm - 8.4 mm diameter
- Probe material: 4 layers, robust probe surface layer made of tungsten material
- "Steering Map"

### Operating system/software

- Based on the easy-to-use Android platform
- New intuitive operating concept with icons and touchscreen

### Upgradeable functions

- Optical recognition of characters, barcodes and QR codes
- Detailed log files showing running time, operating temperature etc.
- WiFi-capable/Bluetooth
- Built-in, easy-to-use measurement functions with 3D point cloud\*
- Future AI (artificial intelligence) functions run on the three built-in NPUs (Neural Network Processing Units)

*\* available soon*





# Cutting-edge technology for conclusive inspections

## BRILLIANT FULL HD OLED DISPLAY

The high-resolution, high-contrast display can be adjusted to the ambient brightness.

## LARGE TOUCHSCREEN

Intuitive, icon-based application for easy operation.

## INTUITIVELY SIMPLE: JOYSTICK CONTROL

For precise, delay-free probe control, with automatic movement brake for constant probe alignment and tracking.

## ERGONOMIC DESIGN

Ergonomically shaped handle for comfortable working.

## COMPATIBLE BATTERY PACK

Suitable for commercially available standard rechargeable batteries, type 18650.

## HIGH COMPATIBILITY

Slot for SD memory card, two USB-A and one USB-C socket, HDMI output for HD screens and audio socket for microphone connection.

## ACCESSORIES SUPPLIED

- Transport case
- Battery charger (with 4 charging stations)
- Li-Ion battery 18650-protected, 4 pieces
- Power supply unit
- SD memory card incl. USB-A adapter
- Cable: USB-C, micro USB, mini HDMI

## OPTIONAL ACCESSORIES

- Rigid guide tube with handle
- Dekabon tube (semi-flexible guide tube)
- Centering aid (for centering video probes in pipes)
- "Magic Arm" (large or small tripod)
- Magnetic base
- WiFi-capable

## SHOCK-RESISTANT HOUSING FOR TOUGH INDUSTRIAL USE

Made of robust plastic with shock-absorbing buffers.

## ROBUST PROBE WITH 4-WAY BENDING\*

Tough construction – for difficult inspection areas. Robust probe head and probe surface layer made of tungsten material.

## VARIOUS LIGHTING TECHNOLOGIES

White light fiber, LED, IR, UV

## BUILT-IN SENSORS

e.g.: Temperature sensor in the probe head (optional)

## PROBES WITH MULTI-PIXEL TECHNOLOGY

With different working lengths and viewing directions as well as multi-camera heads (dual mode).

## VARIOUS PROBE DIAMETERS

1.1 mm - 8.4 mm Diameter

\* 4-way bending not for all probe diameters





## NDTec: Quality products and service – customer-oriented

### Know-how and quality, for safe inspections

We have been involved in non-destructive visual material testing for over 25 years. With this experience, we have created a wide range of industrial endoscopes, that are now used in almost all industries worldwide. The mechanic in the aircraft hangar trusts in the quality of NDTec endoscopes just as much as the technician who maintains a wind turbine or inspects a technical component.

### Service you can rely on

Customer support is our top priority. We build a strong partnership through personal exchange and advice - as your reliable solution provider.

NDTec also supports you after the purchase with its own repair service. If required, we can provide you with rental devices to bridge downtimes or for testing before purchase.



## Wide range of applications in industrial use

The areas of application for industrial endoscopy are highly diverse: Endoscopes are used to look inside engines, gearboxes or turbines, to detect smuggled goods in vehicles, to inspect weld seams in pipes or even to investigate the structure of a termite mound. The **Xplus Videoendoscope** is your reliable companion in the most diverse fields of work, environmental conditions and applications, with a focus on easy and fast handling and documentation.



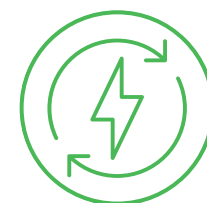
### Aviation

When servicing engines and airframes, hard-to-reach areas can be inspected without the need for dis-assembly. With the **Xplus video-endoscope**, you can carry out inspections quickly and efficiently and obtain safe and conclusive results.



### Process industry

In process plants, downtime means loss of productivity and high costs. Industries such as food, beverage or pharmaceutical, which use a variety of automation systems, often have complex, very thin or very long piping systems for which the **Xplus Videoendoscope** is ideally suited for maintenance.



### Power generation

When it comes to providing energy, maximum availability counts. Preventive functional testing helps to reduce downtimes. The compact and light-weight **Xplus Videoendoscope** is ideal for mobile use, for example in all kinds of turbines, engines, and gear boxes, and enables meaningful inspections.



### Automotive engineering & Traffic

Thanks to its outstanding features, the **Xplus Videoendoscope** is perfect for inspections in the automotive and rail transportation sectors. This includes the inspection of components in ongoing production and in the final inspection, as well as for the continuous quality assurance of engine blocks, injection nozzles, brake systems or cast parts.



### Security

The robust and compact **Xplus videoendoscope** with corresponding accessories is convincing in daily use for fast and reliable resolution of unknown hazardous situations, for vehicle and container inspections by customs, but also for rescue operations in collapsed buildings.



### Infrastructure

The **Xplus videoendoscope** is suitable for inspecting buildings, civil engineering structures, bridges, sewer systems, and ventilation shafts, shafts and for checking building fabric for defects and corrosion. The simple documentation of the inspections facilitates the creation of standardized expert reports.

Camera sensor	CMOS Camera technology
Light source	LED or fiber optic (available as white light, infrared, ultraviolet)
Display	Full HD OLED touchscreen 5.5"
Electrical supply	4 rechargeable batteries, type: 18650-protected; power supply unit with USB-C
White balance	Automatic/manual
Image storage	
Photo	JPG, BMP, PNG
Video	MP4
Storage	Internal memory, SD memory card or PC via USB-C
Angulation	
Control	Motorized joystick, 2-/4-way angulation Real-time with brake function "Explore & Stay" "Steering Map" probe head positioning display
Connections	SD card, USB-A, USB-C, HDMI, audio/microphone connection
Wireless	Optional: WiFi-capable, Bluetooth
Device	
Protection class	Handunit IP54, probe IP67
Ambient temperature	Handunit -10°C to +50°C, probe -20°C to +70°C
Size	38 cm (L) x 17.5 cm (W) x 13 / 10 cm (H)
Weight	From 1.6 kg on, depending on probe

WEBSITE



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## PROBE VERSIONS

Diameter	Working length								
	0.5 m	1 m	1.5 m	2 m	3 m	5 m	6 m	8 m	10 m
1.1 mm	•	•							
1.7 mm		•	•	•					
2.3 mm		•	•	•	•				
2.9 mm*		•	•	•					
3.9 mm**		•	•	•	•				
6.1 mm		•	•	•	•	•	•	•	•
8.4 mm				•	•	•	•	•	•

	FN		FM		FF		SM		DN		DM	
	DOF [mm]	FOV [°]	DOF [mm]	FOV [°]	DOF [mm]	FOV [°]	DOF [mm]	FOV [°]	DOF [mm]	FOV [°]	DOF [mm]	FOV [°]
1.1 mm	3 - 20	120										
1.7 mm	3 - 50	120										
2.3 mm	3 - 50	120										
2.9 mm*	3 - 50	120							F: 3 - 50 S: 3 - 50	F: 120 S: 120		
3.9 mm**	3 - 50	120	5 - 150	110							F: 5 - 100 S: 3 - 50	F: 100 S: 120
6.1 mm	3 - 50	120	8 - 150	110	50 - ∞	80	8 - 150	120			F: 8 - 100 S: 5 - 50	F: 100 S: 100
8.4 mm											F: 8 - 100 S: 8 - 100	F: 100 S: 100

**FN** Forward Near  
**FM** Forward Mid  
**FF** Forward Far

**SM** Side Mid  
**DN** Dual-Cam Near  
**DM** Dual-Cam Mid

\*Tolerance max. 0.1 mm  
\*\*Tolerance max. 0.2 mm

Individual solutions on request.

Subject to technical changes.