

X71



... explore your possibilities

X71

71 MP CMOS Camera

Cutting-edge technology for digitization made in Germany

High-Quality & High-Performance!



The **X71** does represent world-leading technology in modern digital cameras. Our CMOS sensor technology is considered as the key technology of the future, allowing high-resolution images with superior image quality, ease of use and incredible speed.

The modular concept in combination with original tables, repro stands, columns and lighting units provides you with the opportunity to create a customized solution according to the individual requirements of the application.

This way, a universal high-performance scanning system is created which is especially suitable for mobile use and flexible adaptation on miscellaneous requirements.

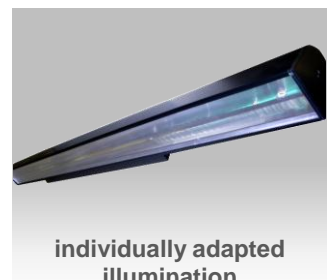
CUSTOMIZING

Integration into existing reprographic systems

Modular concept for specific requirements



special lenses



individually adapted illumination

In-house software:
Easy Scan Professional
Image-processing- and
production software

3rd party software:
Integrated SDK



Repro stand

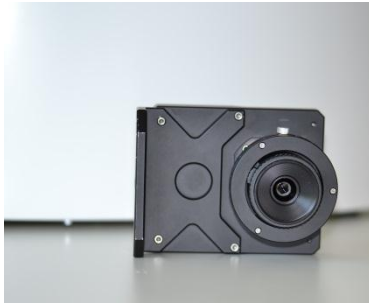


variable original tables

- Book cradle
- Light tables
- Vacuum-suction

X71

fast • robust • flexible



- **71 MP CMOS Sensor - Made in Germany -**
- **71 Mio. Micro-lens System**
- Temperature regulation, - control and -stabilization
- Precision optics from selected manufacturers
- Mounting adapters and high-speed adjustment for flexible, changing installation
- Suitable for mobile and stationary use
- Digital focus adjustment for varying distances
- Adjustable exposure time **0.0001-2.0 sec.**
- Up to **8200 dpi** resolution
- **Scanning speed 0.2 sec.** at 71 MP
- **Image transmission 0.4 sec.** at 71MP
- Image transmission rate **350 MByte/sec.** via USB 3.0 Interface
- Full-frame-, windowed- and video-mode
- TWAIN-, WIA - workflow integration
- Full programmable C++ interface (SDK)
- Electronic shutter for an extended lifespan
- Multi-shot functionality for highest quality
- Cascading of 2- / 3- / 4 camera systems
- Particularly accurate analysis of black-, white- and color for each pixel
- Color reproduction, resolution, noise, linearity according to **Metamorfoze, DFG, FADGI standard**
- Internal 16 bit optimized color analysis (no downstream color-correction profile) for: sRGB, Adobe RGB 1998, eciRGB v1/v2, Wide Gamut, RAW, Native

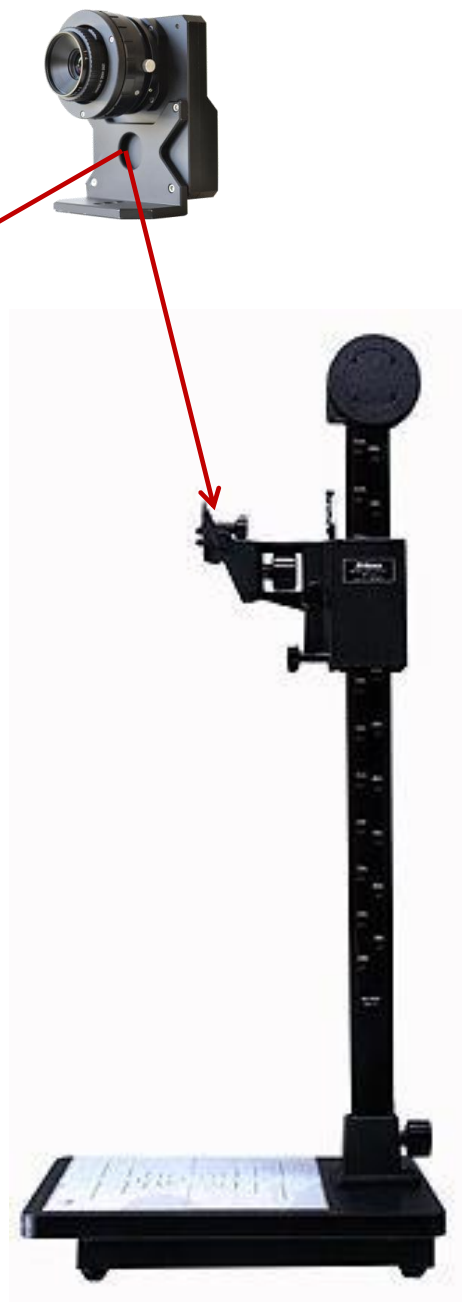
X71

... a flexible application for repro stands

- miniatures or large formats
- flat surfaces or relief structures
- glossy or matt surfaces



- Best quality for all templates, structures and formats!



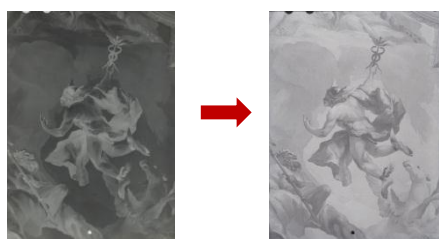
X71

... a supplement for backlighting systems

In conjunction with standard light tables or backlighting systems such as our **book2net backlight scanner**, the camera can be easily adapted to the special requirements of photographic retro digitization.

Thus, fragile objects such as glass negatives, glass and film negatives, glass and film slides or stained glass can be digitized in perfect linearity and brilliant color accuracy.

In addition, with the editing software *Easy Scan Professional* you are getting a user friendly and versatile instrument for archiving and editing your images.



- from negative to positive in just a few steps
- scanning in color, grayscale or black & white
- save as TIFF, JPEG, PDF



book2net backlight
with cold cathode light table (A3-A5)

X71

... for modular use in high end repro systems



The “Grazer Buchtisch”

X71



The “Wolfenbütteler Buchspiegel”

X71

... integrated in **book2net** scanners



The use of our innovative **X71** in our scanners brings you additional advantages in image quality and productivity.

The camera software allows the smooth integration into production software.

The USB 3.0 interface ensures a fast transfer rate of the data sets.

- 71 MP CMOS sensor with BSI technic
- improved image quality
- higher resolution
- reduced processing times
- automatic exposure control
- USB 3.0 interface

Cobra V-Scanner A2 / A1

Large format scanners A1 / A0



Hornet A0

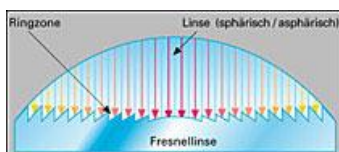
Flash A1

X71

The correct light for best results!

Different templates require different lighting concepts. To ensure the best possible illumination in the field of repro photography and digitization, we have analyzed a wide variety of original and lighting conditions in close cooperation with our customers, and, consequently, we have developed special modular lighting concepts which are available as additional options.

Our **book2net scanners** are equipped with a high quality LED lighting system that provides a stable color temperature during the entire scan process, thus ensuring a faithful color reproduction. Thanks to the use of our **Matrix Sensor Technology** and the innovative process optimization, our scanners work with an **extremely reduced illumination time of only 0.6 sec.** This guarantees a particularly gentle digitization of the templates at minimum light to avoid irreparable damage to paper, ink and colors that can be caused by excessive light intensity. The use of **Fresnel lenses** also ensures a uniform illumination of the entire scan area.



LED lighting system

- UV/IR free (according to EN60825-1)
- glare-free
- low energy consumption < 100 W
- stable color temperature
- durable (10.000 working hours)

Fresnel lenses

- uniform surface illumination with soft edge
- continuously adjustable light emission angle

In the right light!

Precious originals with particularly structured surfaces, special inks, colors or gold plating are demanding more than a standard lighting. For these special requirements, we have developed an additional lighting that guarantees a digitizing without shadows and reflection and can be integrated as required.



LED additional lighting

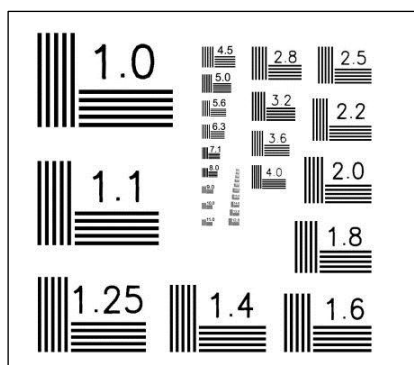
- Light Control Module
 - integrated control module for the precise synchronization of both light sources
 - reduction of light intensity possible up to 2000 lux

X71

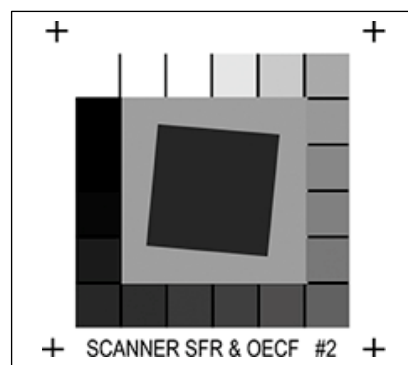
Measurable quality!

To guarantee our customers a consistent and measurable quality, we are working with ISO standards test charts for comparison of **resolution, gray scale and color**.

Our integrated color management fulfills **Nara, Metamorfoze, DFG and FADGI Standards** regarding color quality, resolution, noise.



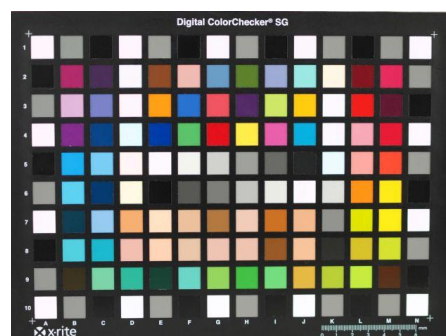
Applied Image Inc® ISO Resolution Chart No. 2



Imatest™ Grey Stepchart (ISO 16067-1-QA-61)



X-Rite® GretagMacbeth Color Checker



X-Rite® GretagMacbeth Color Checker SG



Universal Test Target (UTT)



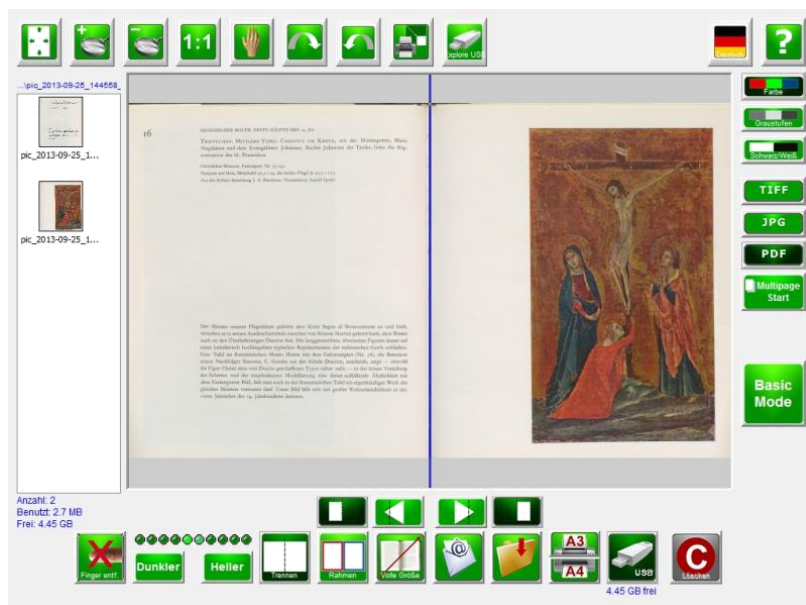
Comfortable image processing with *Easy Scan*

To support the individual processing of your shots, our *Easy Scan* software is a great tool, available in several levels. *Easy Scan* is guaranteed to be intuitive, fast and user-friendly. All parameters settings are visible at a glance, without unnecessary branching in endless submenus. All basic requirements of modern image processing software such as finger removal, page layout and page recognition, automatic cutting and straightening or book fold optimization are performed in the range of milliseconds.

Easy Scan also offers innovative solutions for modern communication: *Easy Scan OCR*, *Easy Scan ePub* and *Easy Scan Audio* are available in more than 120 languages and impress with high accuracy and speed.

Customizable user interface

... by easily enabling or disabling features



- Thumbnail display
- Drag & drop (insert, view, delete)
- Choice of color (COL, GS, BW)
- Choice of format (TIFF, PDF, JPEG)
- Multipage
- Full size scan
- Page separation
- Left side, right side
- Print a defined section
- Adaption of the center
- Contrast control
- Zoom function
- Book fold correction
- Finger removal
- Scan to USB
- Scan to print

Easy Scan Professional

... the easy way to post-processing!

The architecture of the *Easy Scan* software has set new standards in the field of operating software. The intuitive, clear graphic surface allows access to all functions without disturbing branched submenus. With the expansion stage *Easy Scan Professional*, these benefits are transferred directly into the professional sector by meeting the highest standards of performance and quality. *Easy Scan Professional* can be easily integrated into the post-processing workflow. An intelligent job processing with job creation, job retention, job continuation and job processing, provides a basis for a wide variety of uses. Routines for error prevention and intelligent management framework also ensure a smooth workflow.



- Scan in color, grayscale and black and white
- Thumbnail display & features
 - insert, delete, replace by scan or re-scan, replacing with pictures from file, placeholder left side or right side
 - direct reorganization of view and count to actions such as inserting or deleting files
- Job history list to reload already processed scan jobs, including used job parameters
- Multiple processing of digitized scan jobs
 - scan once – process multiple times
 - generating different storage formats
 - change color depth etc.
- Automatic cutting, aligning and sharpening
- Adjustment of brightness / contrast
- Clipping and quick selection between the print sizes A3/A4
- Scan to USB and Scan to copy
- Scan to folder
- Scan to mail
- Different storage formats
 - TIFF, JPEG, PDF
 - multipage PDF, multipage TIFF, PDF-A
- Cutting frame
- One Touch for setting both frames with the same size
- Page separation, with mid shift of the dividing line
- 1:1 Quick view
- 3D-Analyser - Software for geometric book analysis
 - finger removal, edge detection
 - page recognition, type area recognition
- Book fold optimization and book curve correction
- OCR
- Tonal value correction
- Color profiling according to ICC

X71

Hardware Specifications

Sensor	CMOS area sensor 71MP, electronic shutter		
Sensor size	10000 (H) x 7096 (V) effective active pixels		
Chroma	RGB Bayer color / grayscale		
Dynamic range	63 dB		
Exposure time	0,0001 – 2,0 sec		
Speed	0.2 sec. scan- / 0.4 sec. transfer time at 71 MP		
Sensitivity	0,15 A/W (@550nm)		
Frame rate	2,5 fps full color		
Color depth	Intern: 16 bit, Extern: 16 / 12 / 8 / 1 bit		
Capture mode	Single shot, full frame, windowed and video mode		
Input requirement	Single supply; 12V DC		
Power consumption	Operational peak: 6 Watts Stand-by: 1,8 Watt		
Ventilator	Nein; passive cooling concept		
Interface	USB 2.0/3.0 Standard (Hi-Speed/Super-Speed)		
Standard lenses	Schneider 45 A4 to A0		
Special lenses	Special lenses from selected manufacturers (on request)		
Dimensions	105mm x 125mm x 28.5mm (W x D x H)		
Weight	500g, without adapter and lens		
Environmental conditions	Operation:	Temperature 0°C – 45°C	Humidity 15% - 85% (not condensing)
	Storage:	-20°C – 70°C	10% - 85% (not condensing)
RoHS	Directive 2002/95/EC		
03/15 subject to change without notice			

X71

Software Specifications

<i>Device driver</i>	Available for 32/64-bit Microsoft® Windows® 7/8/8.1 operating systems
<i>Basic software</i>	Fully controllable software application for camera adjustment, color calibration, status information, capturing and storage
<i>SDK</i>	Fully controllable interface; C++ communication library provided as DLL
<i>Imaging</i>	White-, black-, linear- and color correction Digital lens correction (lateral chromatic aberration and vignette) Different color-generation types (demosaicing) Median- and sharpening filters
03/15 subject to change without notice	

X71



... we are pleased to support your project!