

# TAC7 Scanner

Physical material scanner for X-Rite's Total Appearance Capture Ecosystem.

x-rite PANTONE®  
TAC

Capturing exact appearance characteristics is critical to improving quality and speeding time to market. The TAC7 scans physical material samples to produce highly accurate digital material definitions. It can be used in normal office environments and is the foundation of X-Rite's Total Appearance Capture (TAC) Ecosystem. With the TAC7 Scanner:

- ▶ Scan physical material samples to bring measurement-driven virtual materials to an unmatched level of realism for state-of-the-art design, production, supply chain and CAD infrastructures for enhanced product lifecycle management (PLM).
- ▶ Use X-Rite's Pantora Material Hub software application to remotely control the TAC7 scanner to scan the sample under multiple lighting conditions.
- ▶ Color, texture, gloss, and other surface appearance characteristics are stored in a highly realistic, accurate and precise digital material specification called an Appearance eXchange Format (AxF) file.
- ▶ AxF files are stored, managed in a library function, viewed, edited and searched for in the X-Rite Pantora Digital Material Hub and distributed to digital material rendering cores and plug-ins for use by third-party 3D rendering systems and X-Rite's Virtual Light Booth.

TAC7 is compatible with large scale IT-Security Infrastructure Requirements

## Key Sensors in TAC7

- ▶ Pattern projector
- ▶ 3 or 4 monochromatic cameras
- ▶ 32 white LED light luminaries
- ▶ Linear light scanner for near specular illumination
- ▶ 3 spectral wheels
- ▶ Backlight illumination for alpha map generation



## TAC7 Scanner Specifications

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Sample size:	▶ 300 mm x 220 mm; Height: up to 30 mm
Measurement spot:	▶ 120 mm diameter, ±3 mm depth of field
Pickup:	▶ 4 monochrome cameras at 5°, 22.5°, 45° and 67.5°
Resolution:	▶ Up to 385 dpi (66 µm per pixel) for 5° camera
Capture time and data size:	▶ Measurement typical: 15 minutes   25 GB raw data for isotropic, medium gloss samples ▶ Post processing typical: 15 minutes   5 - 150 MB processed data depending on computing power and size of region of interest
Illumination:	▶ 32 white LEDs; incident angles: 3 (resolution: 22.5°) x incident directions: 8 (resolution: 45°) ▶ 3 spectral (filter wheel technology) with 8 LEDs ▶ Linear Light Scanner ▶ Backlight Option (H2/2016)
Structured light:	▶ 1 structured light projector for creation of height maps
Supported AxF representations:	▶ CPA (car paint) ▶ SVBRDF ▶ Diffuse albedo map (RGB and spectral) ▶ Specular color map (RGB and spectral) ▶ Specular roughness map ▶ Normal map (replaces need for a Bump map) ▶ Surface orientation map (to capture anisotropy) ▶ Height map (also known as Displacement map) ▶ Fresnel map ▶ Alpha map (-> Backlight Option) ▶ Clear coat maps (Clear coat IOR & normal map)

X-Rite is a world leader in color measurement, management, and communication technology for industries and applications that reach around the globe. We provide the expertise and know-how to make the most of your color and appearance opportunities...right the first time, right every time.