PHASEONE

# RC100

FADGI 4-Star out of the box

# The Phase One RC100

## High-volume performance. Precision results.

Cultural institutions and Digitization Service Providers regularly face the challenge of achieving the highest image quality, meeting the most demanding standards and following strict guidelines, while trying to handle large volumes of objects and materials.

The Phase One RC100 addresses this challenge and provides an Out-Of-The-Box FADGI 4-Star compliance, as well as simple, intuitive workflows. Evaluating the Image Engineering Universal Test Targets (UTT), images are analyzed using NimbusQA*.

Sharing sensor technology and architecture with its iXH siblings, it utilizes high quality, high resolution, low distortion Linos Inspec.X Machine Vision lenses - USB-C and 10G connectivity, and purposefully designed heat sink integration, enabling high capture rate and noise-free images.

Paired with a 60mm lens at 400ppi, it covers an area larger than A2 and is perfect for objects such as, flat A3 documents, newspapers, maps and drawings.

CMOS BSI sensor with an outstanding dynamic range of 15 f-stops, ensure high resolution, accurate colors and low level of noise. Industrial-grade design, with no moving parts and an electronic shutter, allow virtually unlimited number of lifetime actuations. USB-c and 10G connectivity provide maximum flexibility, smooth Live Preview and high capture rate.

The RC100 is fully supported by Capture One CH, NimbusQA, and works with the Phase One D8+ LED lighting system* as well as any 3rd party continuous lighting. The integrated Arca-Swiss type camera mount is compatible with the Phase One AutoColumn copy stands. An optional L-Bracket is available and allows for easy, accurate rotation of the camera around the lens' optical axis.

## Key benefits and features
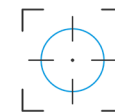
### Capture more, effortlessly

The RC100 handles high-volume workflows with ease, offering infinite capture capabilities paired with machine vision, manual focus optics and flexible high-speed connectivity for uninterrupted productivity.

### Precision in every frame

Achieve consistent, high-quality results with 400ppi A2 resolution and optics engineered for flat document reproduction—perfect for detailed digitization.
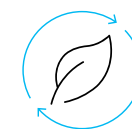
### Sustainable performance, cost-effective solution

Industrial-grade design and flexible high-speed connectivity for high-volume digitization, the RC100 delivers long-term reliability and low operational costs. Optimized for all types of flat documents, it provides scalable, timesaving performance within large scale projects for archives, institutions, and digitization service providers.
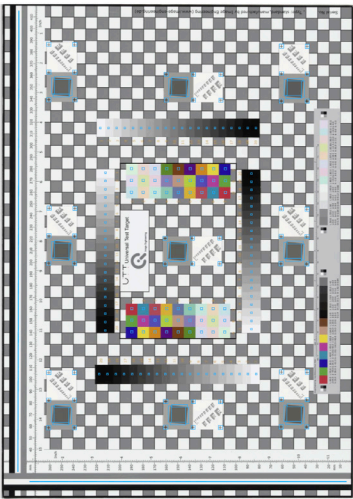
# Input file
## Parameters for test file

| | |
|---|---|
| Target | UTT TE262 |
| Export format | Tiff |
| Export bit depth | 16 bit |
| Export PPI | 400 |
| Capture PPI | 400 |
| Capture color space | ARGB 98 |
| Capture size | 29.1 x 21.8 in |
| Capture aperture | f8 |
| Camera profile | CH D8+ LED |
| Base curve | Linear scientific |
| Capture software | Capture One CH 23 |
| Lighting | Phase One D8 R+ LED |
| Lens | Inspec.X  L 4/60mm |

# Analysis results
## Results for RC 100 w/60mm F4

| | |
|---|---|
| Noise | ★★★★ |
| SFR10 | ★★★★ |
| SFR50 | ★★★★ |
| Bit depth | ★★★★ |
| Color mode | ★★★★ |
| Resolution | ★★★★ |
| Sharpening | ★★★★ |
| Color space | ★★★★ |
| Tone response | ★★★★ |
| White balance | ★★★★ |
| Color accuracy 90 | ★★★★ |
| Master file format | ★★★★ |
| Lightness uniformity | ★★★★ |
| Average color accuracy | ★★★★ |
| Reproduction scale accuracy | ★★★★ |
| Color channel misregistration | ★★★★ |

# Technical specifications
## Phase One RC100

| | |
|---|---|
| Resolution (pixels) | 101 Megapixel 11,656 x 8,742 |
| Pixel size (micron) | 3.76 |
| Effective sensor size (mm) | 43.9 x 32.9 |
| Color depth (per channel) | 16 bit / 14 bit |
| ISO range | 50-1,600 |
| Dynamic range (f-stop) | 15 |
| Capture rate (FPS) | 2.0 |
| Lens mount | M72mm, Phase One mount |
| Shutter type | On sensor Electronic Shutter |
| Shutter speed | 1/4000 - 1 hour |
| Focus positions | Manual |
| Focus control | Manual |
| Mechanical mounts | Arca-Swiss Dovetail, 3/8", optional VHQ L-Bracket |
| Interface | USB-c  / SFP+ Module (1G/10G) |
| Triggering options | Hand release, host capture from software, foot pedal |
| Live View / HDMI | 1920 x 1080 |
| Data storage | Tethered to Capture One CH |
| Dimensions (mm) with M72mm mount (exc lens) | 90x90x73 (90x90x103 with heat sink) |
| Weight with M72mm mount excluding lens and mechanical mounts | 630g |
| Operational temp range (c) | -10 to 40 |
| Humidity (%) | 15-80 (office environment) |
| Lenses | Designed and manufactured by QiOptiq, The Linos Inspec.X lenses deliver the highest quality in terms of resolution, flatness, sharpness, distortion and color required for the most demanding reproduction applications |
| | Inspec.X  L 4/60mm |
| Min. focusing distance (cm) | 55 mm |
| Power system, incl. 5m cable | 24V |
| Software | Capture One CH |
| Min. system requirements | See www.captureone.com for latest system requirements |

# Analysis metadata
## Color, deltaE 2000

| | |
|---|---|
| Mean | 1.4587 |
| Standard deviation | 0.9297 |
| Max | 4.5189 |
| Min | 0.1173 |
| 90th Percentile | 2.6176 |

# Analysis metadata
## White Balance, deltaE(a*b*)2000

| | |
|---|---|
| Mean | 1.1112 |
| Standard deviation | 0.8062 |
| Max | 4.3089 |
| Min | 0.0543 |
| 90th Percentile | 2.1495 |

# Analysis metadata
## Noise, L* standard deviation

| | |
|---|---|
| Mean | 0.5515 |
| Standard deviation | 0.1179 |
| Max | 0.8004 |
| Min | 0.3766 |
| 90th Percentile | 0.7241 |

**Color error bar graph (color patches)**

Legend: ΔE 76 · ΔE 2000 · µ ΔE 76 · µ ΔE 2000 · Ratings
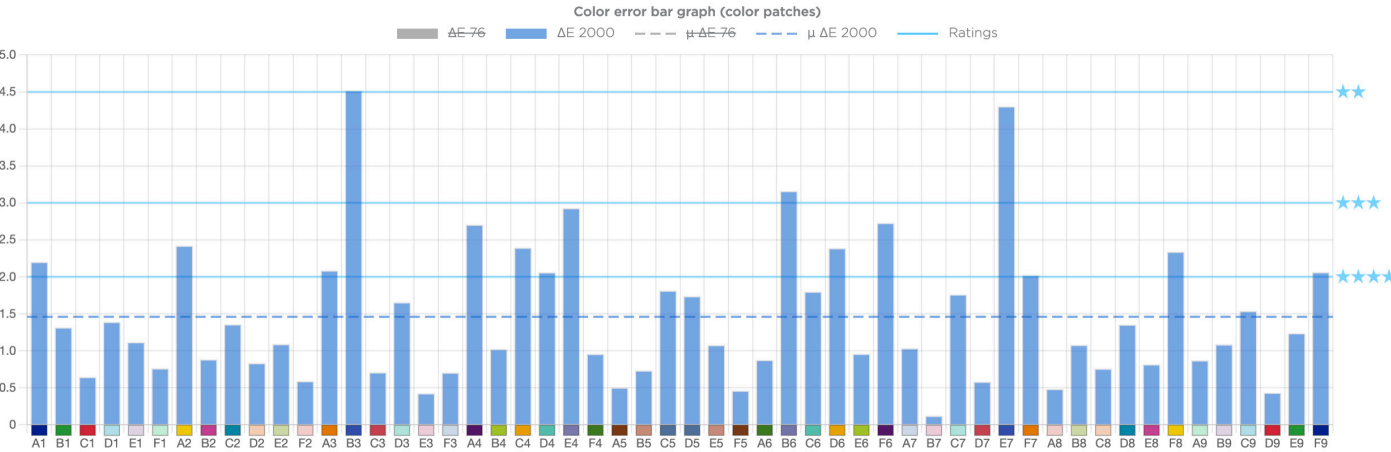


*preliminary ICC camera profile/s

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## About Phase One

Phase One is a global leader in digital imaging technology. Our commitment to imaging quality spans a wide spectrum of applications, from professional photography to heritage digitization, industrial inspections, aerial mapping, security and space.

With over three decades of innovation, Phase One has pioneered core imaging technologies and a range of digital cameras and imaging modules, setting new standards for image quality in terms of resolution, dynamic range, color fidelity and geometric accuracy. Together with its customers, technology partners and its global network of distributors, Phase One drives the imaging industry forward.

We deliver Imaging Beyond Imagination.
**www.phaseone.com**