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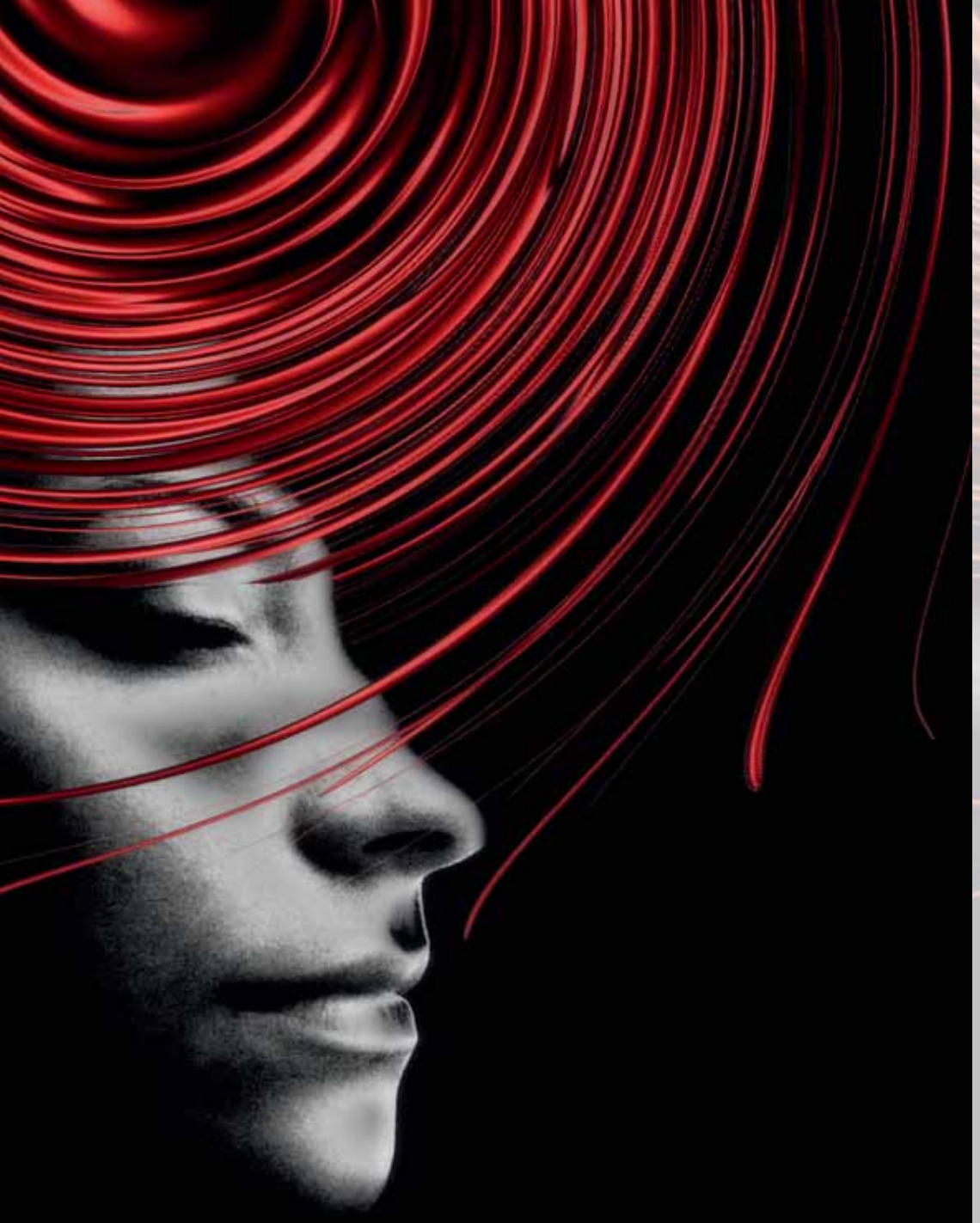
QUATO®

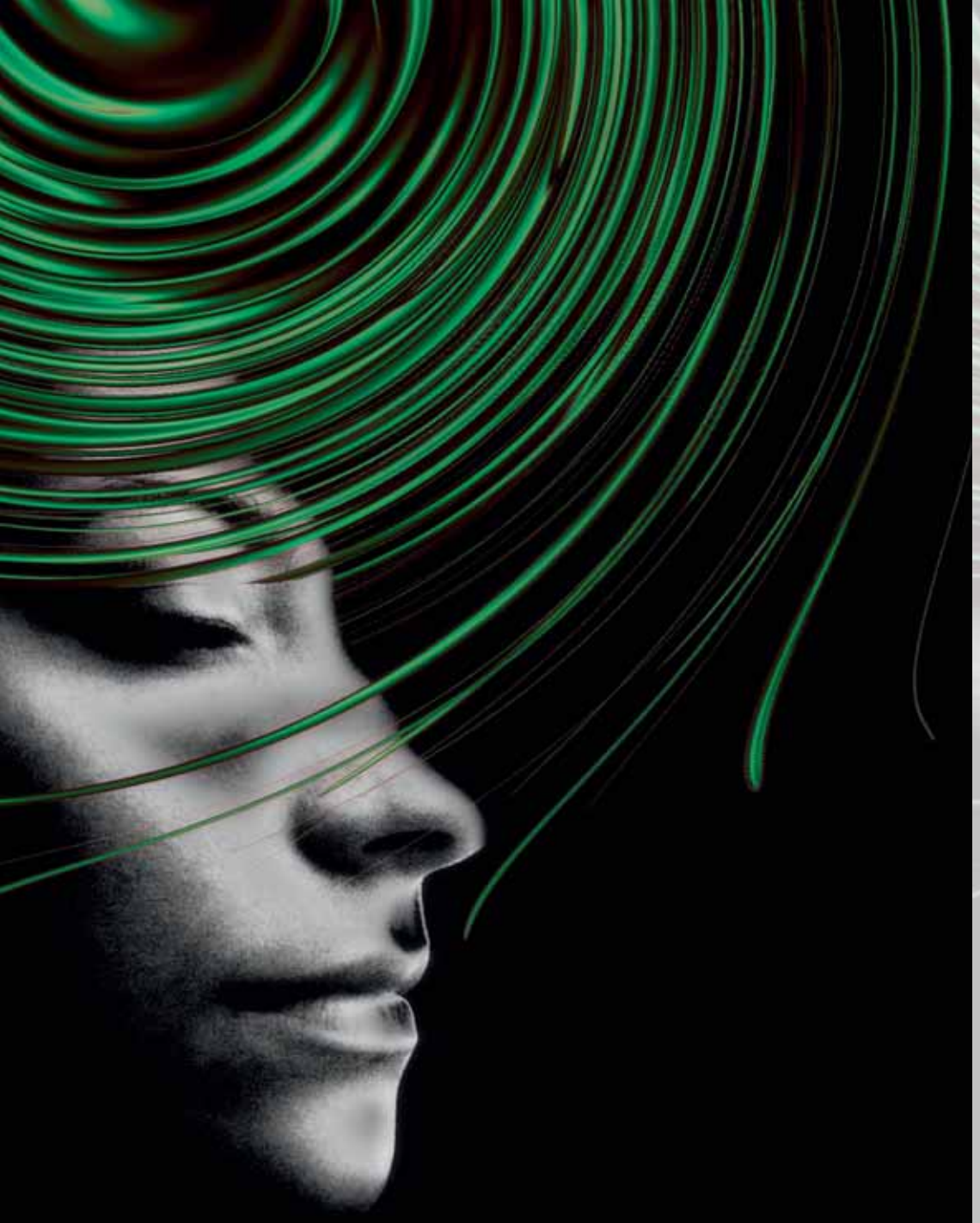


Solutions for creative professionals

For more than 20 years, Quato has been a professional provider of products for photography, design and prepress. The requirements of professional solutions have changed a lot since Quato introduced the first mass production hardware-calibrated CRT ten years ago. Although the monitor is the center piece of a color management workflow, it must be surrounded by additional hard- and software to build a versatile input and output system. Focused on that maxim, Quato has become a competitive solution provider, consequently.

In the day to day work in graphic arts and industry, color is a central issue. More and more tasks, previously performed by specialists, are now performed by the creative professionals. The prepress area on the other hand is confronted with the rising demands in case of speed and quality. The solution for both parties is to harmonize the color performance and reproduction between all parts of the workflow. That's the only way to ensure a consistent color transformation from the creative professionals to the final print or product.

The heart of this workflow is - of course - the monitor that acts as a creative tool on the one hand and as a precise judgement instance on the other hand. Photographers need a precise color control in real-time, prepress professionals demand a precise reproduction and simulation of CMYK data while graphic designers want to judge their spot colors on the screen. Consequently, Quato offers displays that match the requirements of all the different users.

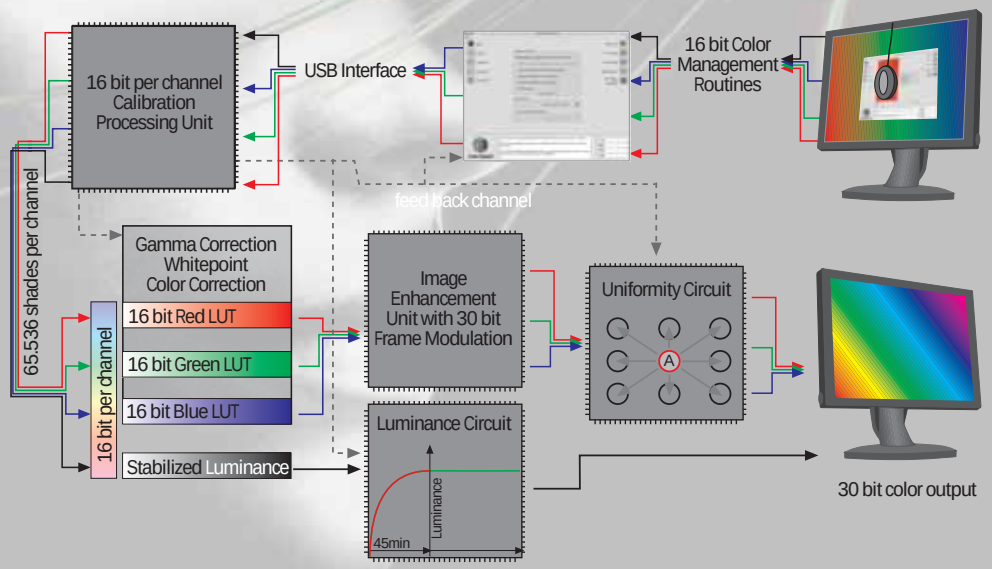


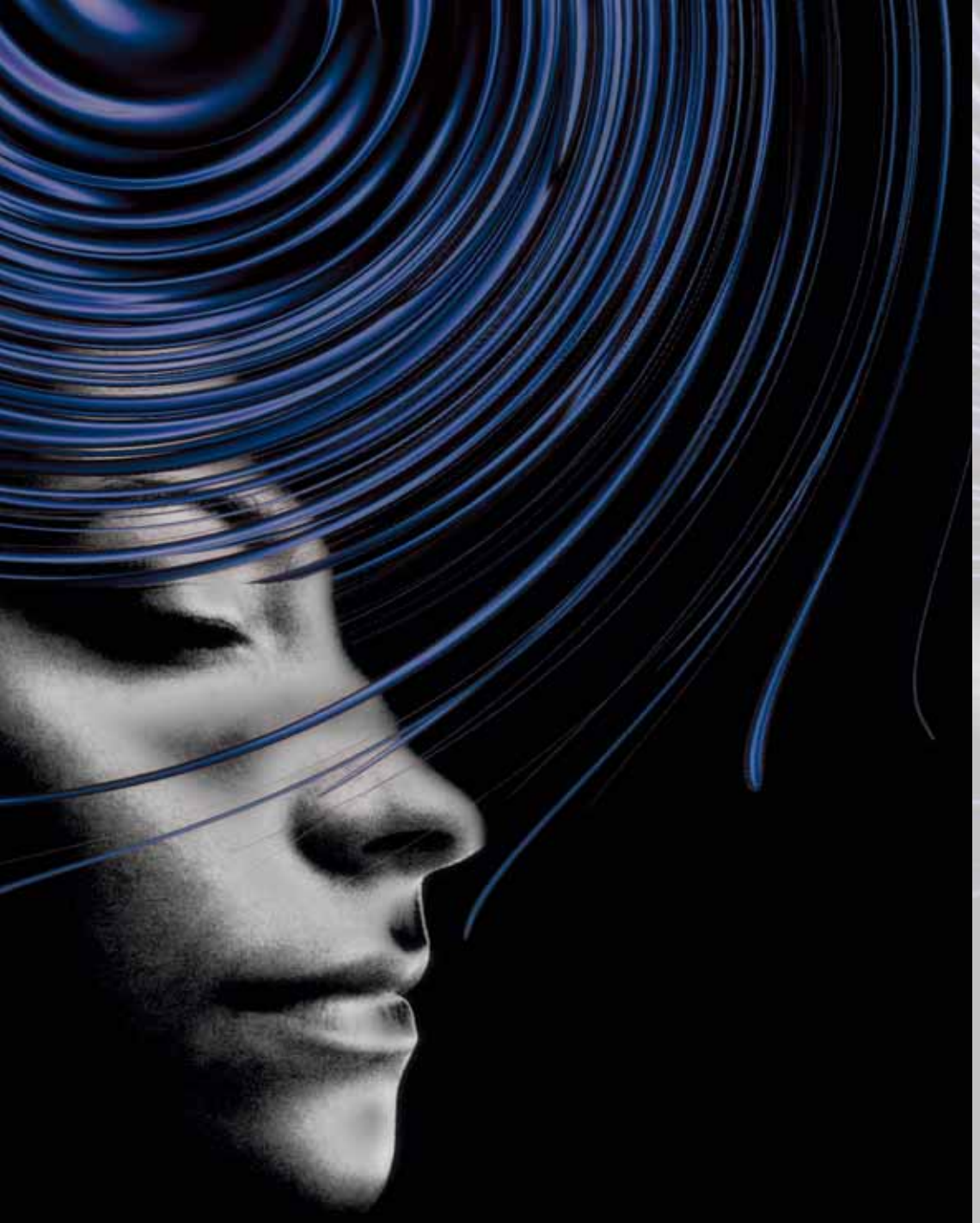
The technology behind the scenes

The color performance of a monitor is closely connected to the additional solutions for the calibration of printing devices and applications that support a high quality simulation of a print or other output. Quato is setting the pace with solutions that offer a perfect workflow - no matter for which application.

· Graphics /Communication Design
· Desktop Publishing and Web design
· Photography and Image editing
· Prepress and Press
· Textile/ Industrial Design
· Fine-Art Reproduction

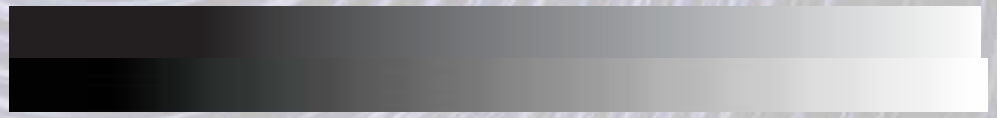
The hardware-calibrated Quato Intelli Proof - as a primary tool in the workflow - offers sophisticated features for all digital color work. The automatic calibration adjusts the display's internal color correction table with up to 16 bit precision. Instead of the limited 256 steps with a software calibration, the display is internally adjusted with up to 65.536 steps.





Advanced uniformity compensation

Compared with the hardware calibration, a software calibration has to take the way through the graphics card to correct the color tables. That reduces the precision and the number of available shades per channel.

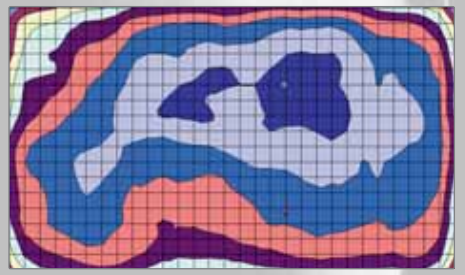


Graybalance after hardware calibration (top) vs. software calibration (below)

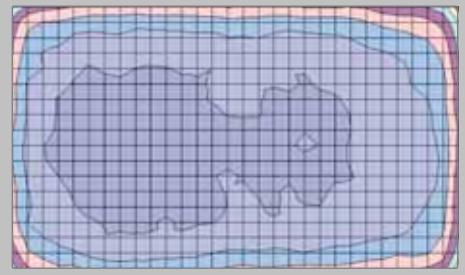
An extensive gray balance calibration ensures that Quato displays meet the tight UDACT certification standards and SWOP-certification.

Today´s displays suffer from several uniformity issues. While a luminance change from the center to the corners might be acceptable, a color shift from left to right is most likely to be unacceptable. While direct backlight sources can significantly reduce the luminance non-uniformity, the color shift can not be fully compensated. Due to this limitation of backlight technology, Quato has developed the ADC-circuit (Area Dimming Control) that separates the display into 25 independent areas and individually corrects the deviations over the whole screen.

Additionally, the sensors in the back of the display track temperature, luminance and whitepoint, keep the display adjusted to the calibration parameters and provide a real-time feedback to the ADC-controller. Therefore, the ADC equipped Quato Displays meet the ISO 12646 uniformity and also the Fogra display certification standard for softproofing displays.

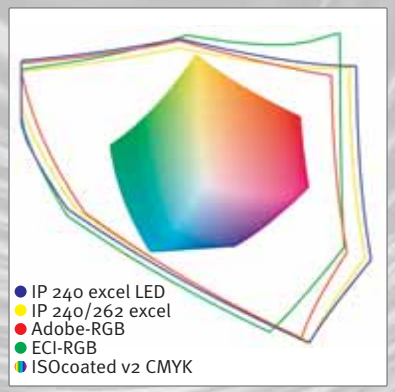


Before uniformity compensation



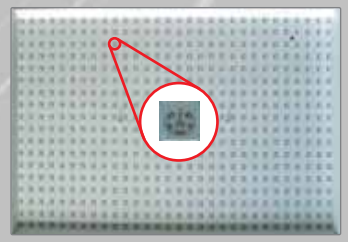
After uniformity compensation

Intelli Proof excellence Displays



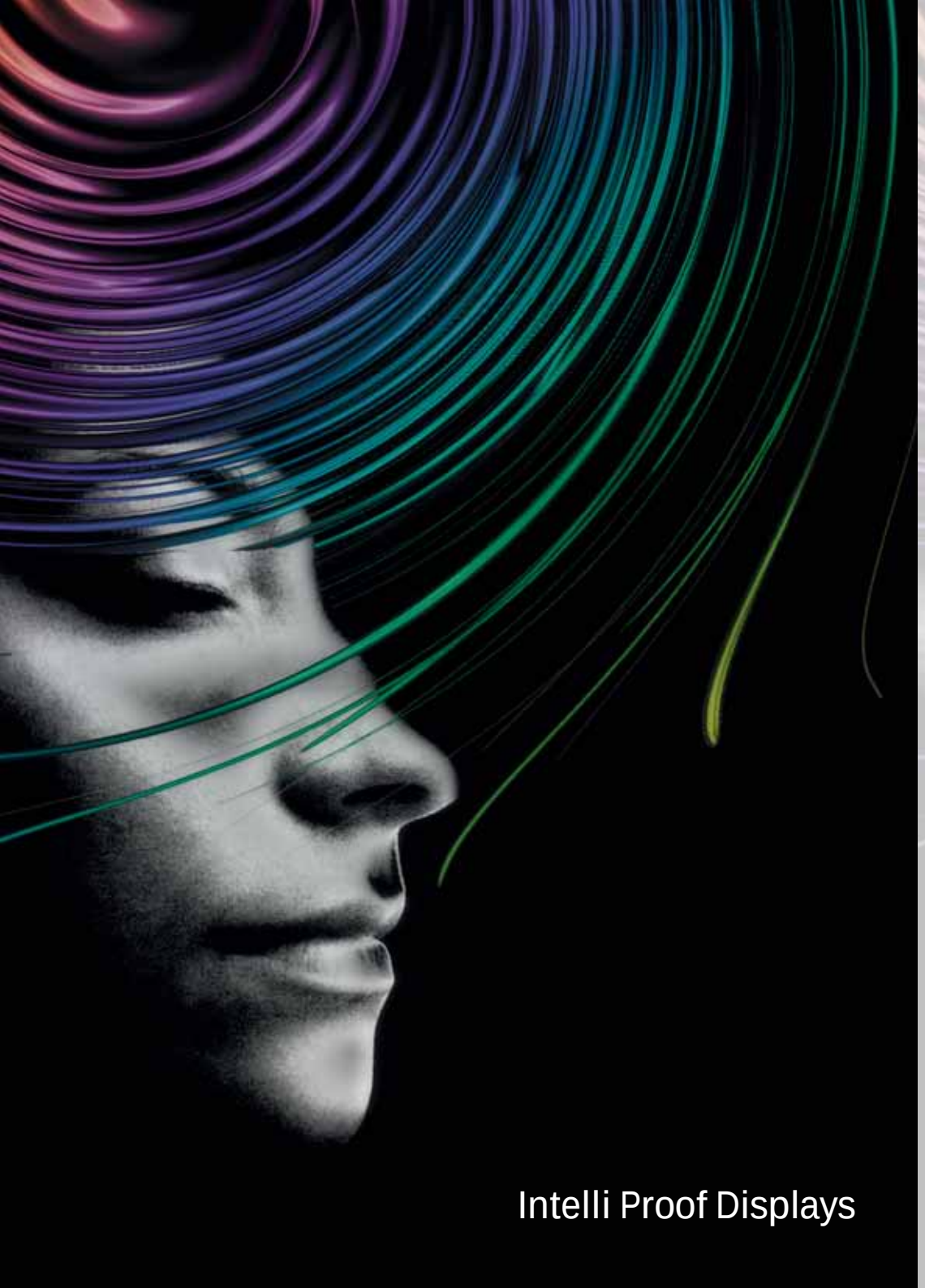
With the Intelli Proof 262 and 240 excellence, Quato offers S-IPS based Wide Gamut displays that - in contrast to other Wide Gamut systems - are not only optimized for Adobe-RGB but also for the ISO 22028 standard - better known as ECI-RGB. ECI-RGB covers all standardized printing technologies and is therefore the best choice for the RGB working space. The Intelli Proof 262/240 excellence offer a nearby full coverage of ISOcoated v2 and closely reach the level of a contract proofing system for the high-precise print preview on the screen.

But not only prepress, image editing and design benefit from these first-class displays, also high end photographers can streamline their input to output by using the Intelli Proof 262/240´s nearby 100% Adobe-RGB coverage. For the first time ever, it is possible to see what the camera recognizes. That's color WYSIWYG at its best.



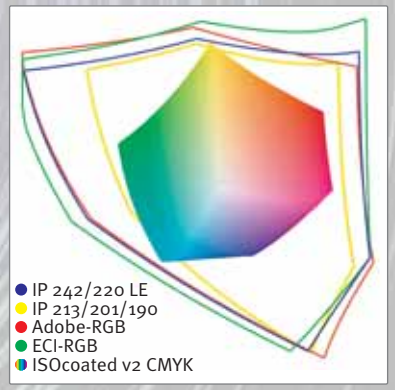
The RGB LED-backlighted Intelli Proof 240 excellence LED reaches an even higher level. The use of 1.620 selected LEDs for the backlight and plus optimized filters offer an extremely wide gamut that creates an extraordinary quality level which bypasses the ISO 12647-7 proofing standard and transforms the display into a true visual contract proofing system with native 10bit output for billions of shades.

If only a basic Adobe-RGB and ISOcoated v2 coverage is needed, the Intelli Proof 213 and 220 excellence are a good choice for professional users for photography, image editing and softproofing. Both units offer the same precise color rendering and low color shifts at higher viewing angles like all other Quato S-IPS based displays.



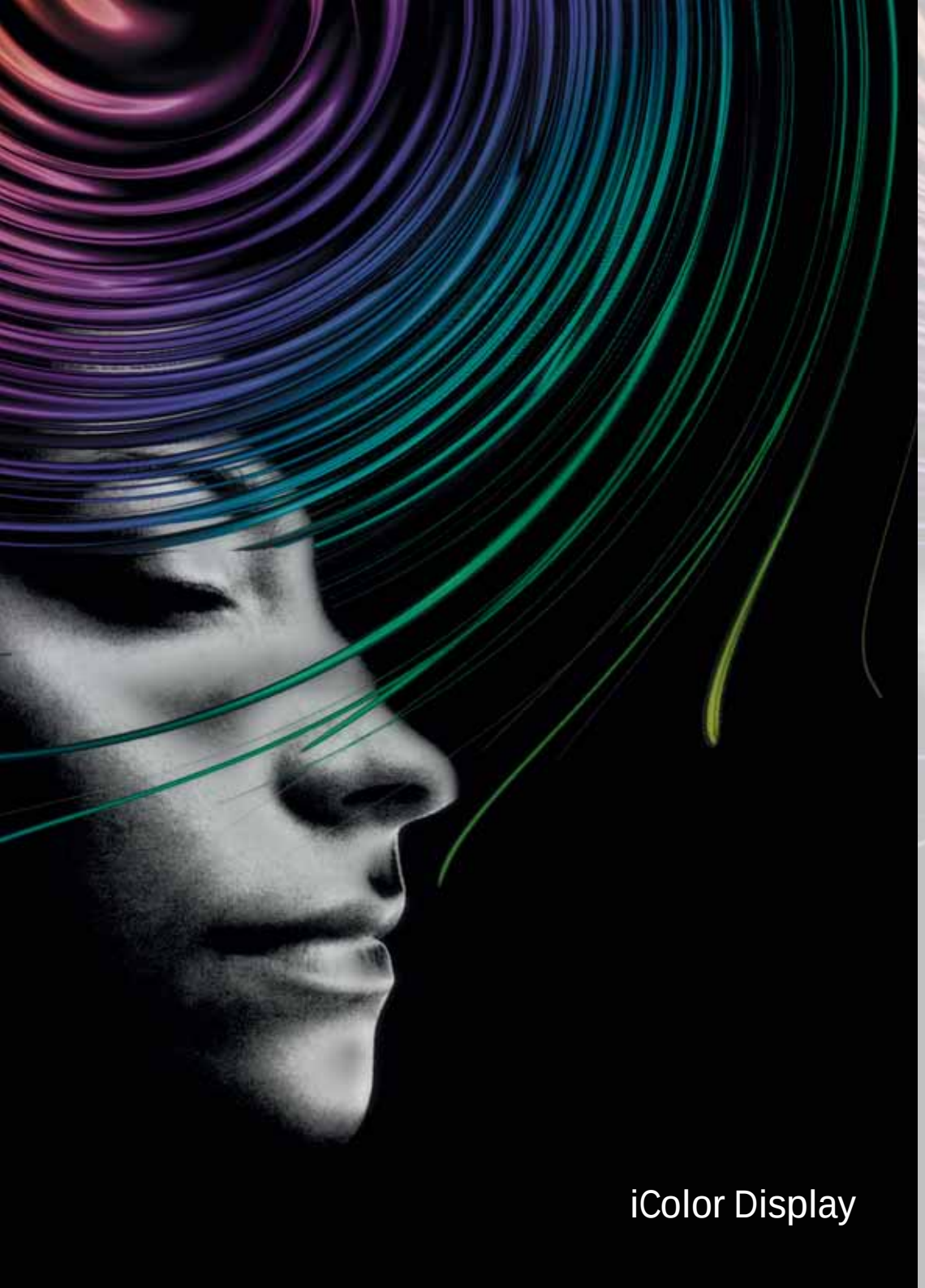
Intelli Proof Displays

For professional users that do not need a Wide Gamut display, Quato offers the S-IPS based Intelli Proof series with display sizes from 19” to 21.3”. These units offer a consistent color workflow with excellent gray balance and precise color reproduction. Based on the proven Intelli Proof technology, the displays offer an ISOcoated v2 coverage of up to 94% and can reproduce nearly the full sRGB gamut.



For budget-oriented and less demanding users, Quato offers the wide gamut S-PVA based Intelli Proof LE series. The LE series offer an easy to use approach to calibrate the monitor with a hardware calibration interface. It offers a cost-effective entry to the hardware-calibrated display class with reduced features, but without crucifying the calibration precision.

The human eye is heavily influenced by environmental issues in the way that the surrounding light changes the perception of colors. Thus, wrong or insufficient environmental lighting is one of the most problematic issues upon comparing softproofs on a display with prints. The tonal response of a print always depends on the light that is used to illuminate the viewing area. ISO 12646 and 3664 define D50 as the standard lighting for judging colors and proofs. Therefore, every Quato display comes with a light indicator and a reference print that help to judge whether the lighting conditions and the color management setup are suited for print to screen comparisons or not. As lighting is crucial, Quato offers the Lightbox XL2 and XL3 as a perfect companion for a Quato Intelli Proof display. The A3+ D50 viewing booth can be dimmed or automatically adjusted (XL3) to the display’s luminance and is therefore perfectly suited for precise display to print comparison.



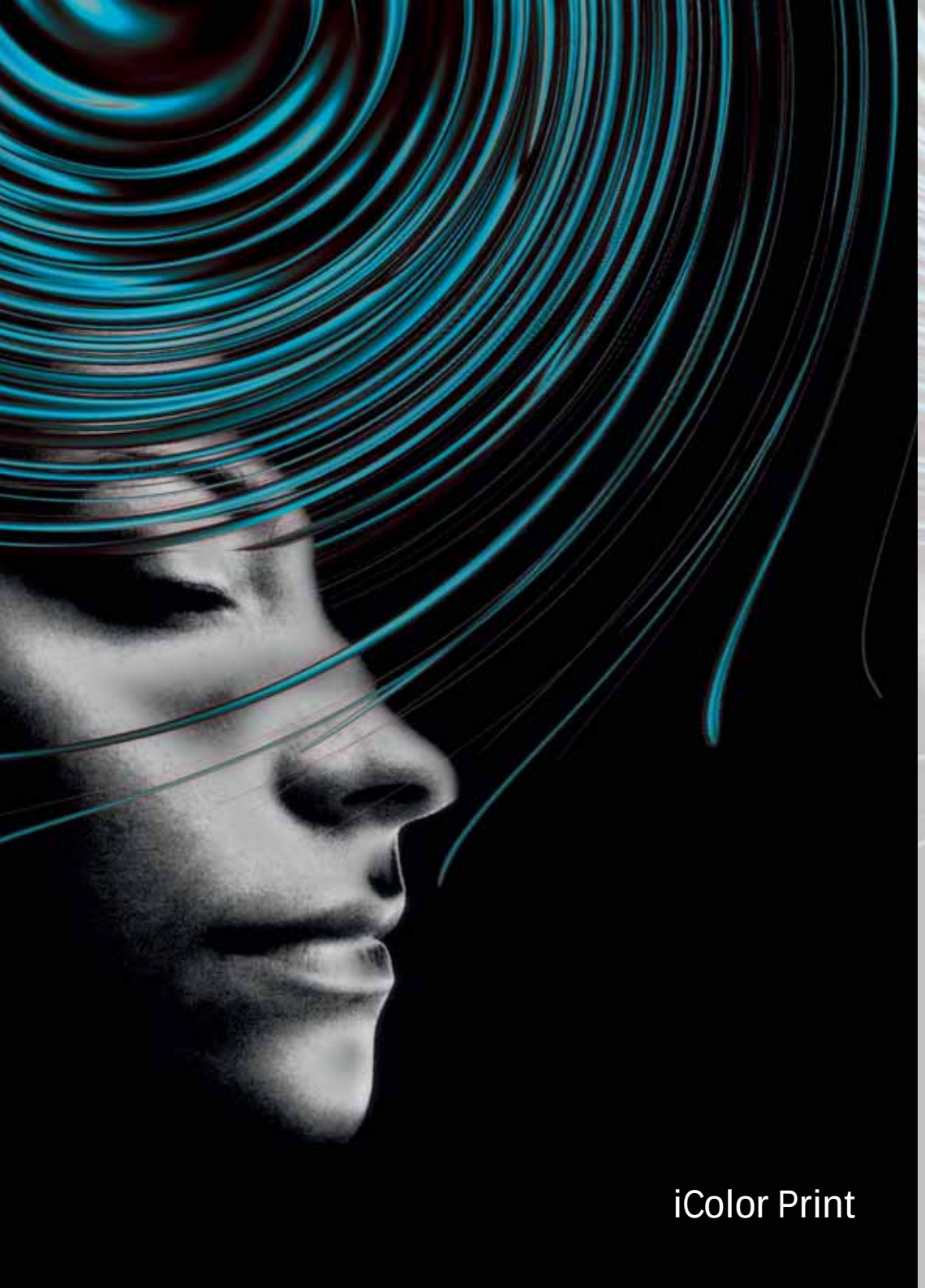
iColor Display

Bundled with Quato´s excellent hardware-calibrated displays, the innovative iColor Display 3 software offers sophisticated features not found in any other display calibration software and ensuring the highest quality in color performance. With iColor Display's Easy-Mode, for example, the user only has to define the working space and the calibration software performs the calibration like magic.

Knowledgeable users have full access to all setup parameters for an individual calibration. To match two identical screens, one display can be the master and the ICC-profile of that display is - locally or remotely - used to calibrate the other displays. To support the measurements and to adjust a screen to a specific illuminant or other display, iColor Display offers a special whiteprint editor.

For an objective evaluation of the calibration quality, iColor Display incorporates a standard testing routine and the UGRA Display Analysis and Certification Tool (UDACT) plus SWOP certification. For the first time ever, a display can be officially judged based on gray balance, soft proof quality and working space coverage.

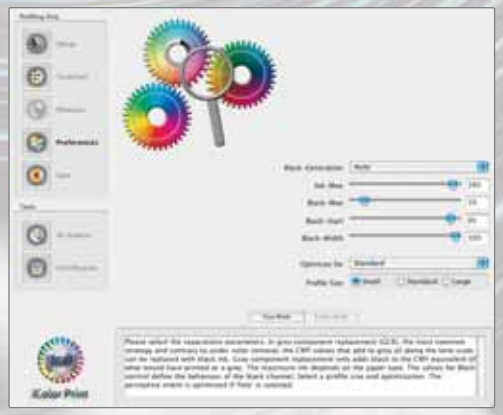
Features like the gamut viewer for up to three different profiles and the curve adjustment make iColor Display's features unbeatable. Thanks to the site license (for Intelli Proof and excellence), every other display in the working environment can be calibrated with the same algorithm as the Intelli Proof, too. That helps to harmonize the color workflow and reduces possible issues due to different calibration approaches. The spot color measurement allows measuring any color on the screen and helps to trace the color workflow in applications like Adobe Photoshop.



iColor Print

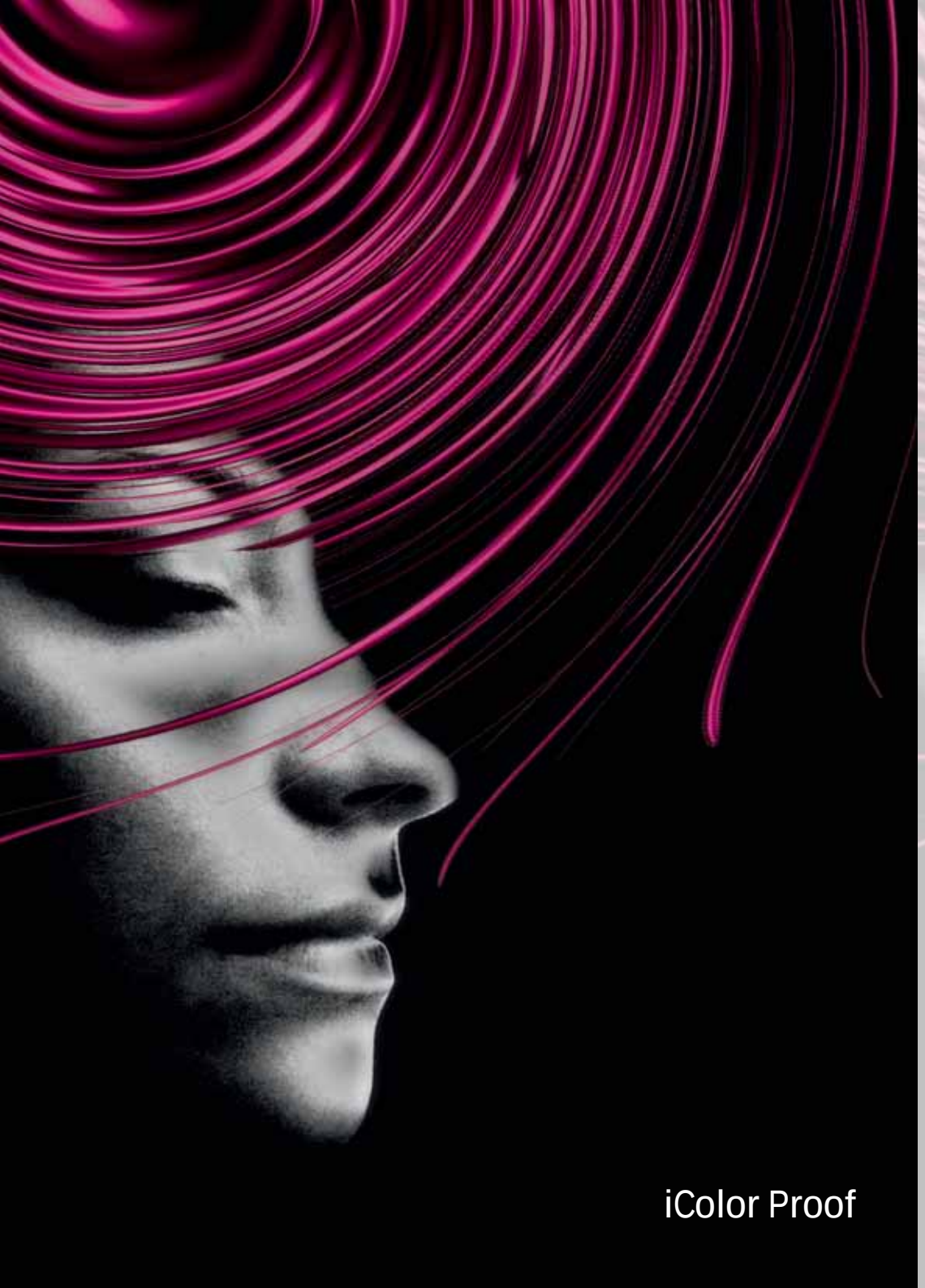
To ensure a highly precise softproof or hardcopy proof and print, an individual calibration is a necessity. iColor Print supplements the iColor Display and Intelli Proof team with a high quality RGB and CMYK printer calibration solution. Despite all the complexity of the printer calibration, the software is extremely easy to use and creates highly precise printer profiles with an optimized gray balance pretty fast.

iColor Print RGB as a semi-professional solution offers the calibration of RGB printers with up to 380 patches with manual measurement or up to 753 patches with stripe measurement. It is especially targeted to photographers and designers and all users that need a consistent color workflow for office- and photo printers.



The more professional CMYK version for PostScript-based systems offers the calibration with up to 1.500 patches in stripe mode and allows full control with the separation parameters plus creates RGB profiles. Apart from the Datacolor 1005 Spectro-colorimeter for manual measurement, iColor Print also supports the Xrite Eye-One Pro and DTP20/Pulse. Measurements from other software solutions in CGATS format can be easily dragged on iColor Print's window and a profile can be calculated - offering a virtual support for almost every device.

iColor Print is a modular software that can be upgraded to new features like certification, evaluation, iterative profiling or profile editing. Instead of buying a complete solution, iColor Print can be configured to the user's needs. Thus, one only pays for the features one really needs. iColor Print is available as a standalone software or comes bundled with the Xrite DTP20/Pulse spectro.

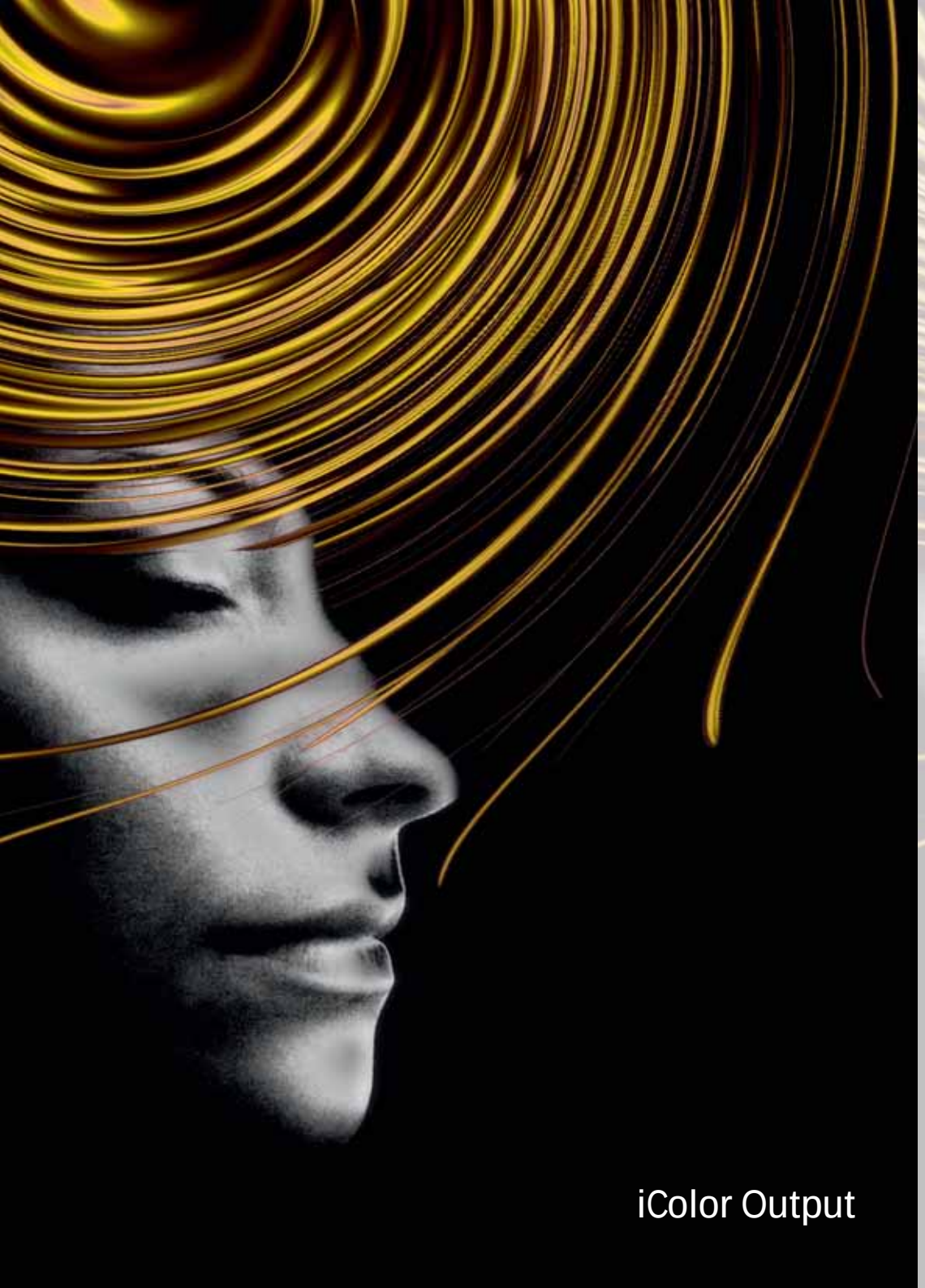


iColor Proof

The missing link between display calibration and printer calibration plus certification is a dedicated softproofing application that uses both the display profile and the printer profile to simulate the output. iColor Proof as the third solution of the iColor family allows virtual proofs on the screen based on JPEG2000, PDF and TIF files. This highly precise softproofing system offers color transformations - like a smooth transition from relative to absolute colorimetric - not found in classic graphic arts applications like Adobe Photoshop or Acrobat. Plus, iColor Proof's task is a high quality softproof with no image editing stuff that crucifies color reproduction quality and reliability. Thus, the software is highly optimized for the demands of users in graphic arts, prepress and press.

Together with iColor Display's reference mode, iColor Proof can be configured as an easy to use, entry level remote softproofing solution. Additionally, the color characteristics of a second source monitor can be simulated to ease the collaborative approach of today's graphic work. Together with an Intelli Proof display and the Lightbox XL2 or XL3, iColor Proof is the perfect basis for a professional color workstation.

Especially for on-press softproofing, Quato offers a combination of iColor Proof and the hardware-calibrated Intelli Press View display. With up to 700 cd/m2 luminance, the Intelli Press View goes far beyond the maximum luminance of today´s desktop proofing displays to match the ISO 3664´s requirements of 2.000 LUX for the viewing booth (approx. 636 cd/m2). This ensures that the viewing booth can operate at the ISO 3664 compliant brightness and does not have to be dimmed down to the luminance level of a standard prepress proofing display.



iColor Output

The fourth part of the iColor series, iColor Output, is an easy to use - Mac OS X 10.5 only - output solution that turns photographic and large format inkjet printers into complete proof systems and ensures high quality photographic color output. iColor Output prints RGB and CMYK data in the printer´s native format with highly precise color rendering.

Due to its direct approach, it supports a large range of professional inkjet printers from A3+ to A0+ printers from Epson, Hewlett Packard and Canon and is available as a M-License (up to A2+ cut sheet) and a L-License (from A2+ roll).

Targeted at the needs of small prepress companies, graphic designers or photographers, it also allows to create correct PDF-X/3 files for a smooth data and color communication between user and client.

iColor Output comes bundled with precise ICC-profiles for the Quato glossy, semimatte and matte papers for proofing and photography. Additional profiles for other papers can be added. To ease the way targets are printed, iColor Output can print iColor Print targets or any other calibration chart directly to avoid common issues with image editing applications and printer profiling. This offers the perfect basis for an individual high quality paper profile.

Additionally, iColor Output includes the Ugra/Fogra Mediawedge 3 for EyeOne Pro and DTP20/Pulse and can place the control strip with jobinfo on the outprint. iColor Print´s optional Mediawedge certification is therefore the perfect companion to certify the printouts and enhance the workflow.

Quato - more than just monitors

Since its foundation back in 1987, Quatographic has passed a steady process of development. Starting as a sole peripheral manufacturer for Macintosh-based systems, today Quato is worldwide well known as the specialist for calibrated displays and color-managed workflow solutions with innovative software and precise measurement devices.

Quato is the company that opened the hardware calibration technology to a wider circle of creative professionals. Especially targeted to the needs of graphic professionals, image editing and photographers, Quato introduced the world's first fully hardware-calibrated CRT with 25-area uniformity control back in 1998. Quato successfully offered the Intelli Proof based on the original ideas and targets with TFT technology in 2004 and has expanded the display range since then step by step.

Quato is an active partner of regulation institutes, supports UGRA/FOGRA and professional user initiatives. In addition, the input from the user base is always a good basis to optimize existing or new products. This strong focus on the user's needs influences Quato's development and decisions for upcoming products pretty much and helps remain innovatively and competitively.

The ongoing changes in the digital color workflow will result more in a partly replacement of hardcopy proofs with softproofing tasks. The harmonization and standardization of the color workflow will be the one big issue for the next couple of years. Thanks to its innovative products, grouped around the monitor as the central device, Quato is prepared for the competing tasks of the next decade. Quato is therefore much more than just a sole monitor manufacturer. Quato is a solution provider.

	Optimum Photo/Softproof/Prepress					General purpose Photo/Softproof/Layout			Advanced Photo/Softproof	
Model	IP 262 ex	IP 240 ex LED	IP 240 ex	IP 220 ex	IP 213 ex	IP 213	IP 201	IP 190	IP 242 LE	IP 220 LE
Size	26”	24”	24”	22”	21.3”	21.3”	20.1”	19”	24”	22”
Resolution	1.920 x 1.200	1.920 x 1.200	1.920 x 1.200	1.680x1.050	1.600 x 1.200	1.600 x 1.200	1.600 x 1.200	1.280 x 1.024	1.920 x 1.200	1.680 x 1.050
Panel type	S-IPS	S-IPS	S-IPS	S-IPS	AS-IPS	AS-IPS	S-IPS	S-IPS	S-PVA	S-PVA
ADC	5x5	7x5 plus LED	5x5	5x5	---	---	---	---	3x3	3x3
Brightness (typ.)	400 cd/m^2	250 cd/m^2	400 cd/m^2	300 cd/m^2	200 cd/m^2	250 cd/m^2	300 cd/m^2	270 cd/m^2	400 cd/m^2	300 cd/m^2
Contrast (typ.)	1.000:1	1.000:1	1000:1	1.000:1	550:1	550:1	800:1	700:1	1.000:1	1.000:1
Viewing angle (typ.)	178°H/V	178°H/V	178°H/V	178°H/V	178°H/V	178°H/V	178°H/V	178°H/V	178°H/V	178°H/V
Gamut (NTSC)	ca. 102%	ca. 110%	ca. 102%	ca. 92%	ca. 92%	ca. 72%	ca. 72%	ca. 72%	ca. 92%	ca. 92%
Gamut (ISOcoated2)	max. 100%	max. 100%	max. 100%	max. 100%	max. 100%	max. 91%	max. 93%	max. 93%	max. 100%	max. 100%
Gamut (Adobe-RGB)	max. 100%	max. 100%	max. 100%	max. 96%	max. 96%	max. 77%	max. 78%	max. 78%	max. 93%	max. 93%
Color depth	30 bit	30 bit native	30 bit	30bit	30 bit	30 bit	30 bit	30 bit	30 bit	30 bit
Calibration	Hardware	Hardware	Hardware	Hardware	Hardware	Hardware	Hardware	Hardware	Hardware	Hardware
Calibration Interface	USB	USB	USB	USB	USB	USB	USB	USB	USB + DDC/ci	USB + DDC/ci
Precision	48 bit	48 bit	48 bit	42 bit	36 bit	36 bit	30 bit	30 bit	36 bit	36 bit
USB-Hub / Ports	USB 2.0 / 2	USB 2.0 / 2	USB 2.0 / 2	USB 2.0 / 2	USB 1.1 / 2	USB 1.1 / 2	---	---	USB 2.0 / 2	USB 2.0 / 2
Warranty	36 months	36 months	36 months	36 months	36 months	36 months	36 months	36 months	36 months	36 months
Pixel failure policy	max. 2 - no pixel failure in the center								max. 3	
Advanced mode	yes	yes	yes	yes	yes	yes	yes	yes	no	no
Reference mode	yes	yes	yes	yes	yes	yes	yes	yes	no	no
UDACT	yes	yes	yes	yes	yes	yes	yes	yes	no	no
Site-License	yes	yes	yes	yes	yes	yes	yes	yes	no	no
Hood	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes

Gamut size based on CIE1931 volume.