



INNOVATIVE SOLUTIONS
COMMITTED TO COLOR

 **ColorGATE**



INTRODUCTION

Dear readers, customers and partners,



only foresight enables you to take advantage of opportunities - and only detailed knowledge brings finesse. The digital transformation of the printing industry is in full swing. Driven by the development of Industry 4.0, it is changing and linking machines, people and markets. This rapid development requires intelligent solutions and a new way of thinking for the decisive edge, which ensures competitive advantages and new business opportunities - that's Print 4.0.

Digital inkjet printing has revolutionized industrial printing! Get to know our application-specific **Industrial Productionserver** solutions: with intelligent workflow, high automation capability and modular functionality available. Our solutions are convincing for the digital decoration of flexible packaging, cardboard and moldings for industrial use and for surface decoration: let it be printing for wood or flooring, textiles or ceramic products. With our know-how, we enable an individual and flexible design of the products both in mass production and in small quantities - directly in the production process in real-time.

Our latest innovation, the **Rapid Spectro Cube** (RSC), which allows you to create an accurate digital color fingerprint for your products, perfectly complements this. This allows you to achieve a precise reproduction regardless of the production location - a milestone concept that led to the world's first complete solution for the ceramics industry. Because the issue of Production Proximity is becoming increasingly important: global production of standard components, regional or local production for customer-specific individualization.

We work with our partners along the entire value chain: the manufacturers of printing machines & print heads, driver electronics & inks. Also with our sales partners in commercial printing, we do not rest until we reach the physical limits of what is feasible: let it be the production of the correct print file, the optimal control of the print heads or the understanding of how to color-accurately apply the ink on any given material. We help the ideas of designers become reality. Because it is not a question of the "better", but the "right" color.

Get inspired with this brochure and see how we can help you: With our solution portfolio for performance-optimized and modular RIP, Workflow and Color Management and with now more than 20 years of experience on the way from analogue to digital printing.

Have fun reading

Thomas Kirschner, Founder and CEO ColorGATE

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INNOVATIVE SOLUTIONS FOR COMMERCIAL AND INDUSTRIAL PRINTING

For over 20 years, ColorGATE has been supporting the printing industry on its way from analogue to digital printing. Our customers rely on our innovative software solutions, RIP Software and printer driver technology for Commercial Printing (Digital, Conventional Printing, Prepress) and Industrial Printing.

We meet our customers as partners on an equal footing and our corporate culture is driven by innovation spirit and our 5 values for trustworthy customer satisfaction:

Simplicity – for our solutions and our customer communication

Productivity – achieve maximum customer benefit with foresight

Color Competence – applied & competent expertise and manufacturer know-how

Cost Efficiency – sustainable optimization of workflows

Added Value – transfer of knowledge for new & improved application possibilities

ColorGATE's core product, the flagship solution Productionserver, a modular RIP, workflow and color management software, is used daily around the globe by thousands of

digital imaging users. ColorGATE has been successfully active on the up-and-coming market of Industrial Printing since the beginning in 2000. With the Industrial Productionserver solutions for specific application areas of industrial production of decor, ceramic, textile and packaging, ColorGATE supplies modular software solutions since 2016.

Especially for integrators in Industrial Printing, ColorGATE strives to significantly reduce the time-to-market to speed up the development to market maturity. ColorGATE's worldwide network of trained Sales Partners is ensuring an optimal support for its end users. In Commercial Printing, ColorGATE works closely with the global imaging companies and more than 50 other manufacturers.

FACTS & FIGURES

- ∴ Imaging Solutions to take advantage of the digital printing transformation
- ∴ Leading software solutions and printer driver technology since 1997
- ∴ Expert team of 40 employees in 7 teams
- ∴ Independent, owned and operated by:
Thomas Kirschner (CEO) and
Norbert Steinhauer (CTO)
- ∴ Headquarters: Hannover, Germany
- ∴ Foreign presences: UK, Italy, Singapore and Foshan/China

COLOR MANAGEMENT

Our claim "Innovative Solutions – Committed to Color" exactly reflects the spirit of ColorGATE: no matter the conditions and applications may be – our innovative Color Management technology optimizes & maximizes the respective color reproduction. This is true color competence à la ColorGATE.

Color Management without glitches

If device-dependent color specifications are not specified with binding color patterns or an ICC profile, exact reproduction is left to chance. The Color Management of ColorGATE defines clear color reproduction sequences. Thus, it is possible to know in advance whether and how exactly a specific color hue can be reproduced on a system - even with different printing systems that are to be color matched to one another.

Color Management for high efficiency

Each combination of a particular printing process with a defined printing material and its own color system forms a specific printing system with unique color characteristics. The printing results may vary – even with identical digital source data. Only the consideration of the specific printing system characteristics in the print data preparation ensures the control of the exact and desired color reproduction.

Color control at the push of a button

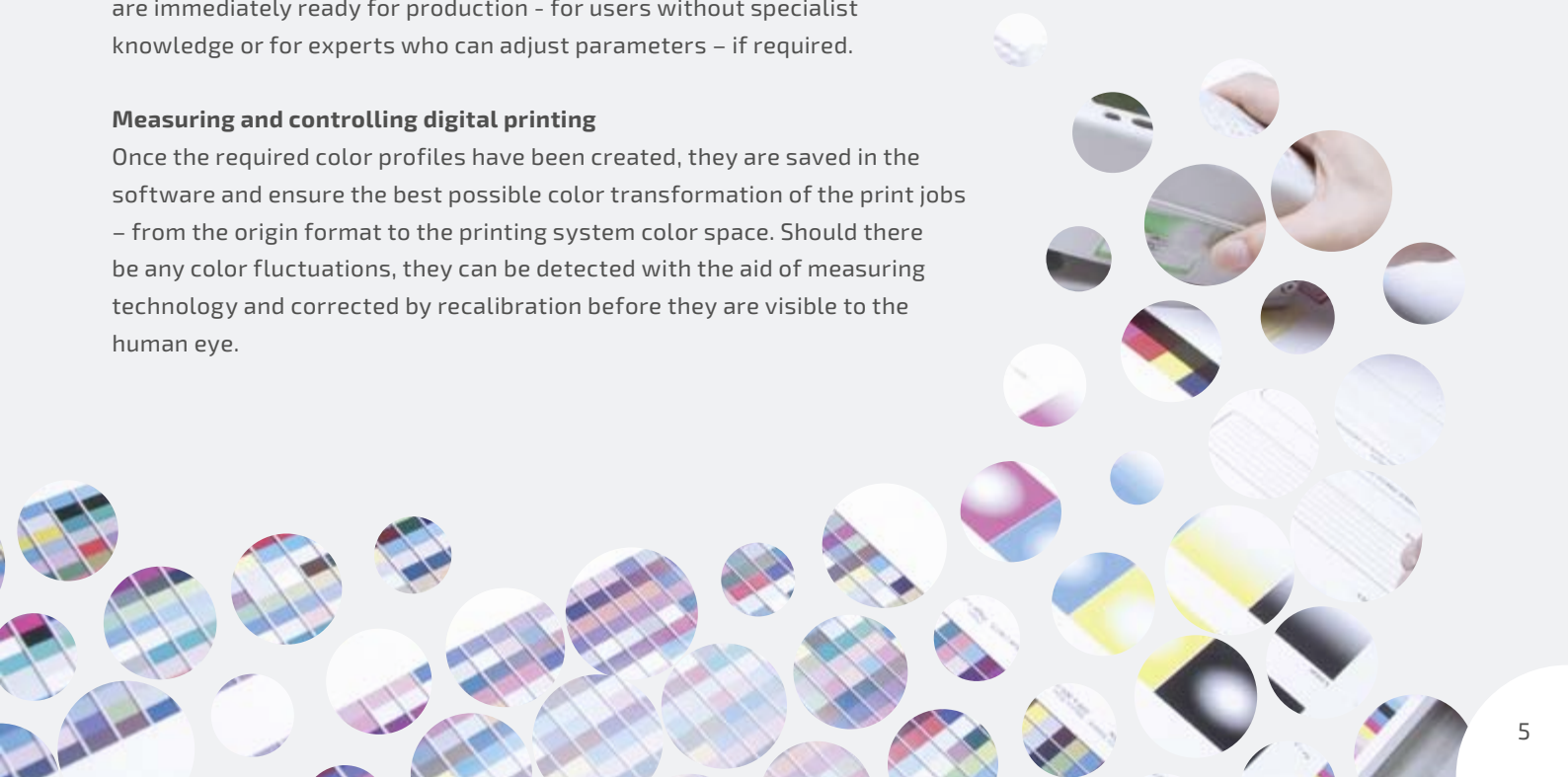
Before the actual production process, the color characterization of the printing system is done with ICC profiling. When comparing the reference and actual color values, an ICC profile is obtained. This then represents the conversion basis of the color management system for the used printing system. For ColorGATE solutions, there are a number of automated and assisted profiler modules for producing high-quality ICC and DeviceLink profiles for different color systems and combinations. The created profiles are immediately ready for production - for users without specialist knowledge or for experts who can adjust parameters – if required.

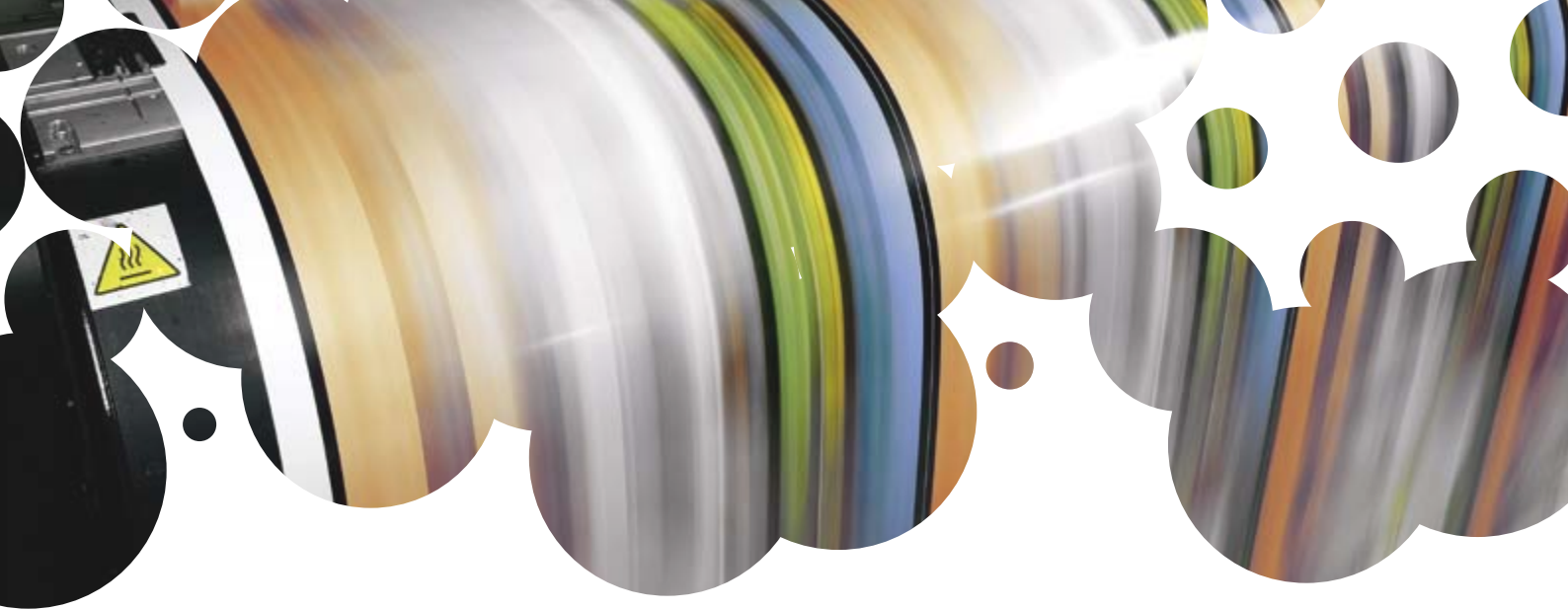
Measuring and controlling digital printing

Once the required color profiles have been created, they are saved in the software and ensure the best possible color transformation of the print jobs – from the origin format to the printing system color space. Should there be any color fluctuations, they can be detected with the aid of measuring technology and corrected by recalibration before they are visible to the human eye.

BENEFITS OF COLOR MANAGEMENT

- ∴ Detailed rendition of highlights, mid-tones and shadows
- ∴ Neutral and balanced grey tones with consideration of media-related white point
- ∴ Brilliant colors due to accurately saturated full tones
- ∴ Pure and finely graduated color gradients
- ∴ Natural skin tones with smooth gradients and no visible steps
- ∴ Best possible processing of design elements, e.g. handling overprint and interpretation of transparencies
- ∴ Exact reproduction of spot colors





COMMERCIAL PRINTING

For us, Commercial Printing comprises all printing services in which the final product is "printed matter". The printing process thus creates the focus of the added value or the final product. We distinguish between Digital Printing (digital) and Conventional Printing (analogue). Prepress covers both process areas.

We have a decade-long competence for extensive prepress solutions for analogue printing processes - even though the majority of our solutions is now mainly for digital printing systems. ColorGATE works closely together with worldwide operating cooperation's as well as with more than 50 additional manufacturers.

WORKFLOW AND PREPRESS SOLUTIONS FOR DIGITAL PRINTING

We differentiate the market segment for Digital Printing as follows: Large Format Printing (LFP), Small Format Production Printing (SFP)

Thanks to using latest technologies, e.g. the current Adobe PDF Print Engine (APPE) and the DeviceLink Color Management, Productionserver

products cope with requirements of all LFP applications and printing systems. Productionserver can be tailored and customized to the given machinery. Versatile features ensure maximum product profitability and excellent print quality. The software use is very simple and user-friendly – recurring processes can be automated.



"As a result of digitalization, commercial printing has changed significantly and requires more and more individual and time-critical solutions for all kinds of print products. With ColorGATE's longstanding expertise from conventional printing - especially in prepress - companies manage the step towards digitalization through perfectly coordinated workflow management - from file to printed product."

Robert Farfort, Data Image Group Ltd.

WORKFLOW AND PREPRESS SOLUTIONS FOR CONVENTIONAL PRINTING

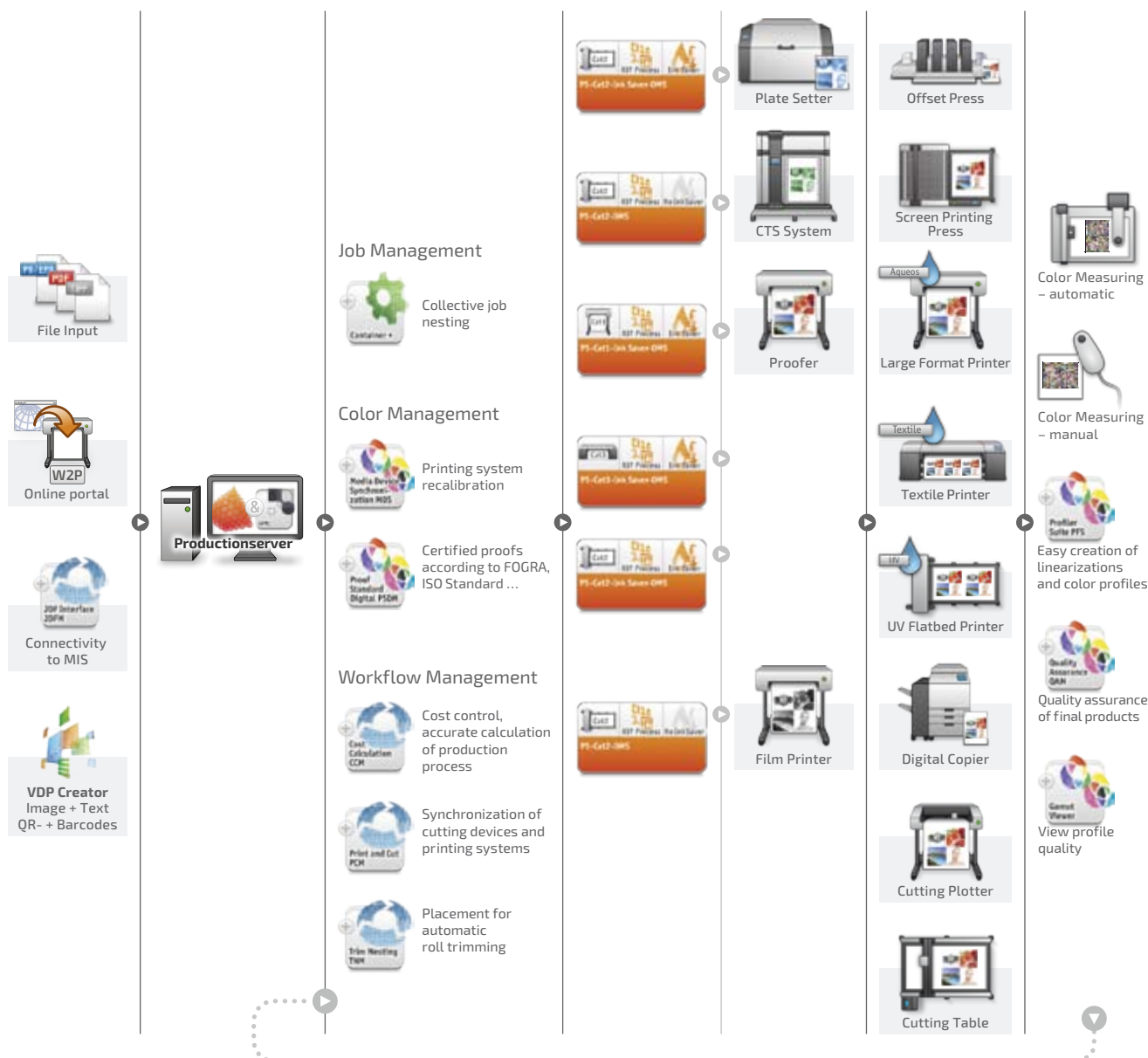
Conventional Printing is the term used for analog printing processes such as: Flexo, Offset, Screen, Gravure printing

Today's printing industry is characterized by mixed production environments with digital and analogue printing systems. By using both worlds, almost any customer requirement can be addressed.

Prepress

Prepress designates the different processes and procedures used to prepare for printing (data preparation, layout, image processing, color management, trapping etc.) to create digital artwork masters (PDFs) or printing forms (film, plates, stencils) for the final digital or conventional printing process.

Applying ColorGATE products, you have "one solution" to serve any workflows in the best way.



RIP- & PRINTING SOFTWARE

ColorGATE RIP software solutions are characterized by their highspeed processing and modular architecture, which allows nearly unlimited possible applications and extensions.



Via our homepage, the ColorGATE product configurator enables you to customize your own ColorGATE RIP Software product to suit your individual needs and requirements. Modules and components can be combined freely.

Configure RIP software online!



"ColorGATE's experts have an in-depth understanding and experience how the ink and substrate interact. Their RIP software allows the user to precisely control each color plane separately to ensure ink to surface compatibility is maintained. This enables brilliant, production ready prints from the ground up."

Mary Schilling, Owner of Schilling Inkjet Consulting and local US representative of ColorGATE

You can use a variety of perfectly matched functions and modules and expand the capabilities of the RIP software for output management, job management, color management and workflow management for different application areas. For example, Output Management Sets (OMS) provides you a variable, and thus optimal configuration for any production environment and number of printers.

With Productionserver as well as with Filmgate and Proofgate, ColorGATE offers individual solutions for each application, production technology and environment with the following features:

- ∴ High-quality components
- ∴ Optimal color reproduction
- ∴ Consistency of reproduction at any time
- ∴ Maximum productivity
- ∴ Intuitive control concept and user interface

ColorGATE utilizes the latest Adobe PDF Print Engine (APPE) by default and every RIP software solution can be configured freely corresponding to your individual requirements. Also, attractive and flexible Single Host License and Multi Host License (SHL/MHL) plans are available for the software products.

Just 5 steps to your ColorGATE RIP Software package!

1	2	3	4	5	✓
<p>Choose base product</p> <ul style="list-style-type: none"> Productionserver 10 PS10 Select PS10 Pro PS10 Ultimate PS10 Campaign Printing Filmgate 10 Proofgate 10 	<p>Select Single or Multi Host License</p>	<p>Add one or more Output Management Sets (OMS)</p> <p>PS – Output Management Set(s)</p> <p>Ink Saver: Cat1, Cat2, Cat3</p> <p>No Ink Saver</p> <p>FG – Output Management Set(s)</p> <p>S, M, L, P</p> <p>PG – Output Management Set(s)</p> <p>S, M, L</p>	<p>Select Modules</p> <p>+ optional</p> <p>+ optional</p> <p>+ optional</p>	<p>Add Value Pack</p> <p>+ 12 months</p> <p>+ 12 months</p> <p>+ 24 months</p> <p>+ 36 months</p>	



PRODUCTIONSERVER

The Productionserver product family consists of highly flexible RIP software solutions that ensure to meet and configure individual requirements when highest quality demands are needed. All individual applications ensure excellent Color Management with optimum color rendering and consistent reproduction at any time.

Whether large, wide and grand format printing, digital production according to international standards, such as ISO, FOGRA, PSD, Gracol, G7 as well as for campaign printing, textile or for screen printing and print and cut – the PS Line-up offers the optimal RIP configuration for all types of digital print services. ColorGATE always utilizes the latest Adobe PDF Print Engine (APPE) in its basic solutions.

FEATURES OF PERFORMANCE

- ∴ High-quality components
- ∴ Optimal color rendering
- ∴ Consistency of reproduction at any time
- ∴ Maximum productivity
- ∴ Intuitive control concept and user interface



Adobe PDF Print Engine 4



“ColorGATE technologies are leading the market in industrial digital printing applications – especially for multicolor color space and color transformation. Adobe is proud to partner with ColorGATE in this rapidly growing segment. Solutions from ColorGATE incorporate the Adobe PDF Print Engine, which provides the fastest, most reliable rendering for jobs designed with Creative Cloud applications. We value the color expertise of our ColorGATE partners, an important part of our ongoing technical collaboration.”

Mark Lewiecki, Adobe



Configure
RIP software
online!

PS FLEX-LINE

ColorGATE's Productionserver Flex-Line provides access to implement highly efficient, digital print & proofing workflows by its modular and flexible design. Excellent Color Management for optimal color reproduction with neutral grey tones, natural skin tones and brilliant colors are based on the unique recalibration technique: Media Device Synchronization (MDS). Furthermore, Productionserver is capable of standard compliant production according to international standards, such as ISO 12647, G7 and ProcessStandard Digital (PSD).

OVERVIEW OF ADVANTAGES

- ∴ The range of functions increases with the next higher product. The PS Flex-Line meet individual requirements and demands – PS Select, PS Pro, PS Ultimate, PS Campaign Printing
- ∴ Latest Adobe PDF Print Engine (APPE) is permanent feature of every basic product
- ∴ Easy, flexible configuration thanks to Output Management Sets (OMS) respectively to type and number of printers as well as Ink Saver
- ∴ Ink Saver Technology – Less Ink Same Quality
Save up to 30% of ink without visible loss of quality

PS MANUFACTURER EDITIONS

The Productionserver Manufacturer Editions are geared exactly to the supported printers of the respective manufacturer for versatile large and wide format printing and signage printing applications.

Available PS Manufacturer Editions

Canon | Epson | HP | Mimaki | Mutoh | Roland

OVERVIEW OF ADVANTAGES

- ∴ Extensive features & modules
- ∴ Excellent Color Management with optimal color reproduction
- ∴ Modular expandable at any time
- ∴ Print and Cut Module (PCM) incl.

PS LIGHT

Productionserver Light is the entry level solution. Extremely low-cost oriented at the same time without any loss of quality. The overall quality of the print output is the same in terms of color or impression – as all PS products (Flex-Line and Light) are utilizing the same quality components.

Equipped with:

- ∴ One Cat1 printer driver & One Adobe PDF Print Engine RIP
- ∴ Color Replacement & One Queue and Hotfolder

PS SPECIAL EDITIONS

The Productionserver Special Editions for special applications include several comprehensive software solutions for special applications such as toner-based color printing, flexo packaging as well as industrial inkjet printing. Each Special Edition contains the latest Adobe PDF Print Engine (APPE) and at least one Output Management Set (OMS) with a printer driver required for the application is already included. The Special Editions can be extended modularly at any time.



FILMGATE

Filmgate from ColorGATE is the worldwide leading RIP Software for chemical-free film production using inkjet printers for flexo-, offset- and screen printing in high-end quality.

FEATURES OF PERFORMANCE

- Solution for comprehensive prepress using digital printing systems
- Consistently reproducible results and maximum reliability in the production process due to unique ColorGATE MIM (Media Ink Metamode) technology*
- Reliable end-to-end processing of composite PDFs (PDF/X4, 5) & separated PDF files
- Predefined screening sets and linearizations for all popular inkjet printer series and screen rulings (up to 180 lpi)
- Full support of an unlimited number of spot colors
- Highly efficient ICC color management for color-accurate In-RIP separation
- Adobe PDF Print Engine (APPE) included
- Also available as complete package for film production:
 - Inkjet printer, ColorGATE RIP software Filmgate, linearizations and corrections of tonal values
 - Adequate film material: CG Repofilm HD and CG Screenfilm Waterbased are the ideal daylight media for high-end screen printing production



Optionally available as Film and Plate Module (FPM).

In combination with FPM, Computer to Screen Module (CTSM), In-RIP-Trapping Module (TRAPM) and Proof Standard Digital Module (PSDM) for CTS Applications or digital proofing.

HIGHLIGHT

- Innovative, integrated screening technology
- **Custom Screen:** Free definition of screen angles, dot forms and line resolutions
 - **Super Rosette 2:** Sharp-edged, homogenous printed images resulting from screen angles of highest precision
 - **Frequency Screen:** Frequency modulated screen with controllable dot size
 - **Hybrid Screen 2:** Combines Super Rosette 2 & Frequency Screen



Adobe PDF Print Engine 4

* MIMs are linearization presets for a variety of raster methods, resolutions, and point shapes. Users immediately can produce – without time consuming self-calibration with expensive measuring devices!



PROOFGATE



Optionally available as Proof Standard Digital Module (PSDM).

Proofgate from ColorGATE is the tailor-made RIP software solution for in-house and corporate users in design and advertising agencies, marketing and communication departments, pre-press companies and departments. For digital proofing in compliance with international color standards, it supports ISO standard 12647-7, ProcessStandard Digital (PSD), G7 and FOGRA 39, 51 and 52 reference values for maximum color accuracy.

FEATURES OF PERFORMANCE

- ∴ Integrated FOGRA media wedge with reporting function for certified proofs
- ∴ Job and workflow settings can be automated and predefined
- ∴ Latest version with integrated support for PDF/X4, PDF/X5, PostScript 3, EPS and most common bitmap file formats
- ∴ Easiest possible set-up, operation, proof output, evaluation and proof certification
- ∴ Includes already all functions necessary for digital proofing
- ∴ Media Device Synchronization MDS for remote proofing
- ∴ DeviceLink profiles for current international printing standards
- ∴ Easy adjustment of individual proofing system without the need of individual profile creation
- ∴ MIM-Sets (media ink metamode)* with optimized DeviceLink profiles for all popular proofing standards and digital proof printers
- ∴ Colorimeters & FOGRA-certified high-end proof papers available



Adobe PDF Print Engine 4





The demand for mass customization of individually designed products is increasing, whether it is surface finishing for packaging, wood, ceramics, textiles or plastics. For the manufacturing industry, modern printing processes open up completely new options. Nowadays, an individual and flexible design of the products is possible both in mass production and for small quantities – directly during the manufacturing process.

INDUSTRIAL PRINTING

In Industrial Printing, the process of printing is already done during the manufacturing process itself and serves to decorate any materials the products are made of. Ink or other liquids are usually applied by the touchless industrial inkjet technology, no matter what an object is made of or how it is shaped. During this process, it is decorated or provided with new features. ColorGATE's solutions ensure precise color reproduction to flexibly meet the respective requirements with high performance.

ColorGATE provides solutions to machine manufacturers and OEMs for the following applications:

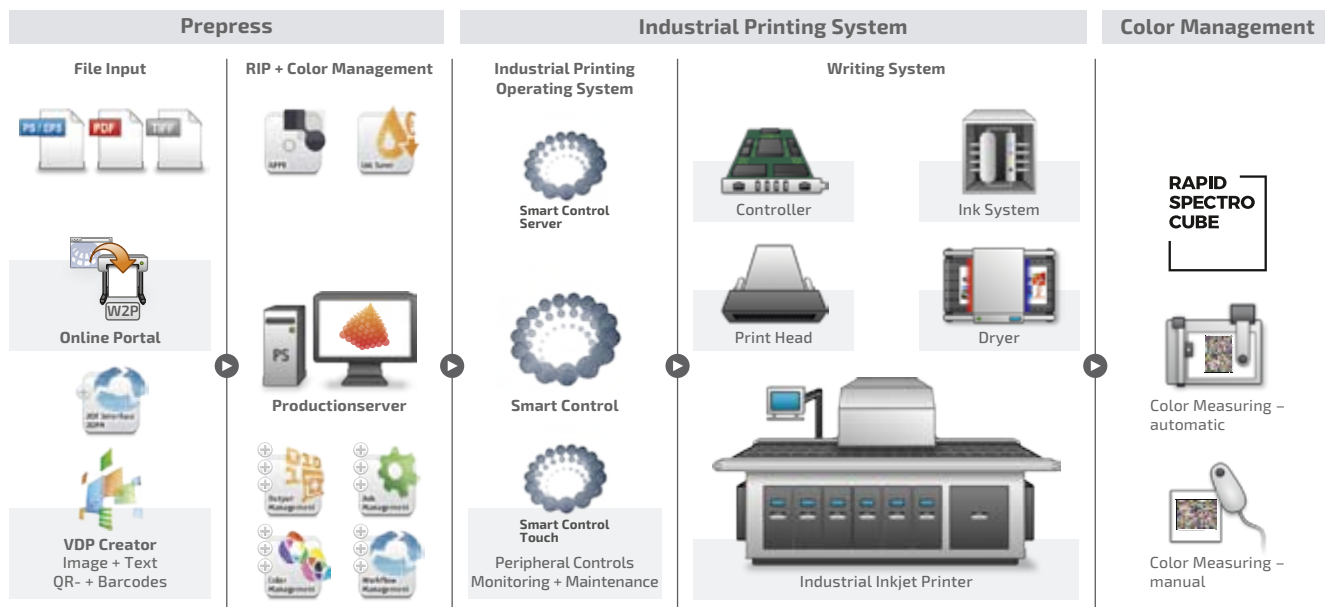
- ∴ Décor (décor paper roll-to-roll or direct-to-board)
- ∴ Textile, ceramic, floor tiles, wallpaper, glass printing
- ∴ Direct-to-object decoration (bottles, cans, other containers)

These solutions can be directly integrated into existing production lines or installed as a separate production line.

ColorGATE's core product is the Productionserver, a modular RIP and color management software that is used by thousands of digital imaging end users all around the globe every day. We have been actively involved in the rapidly growing industrial printing

market since its beginnings 15 years ago. Together with ColorGATE's SmartControl – the Industrial Printing Operating System (IP OS) – all functions of a industrial printing system can be linked and controlled.

ColorGATE supports a variety of print heads made by a number of different manufacturers, including Fujifilm Dimatix, Konica Minolta, Kyocera, Ricoh, Seiko, Toshiba TEC and Xaar as well as many more controllers of all leading companies. ColorGATE also maintains strategic partnerships with important ink and engineering companies. The product portfolio for the industrial printing market is steadily being enhanced and expanded. ColorGATE's know-how helps our customers to use an effective shortcut from the planning stage to the market introduction.





PACKAGING PRODUCTIONSERVER

With PPS you get a highly flexible printing solution for a wide field of applications – with a reliable and complete workflow, RIP and Color Management Solution dedicated to digital packaging printing. ColorGATE offers a modular and adaptive software architecture – optionally to be extended or scaled on demand for higher processing speeds.

APPLICATION AREAS

Direct-to-object decoration

- ∴ Bottles, glasses
- ∴ Cans, tins, tubes
- ∴ Containers

Flexible packaging

- ∴ Labels & Sleeves
- ∴ Bags & Pouches
- ∴ Blister packs

Cardboard packaging

- ∴ Folding carton
- ∴ Corrugated

FEATURES OF PERFORMANCE

- ∴ Precise data preparation for excellent image quality, accurate spot colors and high color consistency
- ∴ Application-oriented functions for digital packaging printing
- ∴ Highly adaptable to automate existing production workflows
- ∴ Scalable processing speed for small to medium print runs
- ∴ Suitable for color accurate printing varying substrates and non-standardized process components

TECHNICAL HIGHLIGHTS

- ∴ Speed optimized output of multipage PDF and PDF/VT
- ∴ JDF-interface for direct workflow data exchange
- ∴ Simultaneous ripping, color management and screening
- ∴ Proofing to industry standards and press simulation
- ∴ Stable and accurate PDF interpretation through optimized integration of up-to-date Adobe PDF Print Engine (APPE)
- ∴ High color consistency through color quality control and re-calibration



“Direct-to-Object printing requires an innovative tour de force of engineering and software development. With the ColorGATE's experts, you have partners with whom you can fully exploit the physical performance limits of your printing presses - through simultaneous ripping, color management and screening, virtually in real time”.

Joachim Weber, Hinterkopf GmbH



TEXTILE PRODUCTIONSERVER

ColorGATE offers with TPS a performance-optimized RIP and Color Management software for all applications in digital textile printing. This includes the support of printing devices for sublimation processes as well as industrial textile processes for natural, synthetic and mixed fabrics using reactive or pigment inks for direct printing and direct-to-garment.

APPLICATION AREAS

Direct-to-garment
Apparel & fabrics
Interior textiles, homeware
Technical textiles
Outdoor textiles

- ∴ Awnings
- ∴ Sunshades
- ∴ Garden furniture

All leading digital printing devices as well as all application areas within industrial textile printing are supported.

FEATURES OF PERFORMANCE

- ∴ Enables coloration process for through-printing, haptics, light fastness and washing durability
- ∴ Automatable and adaptable to existing production workflows
- ∴ Optimal processing speed, scalable to requirements for small to medium print runs
- ∴ Precise data preparation for excellent image quality, accurate coloration and high color consistency
- ∴ Enables maximum reproduction and color impression of the given design

TECHNICAL HIGHLIGHTS

- ∴ Digital adoption of production and design data from conventional printing processes
- ∴ Gamut Viewer (2D/3D) for maximal colorspace utilization
- ∴ JDF-interface for direct workflow data exchange
- ∴ Processing of all common file formats as well as multichannel files (Adobe Photoshop PSD and PSB files)
- ∴ Color Management with quality assuring and recalibration functions (QAM & MDS)
- ∴ Color Profiler for the comfortable assistant-guided creation of multicolor, ICC, DeviceLink and reference profiles



DÉCOR PRODUCTIONSERVER

DPS is a modular workflow and Color Management solution aligned to digital décor printing with industrial digital printing systems of all leading manufacturers.

FEATURES OF PERFORMANCE

- ∴ Application-oriented functions for all requirements in digital décor printing
- ∴ Modular extendable and scalable for boosting performance
- ∴ Maximum optimal image quality like conventional printing processes
- ∴ Maximum color consistency for exact reproduction
- ∴ Optimized seamless data processing for high resolution and extremely large files

TECHNICAL HIGHLIGHTS

- ∴ Digital adoption of production and design data from conventional printing processes
- ∴ Gamut Viewer (2D/3D) for maximal colorspace utilization
- ∴ Color Management with quality assuring and recalibration functions (QAM & MDS)
- ∴ Color Profiler for the comfortable assistant-guided creation of multicolor, ICC, DeviceLink and reference profiles
- ∴ Freely combinable conversion of 1-Bit TIFF engraver data
- ∴ Generation of reference and soft proof profiles

APPLICATION AREAS

Composite wood

- ∴ LDF/MDF/HDF
- ∴ Laminated plywood
- ∴ HPL

**Décor films and laminates
Flooring and vinyl parquetry
Edge bands for boards and
furniture**



"No matter at which world-wide location we produce our decors, ColorGATE's flexible, customer-specific solutions ensure maximum color consistency and reproducibility. This is the key building block to achieve identical quality and color accuracy in the complex finishing of wood materials."

Patrick Faramia, Impress Surfaces GmbH



CERAMIC PRODUCTIONSERVER

ColorGATE's CPS functions as a central print data management system and by that accomplishes the highest process efficiency from design to the final ceramic product. The digital end-to-end workflow offers a secure import and conversion (n-Color) of designs and color data as well as the creation of separations with 3–8 channels.

APPLICATION AREAS

Floor tiles
Wall tiles
Tile decoration
Dishes, tableware



"With the ColorGATE solution it is much easier to produce fast, color-consistent prints specifically for the ceramics industry."

Barbara Galster, Deutsche Steinzeug

FEATURES OF PERFORMANCE

- ∴ Maximum color consistency from design to final product with decreased waste production
- ∴ Contains application-oriented functions for all requirements in digital ceramic printing
- ∴ Seamless digital workflow by color correct preview of multicolor and multichannel data
- ∴ Transfer of know-how to end users from design and production
- ∴ Companionship and technical assistance through expert support
- ∴ Together with Rapid Spectro Cube (RSC) and Colorrizer, the whole production process from design, via profiling to final print can be monitored and controlled

TECHNICAL HIGHLIGHTS

- ∴ Support of nearly all ceramic printing systems available on the market
- ∴ Processing of all common file formats as well as multichannel data (Adobe Photoshop PSD and PSB files)
- ∴ Special designed linearization and profiling tools for ceramic printing
- ∴ Reduction of ink through InkSaver technology for cost optimization and increased process stability
- ∴ Analysis tools for exact design reproduction
- ∴ Color Management with automatic conversion of design data to different production lines

RAPID SPECTRO CUBE



RAPID SPECTRO CUBE

The Rapid Spectro Cube (RSC) is an all-in-one Color Management solution for ultrafast color measuring and ICC profiling for industrial digital printing applications. There are almost no limitations for applying the RSC. Fast and secure high-quality ICC profiling from very small objects is possible, as well as profile processing with any ICC-compatible image editing or RIP software, e.g. Productionserver. The required minimum patch size is as small as 1 mm.

What you see is what you get – We measure like the human eye sees Color

With RSC, even color measurements of complex substrate surfaces such as ceramics, glass, textiles or metal are possible. Additionally, the RSC takes measurements of very small objects. For example, more than 1,000 color fields from an only business card-sized label can be measured in seconds – these are then processed into high-quality ICC profiles. RSC also includes an option to measure backlit-materials (transmissive measurement), to process and profile objects like City Light posters and backlight displays. Batch mode allows the creation of up to 20 profiles per hour.

The detection method of the RSC is similar to the color perception of the human eye. With its high-resolution sensors, the RSC detects a much larger area than conventional color measuring devices and delivers color values in seconds – thus also technically demanding surfaces can be precisely characterized.

HIGHLIGHTS

- ∴ Maximum substrate size 600x600 mm, substrate thickness 80 mm, maximum target size 450x450 mm
- ∴ Processing of 10,000 patches per target
- ∴ Measuring extremely small objects is possible – minimum patch size 1 mm
- ∴ Creation of high-quality ICC profiles (CMYK, RGB, aNyColor)
- ∴ Easy to transport in a flight case (32 kg) – setup-time only 5 min from deployment to first measurement
- ∴ Different housings possible – depending on the production environment

MEASURING AND PROFILING

- ∴ Non-white/tinted or colored substrates: Corrugated, Leather, Wood, Ceramics, Metallic surfaces
- ∴ Translucent substrates: Backlit materials, Glass, High gloss ceramic tiles, High gloss finished décor panels, Metallic surfaces
- ∴ Structured substrates: Carpets, Ceramic tiles, Leather, Textiles



"ColorGATE's Ceramic Productionserver software in combination with the innovative Rapid Spectro Cube represents a revolutionary and worldwide first complete color management solution that solves the major digital challenges in the ceramics industry."

Juan Martorell, ColorInLab Color Consulting S.L.



CERAMIC PS WITH FINGERPRINT AND RSC HD

First total solution for digital ceramics tile production with heavy duty housing and including Scan and Profiling option of RSC and patented Fingerprint Module (FPRM) – Complete workflow and color management solution dedicated to digital ceramic printing and typical ceramic production environments.

FEATURES OF PERFORMANCE

- ∴ Supports all ceramic printing systems with 3 to 8 channels
- ∴ Central print data management system for highest process efficiency from the design to the final ceramic product
- ∴ Includes color management tools and workflows dedicated to ceramics
- ∴ Ink Saver technology for reduction of ink usage up to 15%
- ∴ Gamut preview function to select suitable ink color combinations
- ∴ Features n-Color-transformations for automatic design conversion between lines
- ∴ RGB and CMYK working space profiles for convenient retouching with Adobe Photoshop
- ∴ Processing of all common file formats & multichannel data (Adobe Photoshop PSD and PSB files) with color correct preview

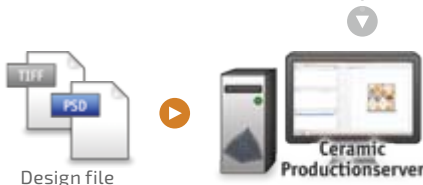
Fingerprint Module (FPRM)

- ∴ Patented Fingerprint technology for color consistent re-runs of digitally decorated tiles
- ∴ For exact color characterization of digital print jobs
- ∴ Archival of print production data for exact reproduction any time

APPLICATION AREAS

- Floor tiles**
- Wall tiles**
- Tile decoration**
- Dishes, tableware**

1. Initial production and Fingerprint creation



Ceramic Productionserver (CPS) generates colorimetric specification



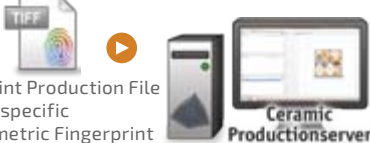
Result production



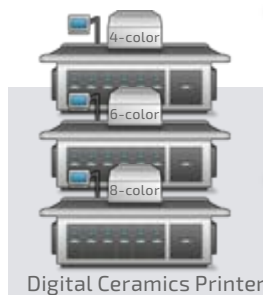
Fingerprint measurements

2. Reproduction with Fingerprint Production File

CPS generates the Fingerprint Production File



- ∴ Designspecific
- ∴ Colorimetric Fingerprint
- ∴ Digital Design Reference
- ∴ Universal reproducible



MATCH

Result reproduction

Fingerprint in a ceramic production workflow



SMARTCONTROL IP OS

The SmartControl Industrial Printing Operating System (IP OS) is the brain of your printing system! All components – from print heads to the controllers, and right on up to the transport systems, are controlled in an efficient, intelligent and easy way. With SmartControl, ColorGATE connects its RIP Software and Color Management know-how with the industrial print production: by facilitating a connection between industrial inkjet printing systems and a RIP Software like Productionservier. This is getting the best out of your Industrial Printing applications.

SmartControl can be installed on any current Windows PC or server, which means the hardware can also be optimized and configured to suit the application. As a result, the purchasing and maintenance costs are optimized for the actual applications.

FEATURES OF PERFORMANCE

Comprehensive control software for all the important components of the printing system:

- ∴ The writing system: print heads, ink supply and print head controller
- ∴ Heating and drying systems
- ∴ PLC communication to coordinate the transport systems and other peripheral devices
- ∴ Initialization of maintenance functions, such as cleaning the print heads
- ∴ Status checks, e.g. reports on ink levels, temperatures and stand-by operation
- ∴ Display and processing for other system-specific information, which is implemented as required



“As a key component of the overall printing system, ColorGATE's solutions enable seamless data flow and seamless printing control from prepress to the finished product. This makes our industrial digital printing machines and solutions even faster and more reliable and more economical and flexible.”

Joachim Voigt, Wemhöner Surface Technologies GmbH & Co. KG



SMARTCONTROL SERVER

SmartControl is a client-server-based industrial printing solution, which can be flexibly adapted to different production environments and printing processes. The SmartControl Server prepares and distributes the printing data within the digital printing system in high-performance. The data is then delivered via the corresponding print head controllers to the individual print heads.

The SmartControl Server enables the implementation of extremely high-powered, complex printing systems – as an independent application that can be operated in master-slave mode distributed over several different print servers. In addition, the SmartControl Server provides interfaces to machine control systems (PLC) to synchronize the feed rate and control of such supporting systems as heating and drying.

SMARTCONTROL TOUCH

SmartControl Touch provides a flexible machine frontend, which can be individually customized to the requirements of the application.

With SmartControl Touch, individual human-machine interfaces (HMI) are realized, which usually are controlled by the system operator via touchscreen. This shows all application-relevant functions for the printing process at a glance.

FEATURES OF PERFORMANCE

- ∴ Suitable for any multi- or single-pass architecture
- ∴ Scalable master-slave architecture with no limits for the number of print heads to be controlled
- ∴ Support for a wide range of different print head manufacturers: Fujifilm Dimatix, Konica Minolta, Kyocera and Ricoh plus controllers of all leading manufacturers
- ∴ Stand-alone use independently of SmartControl Touch – for completely automated use or in combination with an individual frontend connection
- ∴ Optimum supply, synchronization of the print heads with printing data from the RIP Software, e.g. through the seamless integration of the Productionserver or the connection of third-party solutions

FEATURES OF PERFORMANCE

- ∴ Secure communication between the SmartControl Server and SmartControl Touch via TCP/IP
- ∴ Display of all relevant information and control options
 - Information: Ink levels, maintenance intervals, print preview
 - Control options for transport system, heating, drying and much more

HIGH PERFORMANCE PROCESSING

Large volumes @ high speed

- The fastest available RIP and Color Management Solution
- Contemporary industrial high-performance printing systems
- Parallel processing with adaptable data bandwidth
- Capable of flexible large volume printing



BRAND COLOR MANAGEMENT

Color matching on the spot

- Accurate spot color reproduction
- Intelligent prediction for replacement of process colors
- Comprehensive Color Atlas for finding closest match
- Color Book Generator
- Specify in gamut spot colors



“The ColorGATE solution impressively meets the special requirements of the packaging industry – such as the proofing. We don’t know any other solution that can be used in such a precisely and flexible way. In particular, the sophisticated workflow management and parallel data processing ensures maximum efficiency.”

Gerardo Cerros, CMA Imaging



30%
ink saving

INK SAVER TECHNOLOGY

Less Ink – Same quality

- ∴ Save up to 30% ink costs without any visual losses in quality
- ∴ Stabilization of the printing process
- ∴ Improved grey balance
- ∴ Shorter drying times



FINGERPRINT

Patented technology for a "digital color twin"

- ∴ Revolutionary concept for efficient and high-quality reproduction
- ∴ Available for Ceramic Productionserver and all Industrial Productionserver variants
- ∴ Creates measurable color reference including all colors of master design with the exact same color properties
- ∴ Fingerprint production file can be re-produced on any other production line



REFERENCES

Administrations

Deutsches Rotes Kreuz, Germany • Barcelona Regional, Spain • Stadt Erlangen, Germany • Südtiroler Landesverwaltung, Italy • Bundesstadt Bonn, Germany • SAP, Germany • Landeshauptstadt München, Germany • Norwegian Land Consolidation Court, Norway • Oxford County Council, UK • Landkreis Leipzig, Germany

Finance & Banking

LBS, Germany • Raiffeisen Volksbank, Germany • Hallertauer Volksbank, Germany • orell füssli security printing, Switzerland • Sparkasse Soest, Germany • Giesecke & Devrient, Germany

Culture

OÖ Theater and Orchester, Austria • Niedersächsisches Staatstheater, Germany • Stiftung Oper, Germany • State Peterhof Museum, Russia • Museum for universitets- og vitenskapshistorie, Norway • Bremer Bühnenhaus, Germany • Kunsthaus Zürich, Switzerland • Tromsø Museum, Norway

Military

Royal Air Force, UK • Bundeswehr, Germany • Royal Netherlands Air Force, Netherlands • National Defense, Canada • Ministère de la Defense, France • Istituto Geografico Militare, Italy • Kazan Suworov Militari School, Russia

Education & Research

IGN Institut de L'Information, France • Bauhaus Universität Weimar, Germany • Leeds Beckett University, UK • Hochschule Munich, Germany • University of What, UK • Universitet i Oslo, Norway • Hochschule Augsburg, Germany • Kunstakademie Düsseldorf, Germany • ABK Stuttgart, Germany • Philipps-Universität Marburg, Germany • King Abdulaziz University, Saudi Arabia • University of the Arts Helsinki, Finland • kingston university printmaking, UK • Uni Rostock, Germany

Industrial

Adidas, Germany • Abbott-Action, USA • Alm, Spain • BHS, Germany • Heineken, Netherlands • ITW Trans Tech, USA • LEGO System, Denmark • Luxottica, Italy • Medipack, Switzerland • PAS, Germany • Plastipak, USA • Ritter, Germany • Sandra, Italy • Schreiner Group, Germany • Silhouette, Austria • Tonejet, UK • Traderplus, South Africa • Casalgrande Padana, Italy • Deutsche Steinzeug, Germany • Osmose, Germany • SEB-Tefal, France • Stiltecno, Italy • Torrecid, Spain • Villeroy & Boch, Germany • Zschimmer & Schwarz, Germany • Cefla, Italy • Dizal, Canada • Geberit, Italy • Heberndorfer Leistenfabrik, Germany • MKT, Germany • Salag, Poland • Stadur Composite, Germany • Swiss Krono, Germany • Kaindl, Austria • Tendencias Cerámicas, Spain • Vidres, Spain • Decotec, Spain • Enmarkalia Decoracion, Spain • Nalini, Italy • Continental AG, Germany • Teufelberger, Austria • Zwiesel Kristallglas, Germany • SKI Rossignol, France • Serivid Trade, Spain • HTM Sport, Czech Republic • Rastal, Germany • Eurokera, France • Yuen Yuen Industrial, China • Rossport, Russia • Innique, Switzerland • Martinenghi, Italy • Classen Holz Kontor, Germany

Medical

Baxter Healthcare, UK • University Hospital Maastricht, Netherlands • Medizinische Hochschule Hannover, Germany • Mayo Clinic, USA • MPA Pharma, Germany • Pietrasanta Pharma, Italy • HealthSouth, USA • PromoPharma, Italy

Press & Media

Tagesspiegel, Germany • Guardian News and Media, UK • Standard Medien, Austria • Denmarks Radio, Denmark • Haymarket Publications, UK

Print Service Providers

Bluemedia, USA • Huhtamaki, Czech Republic • DS Smith, UK • PosterXXL, Germany • KDM POP Solutions Group, USA • Posterjack, Germany • Webcom, Canada • Georgia Pacific, USA • Standard Register, USA • Christiansen Print, Germany • Elanders, Germany • Rodona, Spain • Ghelfi Ondulati, Italy • Obaly Morava Czech Republic • O'Neil Data Systems, USA • BMK, Brazil • Kaweah Container, USA • Shutterfly, USA • Schagen & Eschen, Germany • Freedom Graphic Systems, USA • Bluestar Group, New Zealand • Saxoprint, Germany • Inform P. Lykos, Greece • Millerzell, USA • ColorHub, USA • Grupo Bianchini, Brasil • Ifolor, Switzerland • Quad Graphics, USA • Data Image, UK • We R.Signs, Ukraine • Olympus Group, USA • Siegwerk, France • Northwest Framing, USA • Holland & Crosby, Canada

Retail

Amazon, UK • Porta Möbel, Germany • Galeria Kaufhof, Germany • Photo Dose, Germany • Ikea Swiss, Switzerland • Ikea Norway, Norway • REWE, Germany • Swarovski, Austria • Möbel Heinrich, Germany • Smurfit Kappa, Ireland

Screen Printers

Adcoproducts, Great Britain • Aelen en van Leeuwen, Netherlands • Artisan Complete, Canada • AT&S, Austria • BIC Graphic Europe, Spain • Blase Siebdruck, Germany • Celloglas, Great Britain • Centro Grafico, Italy • Comproespacios, Mexico • CPC, Israel • CSW Graphics, USA • Druckpunkt, Germany • FERAPPI Industria Serigrafica, Italy • Flexo, Italy • GFV-Verschlussstechnik • Imaba, Netherlands • Karl Meyer, Switzerland • Kilian Industrieschilder, Germany • Kroschke sign-international, Germany • Matthias Wetzel Industriebeschriftungen, Germany • MC Flock, Germany • Mccoy, USA • Mekoprint, Denmark • Metafas, Netherlands • Miele, Austria • Modernistic, USA • New Albea, Germany • OTM, Belgium • Plusprint, Germany • Press Glass, Poland • PRP Flexo, USA • Pure Innovation, Great Britain • Rüesch-Druck, Switzerland • SCA, France • Schilder Gerlach, Germany • Schurter Input Systems, Switzerland • Sericum, Spain • Signum Siebdruck, Austria • Stema Specialtryck, Sweden • Strate-Druck, Germany • Trico, Great Britain • Werner Achilles, Germany • Westrock Candiatic, Canada • Wilhelm Grewe, Germany • Willson & Brown, Poland

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