

## Color iQC

### Color Quality Control Software

Whether approving submits, production samples, or finished products, Color iQC adapts to your workflow making color fast and easy. Color iQC is a document-oriented software solution that removes the guesswork from evaluating colors. It's easy configurability and powerful feature set allow you to simplify processes and increase efficiency while ensuring accurate color control. Color iQC is available in a variety of configurations for specific industry and color communication requirements.

# Color iQC Advantages

## Configurability

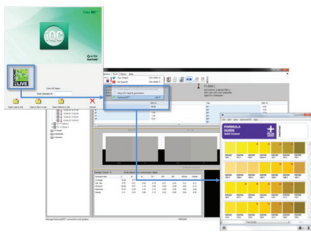
- Jobs are containers that contain all the items a user needs to perform a specific function. An example could be a project that requires several standards along with their acceptance criteria [document based architecture]
- Sending a Job to another user sends all of its contents. Settings, displays, screen layout, tolerances, and data are preserved in the job exactly the way they were on the sending system.
- This functionality can be extended to the creation of desktops tailored for different workflows and for different types of users.

## Connectivity

- It is becoming increasingly important for color systems to share their data with other business systems.
- Color iQC has the unique ability to connect and exchange color data across workflows and color chains.
- Color iQC's expanded suite of connectivity and traceability features make it easy to bridge processes and simplify the exchange of data with partners.

## Color Exchange, Import, and Export

- Color iQC can import and export a wide range of file formats [CxF1, CxF2, CxF3, EXP, QTX, MIF, SMP, XML, PAL, TXT, DAT, MDB...]
- In most cases these files can be imported as a native format by simply double clicking on the file and launching Color iQC
- Communications between many types of color systems is becoming mandatory



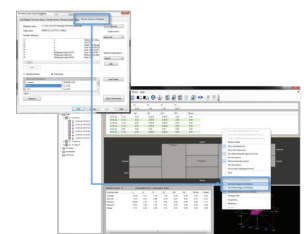
PantoneLIVE™ enabled: Allows access to Brand Owners palettes with an annual license.

- Easy access to PANTONE™ standards generic master and dependent libraries.
- Digitize workflows to deliver color standards with well defined and achievable tolerances to all participants in a supply chain.
- Ensure brand owners expectations are met across your production facilities.



Full support for remote jobs and projects when working with CI6X series spectrophotometers

- **Remote Jobs:** A series of actions defined in Color iQC and downloaded and executed on a CI64. A remote job may be more clearly defined as a procedure, a structured series of commands executed sequentially on a remote device.
- **Remote Projects:** Enables a Color iQC user to select a collection of Standards and send them as a named "project" to a handheld device.
- These features leverage Color iQC's unique document architecture to provide improvements in the creation, execution, and analysis of remote jobs and projects

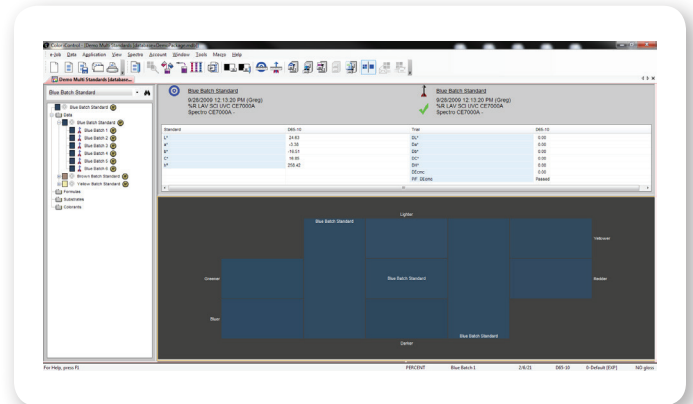


Remote output to customer database:

- Communications between many types of color and business systems is becoming mandatory
- Color iQC contains multiple methods that allow users to select and format color data and direct it to a location or application of their choosing.
- This information can be sent automatically as samples are measured, making it ideal for automation integration into manufacturing and process management systems.

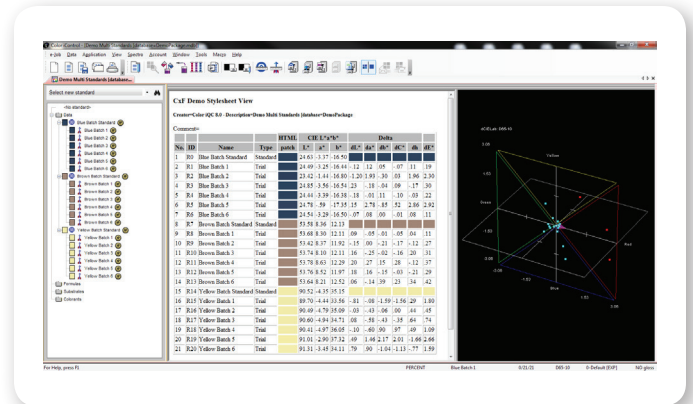
## Digital Signatures and Traceability

- Every measurement, colorant, and collection in Color iQC is created with a unique code that identifies that specific object for its entire life.
- This allows color data to be circulated around the world and specific items to be recognized by the software as they come back.
- Attempting to add a new item to the database which is actually a renamed copy of the original will flag the attempt and either update the item in the database or create a new object with a new GUID
- Each measurement contains a signature that validates the instrument conditions used to measure it, the type of instrument, the procedures used, and any NetProfiling or model transforms applied to the data



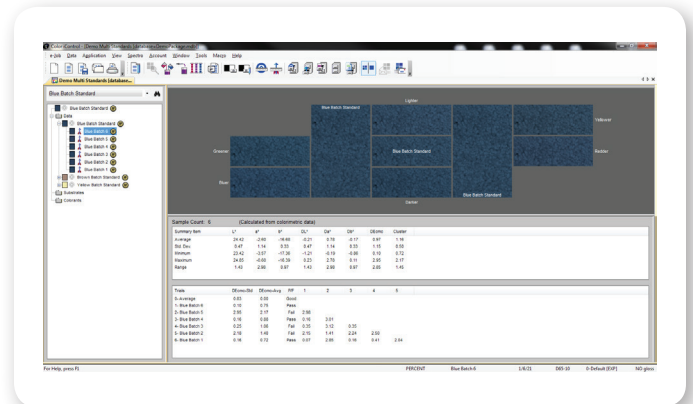
## Measurements

- Measurements are containers that can have multiple spectral curves, user defined tags, security settings, measurement properties, procedures, and colorimetric data.



## Templates

- Jobs and their contents, settings, and layouts can be derived from templates, allowing customer to create many tailored job types that are preset for functions they routinely do.
- A requirement to change a tolerance for a specific customer only requires changing it in a settings file, and all relevant jobs derive that new setting.



## Multiple Database Storage and Retrieval

- Important information required by multiple jobs, or that needs to be preserved and organized for analysis, can be stored in a database
- A job can be connected to a database for easy data association.
- User can create and store queries to dynamically organize their view of the database with up to 5 levels of hierarchy.

## Image Capture and Association

- Color iQC includes the ability to capture, associate, and display video images with a measurement.
- Images can be captured from any available video input device.
- Images can be associated and displayed with measurements or used to provide rendered on-screen color.

| Specifications                   |   |
|----------------------------------|---|
| <b>Color Spaces</b>              | CIE L*a*b*, CIE L*C*h*, Hunter Lab, CIE (XYZy)  |
| <b>Observers</b>                 | 2 degree, 10 degree   |
| <b>Illuminants</b>               | D50, D55, D65, D75, F2, F7, F11, C, A,<br>Horizon (GretagMacbeth), TL84, Ultralume 3000   |
| <b>Color Differences</b>         | FMCI, CIE DL*, Da*, Db*, CIE DL*, DC*, DH*, Hunter DL, Da, Db   |
| <b>Pass / Fail</b>               | All Attributes of CIELab, CIElch or HunterLab, CMC (l:c), CIE2000 (l:c:h)   |
| <b>Industry Standard Indices</b> | Whiteness [ASTM E313, CIE, GANZ, Berger, Stensby, Taube, Tappi]<br>Yellowness [ASTM E313, D1925], Opacity [Contrast Ratio, Tappi]<br>Strength [SWL, Summed, Weighted Sum], Haze, Munsell Notation<br>Orange Juice, Gloss [ASTM E429, Gloss60]<br>Grey Scale [ISO 105 Staining, Color Change]<br>Metamerism, Color Constancy Index, APHA |
| <b>Additional Features</b>       | User Defined Screen Layouts<br>Interactive Plots and Graphs<br>Job Files<br>Multiple Levels of Password Protection<br>Data Tagging and Tracking<br>Remote Output File Formats<br>e-Submit<br>Multiple Tolerancing Methods [User, Statistical, CMC, Historical]<br>NetProfiler Enabled<br>APHA   |

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L10-462 (09/13)

| Specifications                                       | Color iQC |              |
|--|-----------|--------------|
|  | Basic     | Professional |
| Job Driven Workflows                                 | •         | •            |
| Extended Tolerancing (Indices)                       | •         | •            |
| Dynamic Averaging                                    | •         | •            |
| Filters by Tag or Date                               | •         | •            |
| Automatic Tag Prompts                                | •         | •            |
| Remote Job Support                                   |           | •            |
| Intelligent Customization                            |           | •            |
| Connectivity: Import / Export Capabilities           | Limited   | •            |
| Data Management                                      | •         | •            |
| NetProfiler Enabled                                  | •         | •            |
| Traceability / Automatic Associations                | •         | •            |
| Textured On-Screen Color                             |           | •            |
| Image Capture / Association                          |           | •            |
| Dynamic Image Viewer                                 |           | •            |
| Automatic [Intelligent] Tolerancing                  |           | •            |
| Networkable Database                                 |           | •            |
| Design System Links using CxF                        | •         | •            |
| User Defined Procedures                              |           | •            |
| Visual Representation of Tolerances                  | •         | •            |
| Interactive Plots and Graphs                         | •         | •            |
| Remote File Output                                   |           | •            |
| Integrated Submit and Tagging                        |           | •            |
| Context Sensitive Help                               | •         | •            |
| Password Protect Key Functions                       | •         | •            |
| Dynamic Database Viewer / User Defined Hierarchy     |           | •            |
| Palette Programs, Color Programs, Vendor Management  |           | •            |
| eMail / FTP Support for Managing Submissions         |           | •            |
| Cross Trial Color Differences                        |           | •            |
| Data Output to XML, Style Sheets, Direct-to-Database |           | •            |
| Configurable HTML View using XML Style Sheets        |           | •            |
| Color Coded Tags and Labels                          |           | •            |
| Snap to Color  |           | •            |

| General System Requirements for Industrial Stand-Alone Software |   |   |
|---|---|---|
| Item  | Recommended   | Minimum   |
| Processor   | Intel Core 2 duo, AMD Athlon II or higher                               | Pentium IV  |
| CPU Speed   | 2 Ghz or higher   | 1 Ghz   |
| RAM   | 2 GB or higher  | 1 GB  |
| Operating System  | Windows® 7 (both 32 and 64 bit versions), XP Professional SP3           | Windows® XP Professional SP3                                  |
| Hard Disk   | 5 GB free space on system disk  | 1 GB free space on system disk<br>2GB free space on data disk |
| CD  | 24X speed or faster   | 4X speed  |
| Video Adapter   | XGA [1024 x 768] 32 bit True ColorSupport for OpenGL                    | SVGA [1024 x 768]16 bit High Color Support for OpenGL         |
| Com Ports   | 1 Serial or USB port for each connected instrument                      | 1 USB port  |
| Internet / E-Mail   | Recommended for data transfers, software updates, and technical support | Not required  |