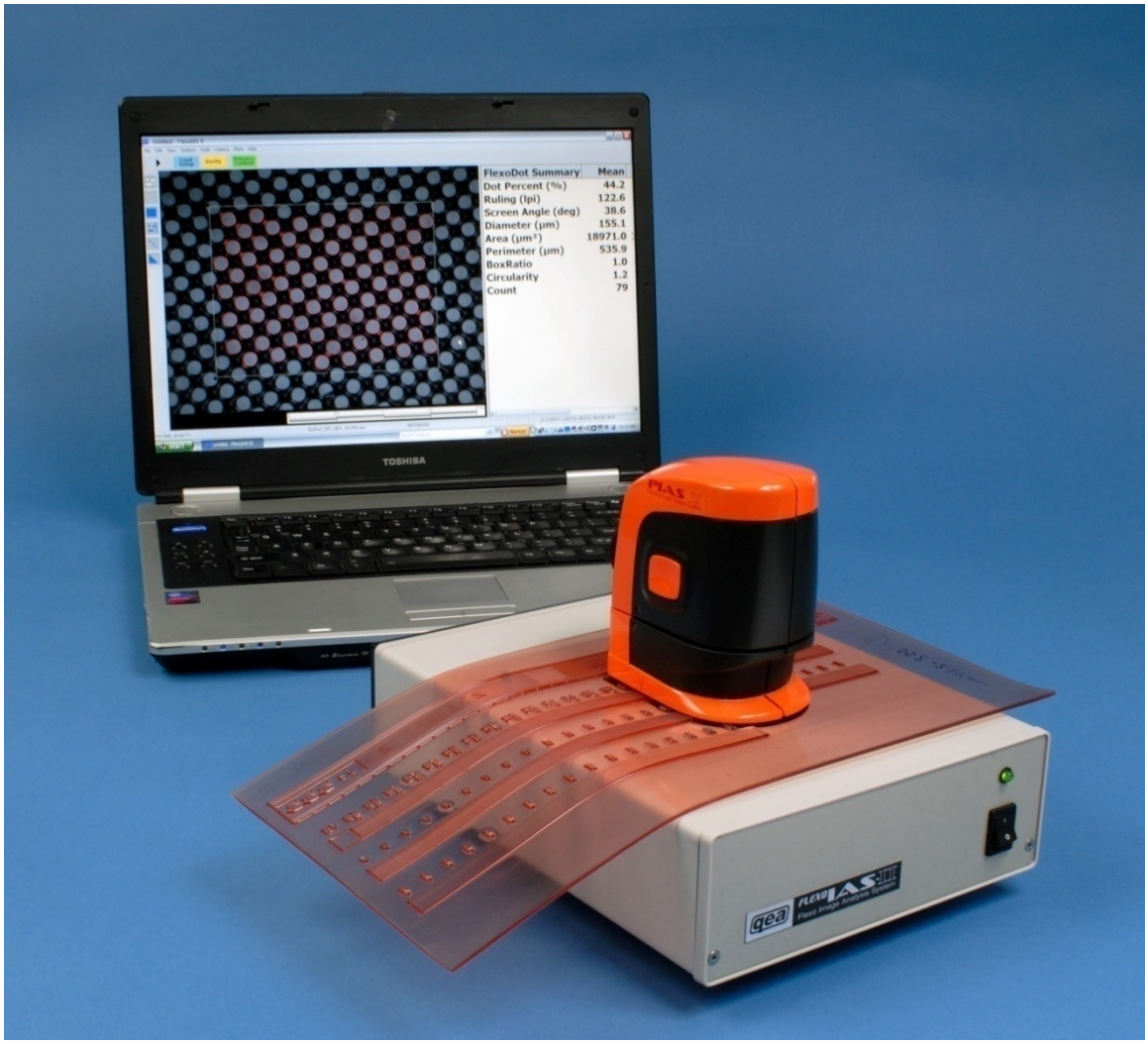
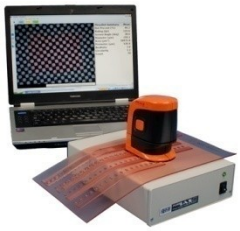
FLEXO IAS II

Flexo Image Analysis System



Advanced Process Control Instrument for
Flexographic Plates and Prints

Innovative measurement instruments from qea



FLEXO IAS II
Flexo Image Analysis System

FlexoIAS™-II *is a second generation test instrument from QEA designed for process control in flexographic printing. Equipped with specialized optics, a light box, and advanced imaging software, the FlexoIAS-II enables quick, objective, and reliable analysis of the quality of flexographic photopolymer plates, films and masks. Optional optics are also available for comprehensive print quality analysis.*

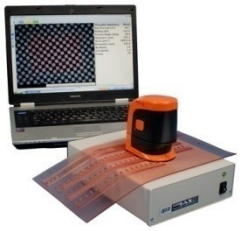
Plate Production Process Control
The FlexoIAS-II elevates flexo plate quality analysis to the highest level. It brings a sophisticated tool to the shop floor and empowers plate room operators to make critical quality measurements during plate production. With the easy-to-use measurement unit and the automated data logging capability, the FlexoIAS-II provides systematic plate quality monitoring and control to catch errors as early as possible in the production process, reducing costs and eliminating down time and waste.

Best Tool on the Market
The FlexoIAS-II is a highly refined tool based on more than10 years of experience in flexo plate measurements by numerous converters, tradeshops, and equipment and plate suppliers. Its performance leapfrogs other products on the market. *The largest packaging converter in the world relies on the strength and performance of the FlexoIAS-II for plate production process control in more than 30 factories worldwide!*

Features Highlights

- Quantitative analysis of dot%, line screen, and many other dot quality parameters (size, shape, location, screen angle); line and transmission quality analysis also available
- Excellent measurement repeatability and reproducibility
- Superior sensitivity and reliability in highlight dot measurements
- Compact design with small footprint; no limit on plate size
- High-resolution digital camera (1024x768 pixels) and optics (~3µm/pixel) for high line screen and small highlight dots
- High intensity, collimated light source; allows analysis on any plate type and color
- USB 2.0 high speed interface to PC; no battery or external power required
- *Process Control mode* for routine plate quality monitoring and control by plate room operators and supervisors; or *Interactive mode* for product design, R&D and problem-solving by R&D and quality engineers
- Pre-programmed test sequence in process-control mode; automated data logging into database, and graphical statistical process control reporting
- Multiple options to meet all needs including: a) plate only, b) plate and print, c) plate only for process control, and d) plate and print for process control

Innovative measurement instruments from qea



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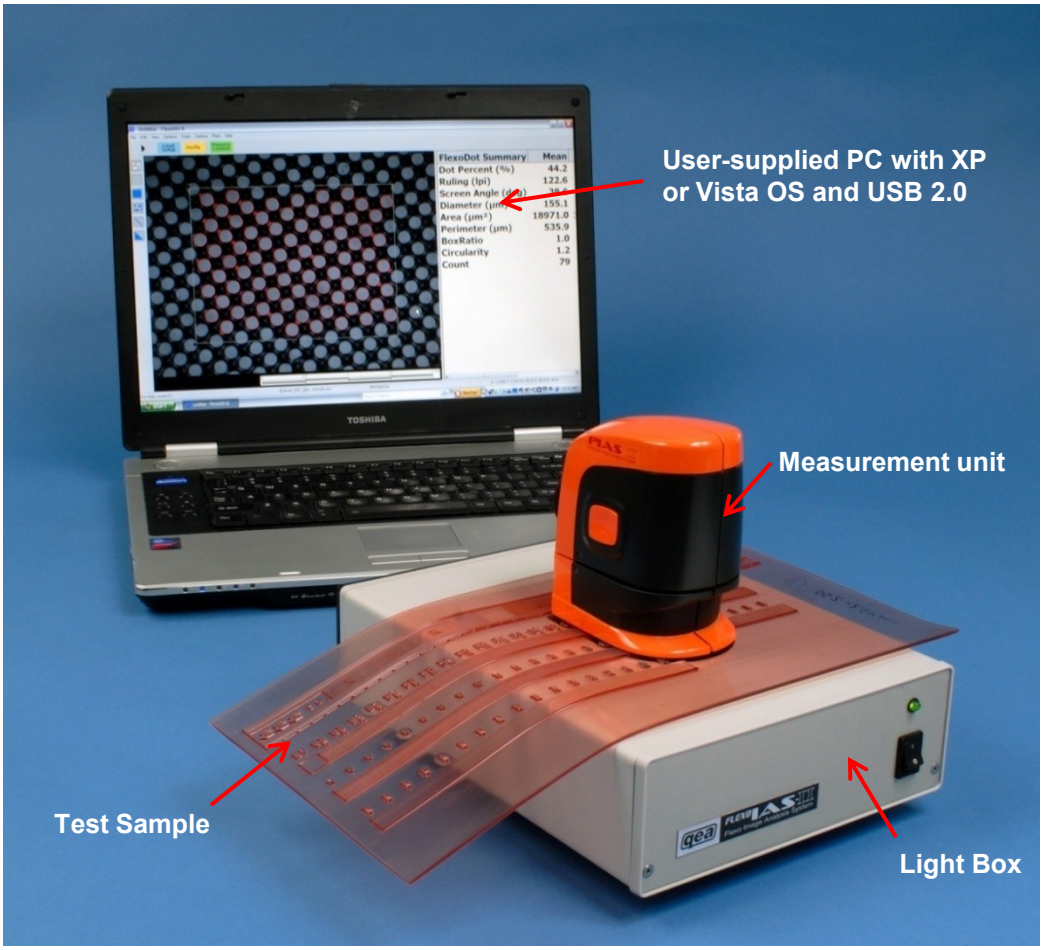
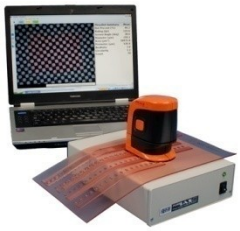
System Configuration



FlexoIAS-II System Configuration and Options:

- ***Measurement unit***, with optics for plate measurement (standard)
- ***Light box*** (standard)
- ***Calibration reference target*** (standard)
- ***Control software*** (4 options: see *Product Matrix*)
- ***Optics for plate and print*** measurements (option)
- ***Jig*** for test sample (option)
- ***PC*** (user supplied)

Innovative measurement instruments from qea



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Product Matrix

Product Code	Optics	Control Software
FlexoIAS-II	Plate[1] only	Interactive[3] mode only
FlexoIAS-IIP	Plate + Print[2]	Interactive mode only
FlexoIAS-IIPC	Plate only	Interactive + process control[4]
FlexoIAS-IIPCP	Plate + Print	Interactive + process control

***Notes**:*

1. In ***Plate*** measurement, the light box is used to back light the test sample in a transmissive lighting arrangement.
2. In ***Print*** measurement, the test sample is illuminated by the light source built into the optics module in a reflective lighting arrangement.
3. In ***Interactive Mode***, measurements can be made at any arbitrary location on the test sample and the results are displayed in real-time. The user is responsible for recording the test results. Images and data can easily be saved or copied and pasted into other applications such as Excel.
4. In ***Process Control Mode***, measurements are made in a pre-defined sequence and the results are automatically logged into a Microsoft Access database, together with other relevant information for documentation and process tracking. The results can be viewed graphically in a process control chart, together with the quality statistics.

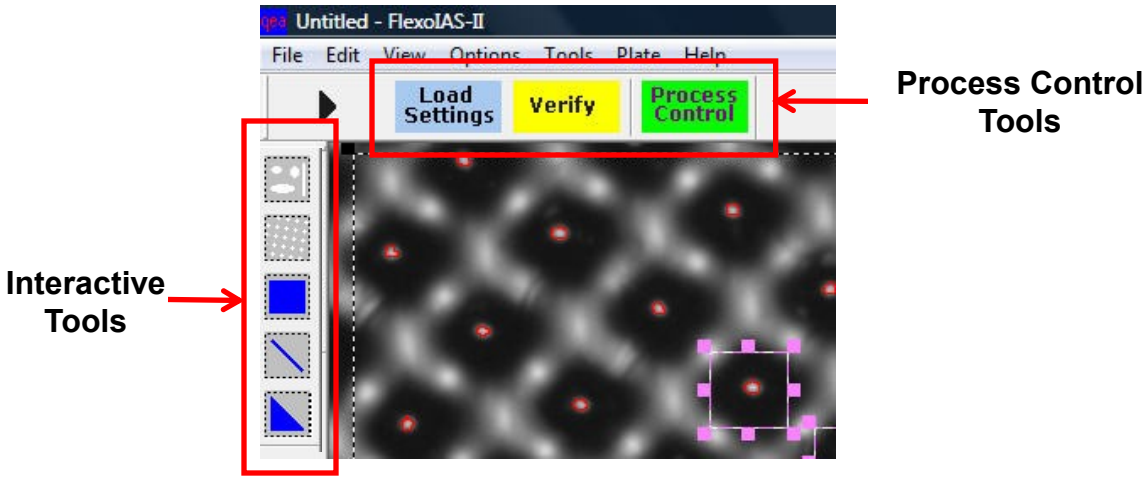
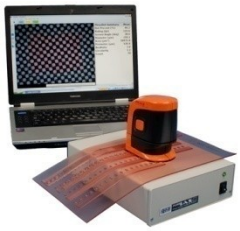


Plate Measurement: Interactive & Process Control Tools in FlexoIAS-IIPC

Innovative measurement instruments from qea



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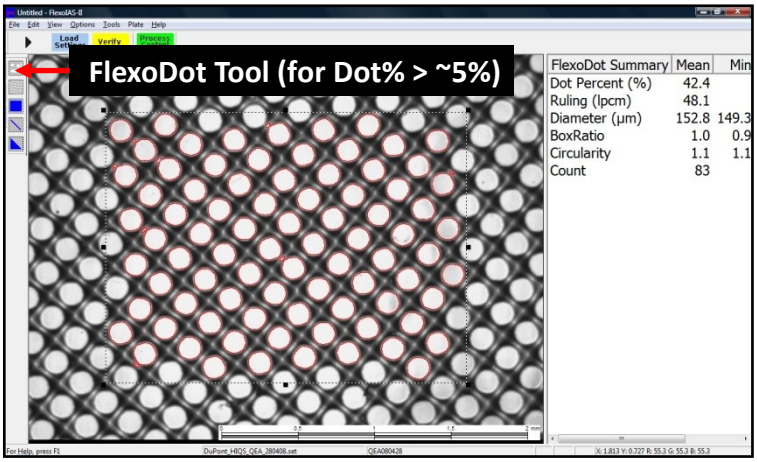
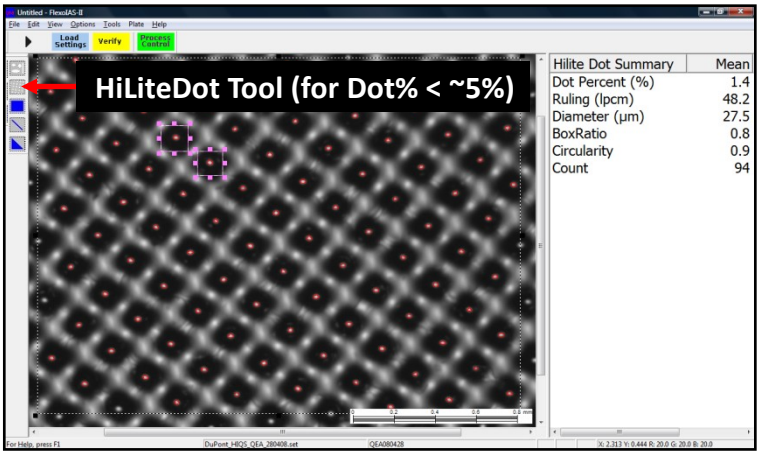
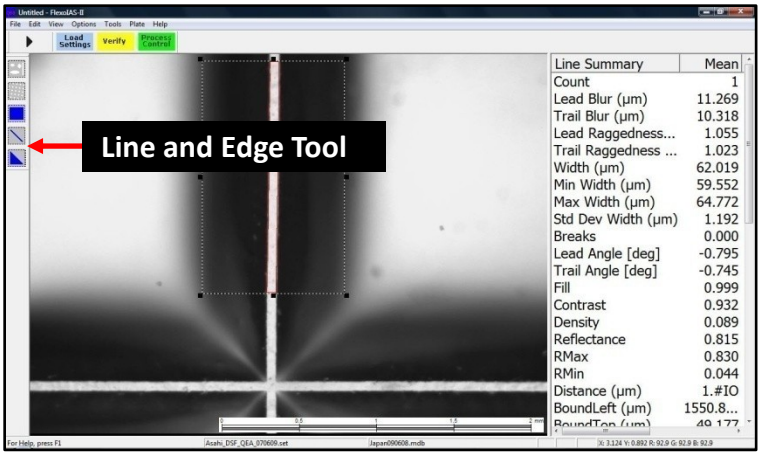
Tools for Flexo Plate Quality Analysis







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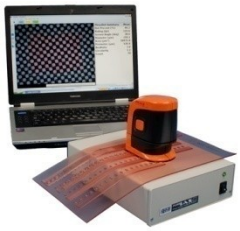

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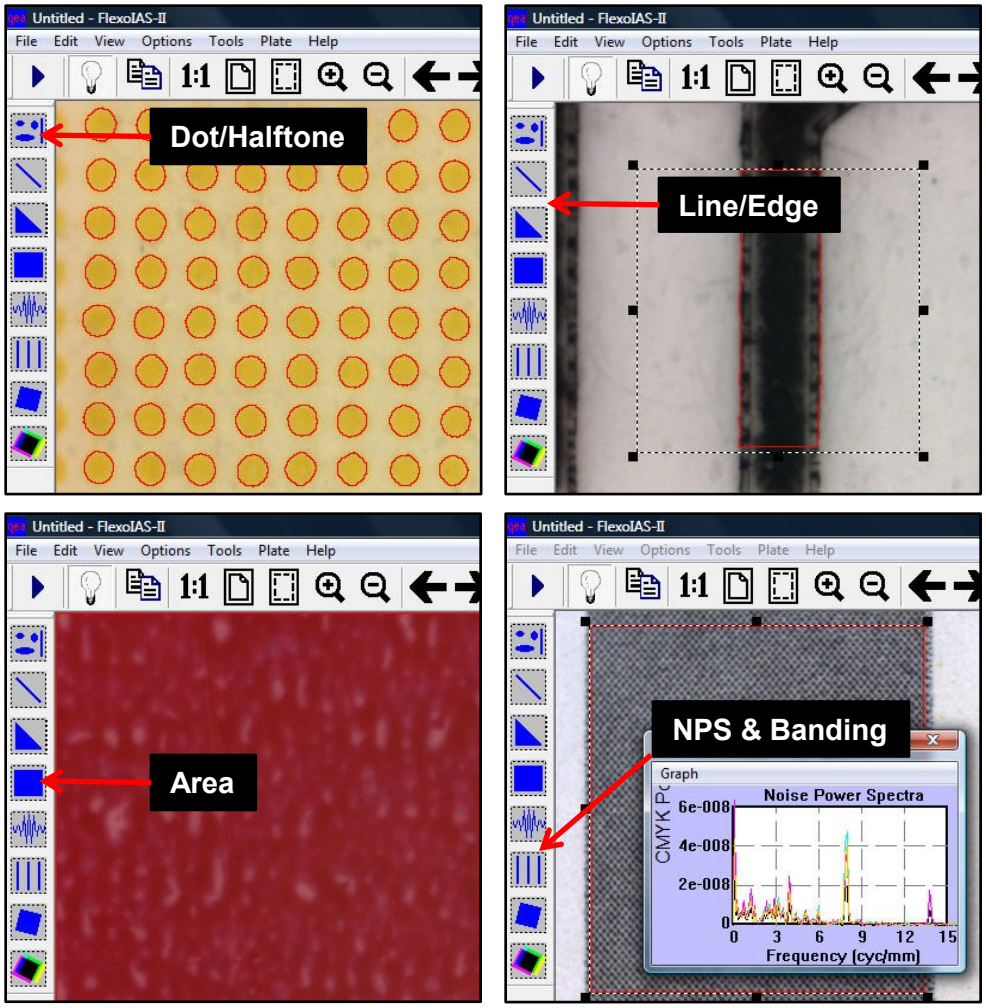
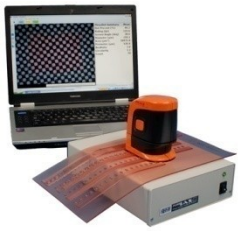
Tools in the Print Quality Analysis Option



Most commonly used tools for flexo printing

Innovative measurement instruments from qea



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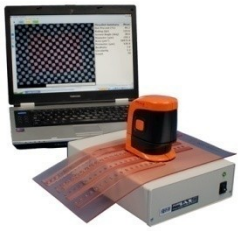
Specifications - Functions*

Functions	Description

Measurement Tools	**Plate Analysis Tools**
	• Dot Tools – Standard Mode & HiLite Mode
	  • Dot%
	  • Line Screen (lines per inch, lpi or lines per cm, lpcm)
	  • Screen Angle
	  • Dot Quality (dia, area, perimeter, circularity, box ratio, and XY location)
	• Area Tool
	  • Transmittance (%)
	• Line Tool
	  • Line Quality (width, blurriness, raggedness, darkness, contrast, fill)
	Print Analysis Tools (Option)
	• Dot%, line screen, screen angle and other dot parameters as in plate
	• Line and edge quality
	• Area properties (OD, graininess and mottle)
	• NPS (Noise Power Spectrum) and Banding
	• SFR (Spatial Frequency Response)
	• Reg (Color registration)

Typical Applications	Flexo plate, film and mask quality control Exposure calibration Confirmation of bump curves and dot compensation Print quality analysis
Software Features	Live image viewer Analysis of live or stored images Dot analysis parameters (color plane, threshold and magnitude, size filters) Transmittance calibration and verification
Analysis Modes	Interactive and Process Control (Sequence Mode) Multiple plate settings in process control
Output	Image saving in bitmap file Results saving in text files (interactive mode) Output to Microsoft Access (Process Control Mode)

* Subject to change without notice.



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Specifications - Technical*

Technical	Description
PC Requirement	PC with Windows® 7 64-bit; USB 2.0; MS Access and Excel 2007 (recommended)
Measurement Geometry	Transmissive: broadband collimated backlight (white LED) for plate; Reflective: 45/0 (white LED) for print
Sensor	Color CCD (1024x768 pixels)
Resolution	Plate measurement: 3.3µm/pixel Print measurement (option): 3.3µm/pixel (high resolution module); 23µm/pixel(low resolution module)
Analysis Modes	Plate: Interactive and Process Control (Sequence Mode) Print (option): Interactive Mode
Aperture Size	Plate: 3.4mmx2.55mm Print (option): 3.4mmx2.55mm (HR); 24mmx18mm (LR)
Substrates	Plate: Photopolymer plates (analog, digital, capped); Digital mask and film Print (option): paper, board or film
Sample Size	Unlimited
Repeatability (Dot %)	±0.1% @ 2% ; ±0.3% @ 30% and ±0.5% @ 50%
Inter-instrument Agreement (Dot %)	±0.2% @ 2% ; ±0.5% @ 30% and ±1.0% @ 50%
Power Requirements	Analyzer (Measurement Unit): USB powered Light Box: AC power adapter (battery power optional, 4 AA batteries)
Accessories	Calibration reference target Portable carrying case Lens cleaning cloth CD with software & documentation
Instrument Size	Analyzer: 10.0x8.5x6.4cm; 0.35kg [3.9”x3.3”x2.5”; 0.77lb] Light Box: 24.2x18.4x6.6cm 1.12kg [9.5”x7.2”x2.6”; 2.5lb]
Shipping Dimensions and Weight	46x38x23cm; 4.5kg [18”x15”x9” 10lb]

* Subject to change without notice. Rev. 130911.

For all inquiries, please contact:

Quality Engineering Associates (QEA), Inc.
755 Middlesex Turnpike, Unit 3
Billerica, MA 01821 USA

***Tel:* +1 978-528-2034 *Fax*: +1 978-528-2033**

***Email*: info@qea.com *url*: www.qea.com**

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