



# AceFormChecker

## ► Market asks for quality

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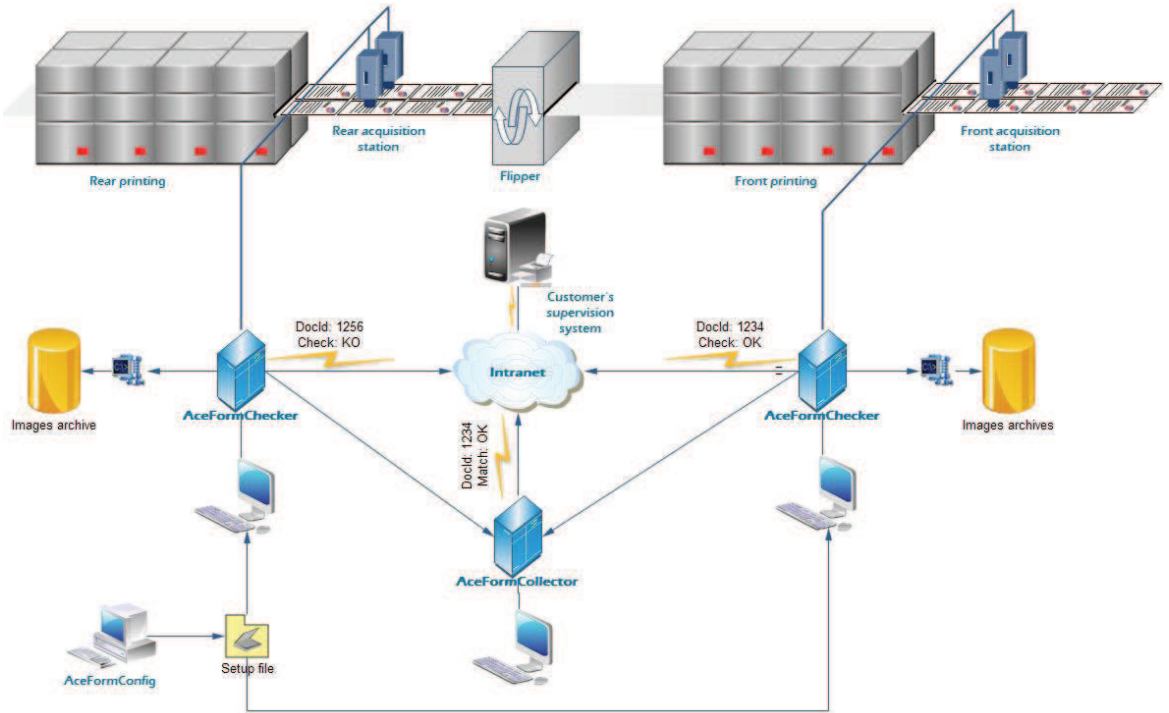
If the printing is your business, there's a thing you can't overlook: to make mistakes! Variable data integrity, ink smearing, text and graphics un-sharpness, wrong match between front and rear: just a few jeopardizes of your business.

**AceFormChecker** guarantee a 100% quality check on your manufacturing: you know what it's worth:

Mind to know how?

- Optical acquisition of printed documents up to 1000 fpm (300 m/min)
- Monochrome and Color
- 250 dpi Standard resolution, up to 800 dpi for custom application.
- Small dimensions (WxHxD 8x28x20in (200x700x500 mm) 2up version)
- Reading and decoding of:
  - Alphanumeric text (OCR)
  - Various Data Matrix Standards
  - Various Bar Code Standards
- Integrity check on logos and graphic symbols (OCV)
- Chromatic check
- Color register alignment check
- Ink smearing check
- Code sequences check
- Front and rear side match
- Data check with source files or Databases
- Cross check between different data read on the document, in order to verify match & consistency
- Real time switching between different check set-ups according to the document layout.
- Real time visualization of acquired documents (strobe mode)
- Real time visualization of detected defects and image freeze of faulty document
- Real time visual notification of the quality check result (pass/fail) for every inspected document
- Availability of optoisolated I/O signals for easy Real time interaction with many devices
- Generation and memorization of error reports
- Memorization of document images (after compression)
- TCP/IP interface towards external supervision systems to notify check result of every document

## ► Logical Schema



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The system performs the digitalization of the documents exiting the printers by means of an acquiring station that employs the leading edge technologies available on the market. The document image is then transferred to the processing server and analyzed by the inspection application, **AceFormChecker**.

**AceFormChecker** performs all the quality check defined for that particular document layout and generate a pass/fail response; the check result is immediately displayed on the graphical user interface -together with the document image- and could be sent over the network to the customer's supervision system. Accordingly with the severity and persistence of the printing error, **AceFormChecker** could even stop automatically the printing process.

The configuration of the quality check to be executed on the document is performed by **AceFormConfig**, a powerful and intuitive application designed to give the

operator full configuration capabilities to fulfill the more demanding inspection tasks.

The set-up is stored within a configuration file that could be deployed on every inspection station with a simple click, and without the needs to stop and start the printing process.

The exclusive **SmartPinless®** technology leads to an outstanding document image stability; it compensate the oscillation due to the normal side-slipping of the paper flowing at full speed through the acquisition station; this feature is impossible with traditional photocell sensors.

Front and rear inspection station are interfaced to **AceFormCollector** in order to monitor the right coupling of the two sides of the document, that could mismatch due, for instance, to a wrong paper path threading.

**AceFormCollector** shows on the operator interface the match result, that could also be sent to the customer's supervision system.

Below are depicted some simple screenshots of both the run-time and configuration application ([AceFormChecker](#) & [AceFormConfig](#)).

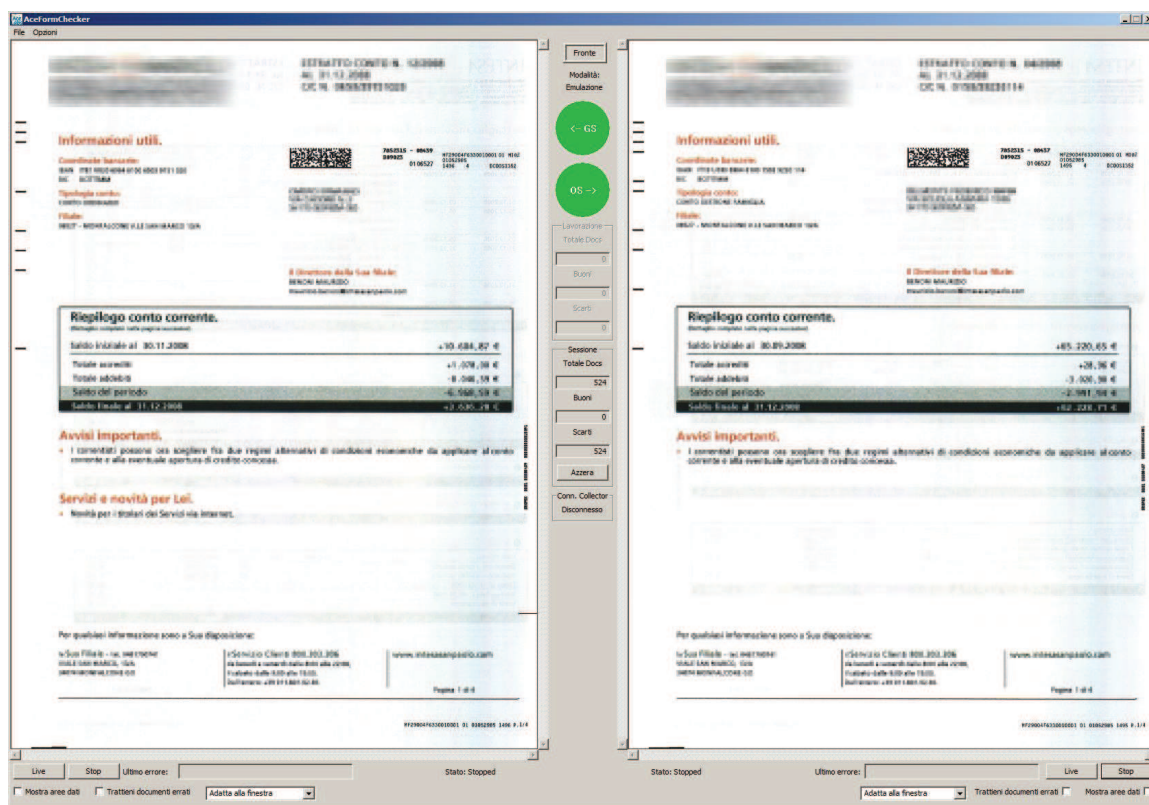


Fig. 1. [AceFormChecker](#): Both document fulfills the quality check (green light); the two document images are shown.

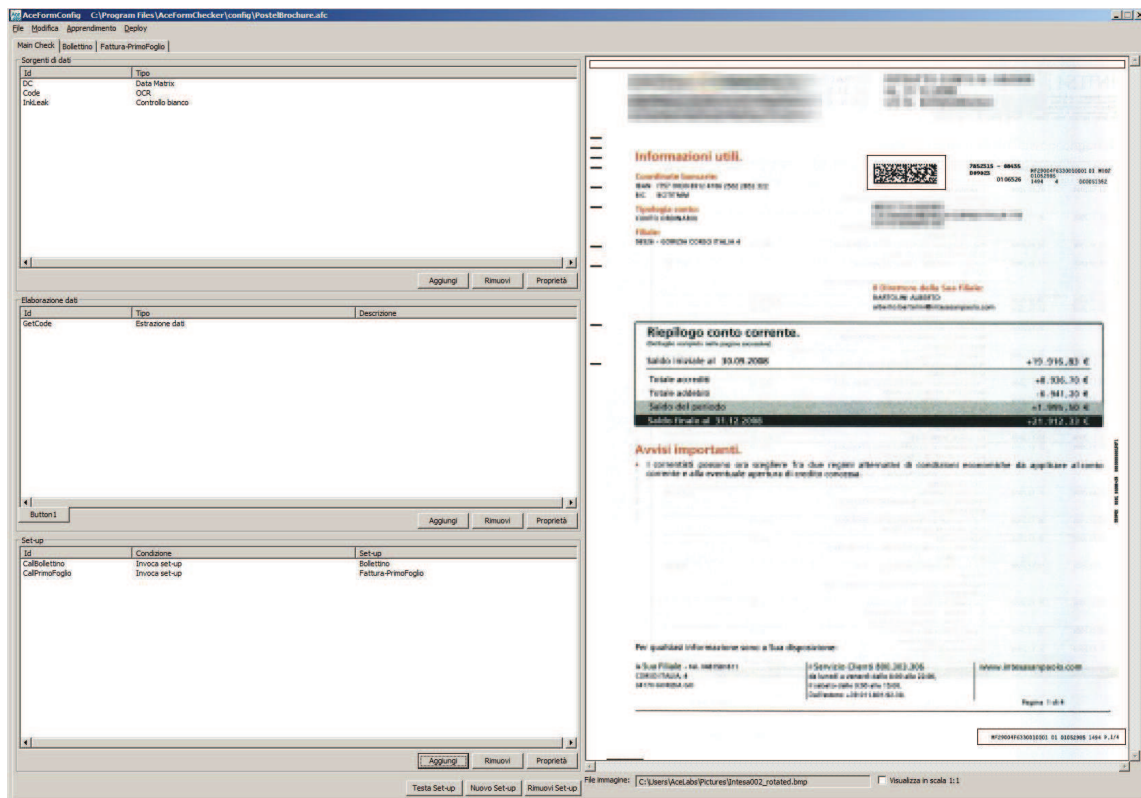


Fig. 2. [AceFormConfig](#): a rather simple inspection set-up. After Data matrix & OCR decoding, the two codes must match: all in few click

## ► Easy and painless installation

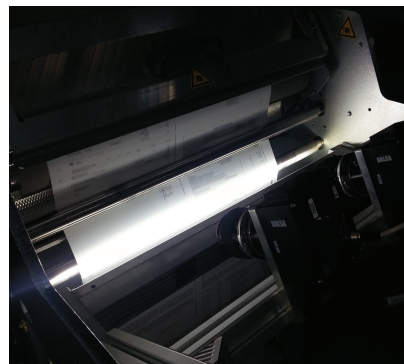
**AceFormChecker** is made of two main unit:

- the acquisition station, composed by line-scan cameras and illuminators
- the processing station, composed by the server together with the monitor (either standard or touch screen) and, eventually, mouse & keyboard

Depending on the customer's printing equipment layout (make and model of both printer and winder, available premises room, customer's preferences, etc.), different system layout are available:

### Embedded

If the printing station offers enough room to accommodate the acquisition station, this is the economical solution. A small external unit containing only the processing station is necessary. AceLabs will provide all the necessary mechanics and wiring in order to integrate the solution into the customer equipments.



### Stand-alone

In this configuration the acquisition station and the processing station are integrated in a unique stand-alone metal enclosure that has to be installed between the printer exit and the paper winder.

Being a passive unit, the paper tension must be provided by the paper winder.

### Power-driven

Due to the particular customer plant configuration and/or when it is not desirable the paper winder controls the dragging of the paper through the inspection station, AceFormChecker could be fitted with a dedicated power driven unit that provide the adequate paper feeding capabilities. The power unit will be completely integrated inside the structure, that has the same layout as the stand alone configuration.





## ► Modularity of the solution

Modularity and flexibility. [AceFormChecker](#) is configurable according to the customer's real needs, getting the best at the right price.

Choose the right solution you need now, having the awareness that whenever you need to expand it, you can. All the solution permits the customer to upgrade or to switch to the next level of complexity without thrashing a single bolt.

### Hardware Modularity

1UP, 2UP or 3UP, simplex or duplex, Color or Monochrome? Depending on your printing plant configuration, here are the possibilities

	Simplex			Duplex		
	1UP	2UP	3UP	1UP	2UP	3UP
Acquisition station	1	1	1	2	2	2
Cameras needed for each acquisition station	1	1,2	1,3	1	1,2	1,3
Total camera needs	1	1,2	1,3	2	2,4	2,6
Processing station	1	1,2	1,3	1	1,2	1,3

### Software Modularity

Depending on the kind of data to read and decode, you can choose whether to install all the reading modules or only what you need among BarCode, DataMatrix, OCR, OCV.

[AceFormChecker](#) is made of a common processing core and a set of inspection and data decoding widget that could be added in every moment.

Whenever you need to perform the front / rear document match verification, you can also add the [AceFormCollector](#) module.

### Technical Specifications

Depicted below are the technical specification of the standard solution.

Due to the modularity and flexibility of the product to tailor to the particular customer's needs, please give us a call whether the proposed solution doesn't completely fulfill your needs. We guarantee to find the best solution for you.

	Color & Monochrome solution
Supported Printing Formats	1UP,2UP,3UP
Paper speed	1000 fpm (300 m/min)
Resolution	250 dpi Standard, up to 800 dpi for custom solutions
Data Matrix	ECC 200, QR Code model 1 & 2 , PDF417 conventional & compact form
Barcode	2/5 Industrial & interleaved Codabar Code 39, 93 & 128 EAN-8 - including Add-On 2 & 5- EAN-13 - including Add-on 2 & 5- UPC-A/E - including Add-On 2 & 5- PharmaCode, RSS-14 normal & truncated RSS Limited, RSS Expanded
OCR	OCR A, OCR B, Learning capabilities of custom font, natively supported
OCV	Learning capabilities of custom graphics, natively supported
Power supply	220 V 10A Industrial
I/O & Interfaces	Ethernet port 10/100/1000 Serial RS 232 (RS458 on demand) Optoisolated I/O towards customer's PLC & logic