



Haiyaa industrial VDP

*fully dedicated in creating variable job smartly
innovatively, efficiently and safely.*

Over the past decades, I've seen thousands of digital printing users are happily using our world-leading technologies to widen their business scope with high working efficiency. Here I'd like to share with you what we have done and what we will do.

Presenter:

Edward Tsui, General Manager
Haiyaa Technologies Inc.



{Foreword}

The printing industry is changing rapidly. Going to digital is the irreversible trend.

We start from China who is one of the biggest digital printer installation countries around the world. The job volume and its design there are unimaginable big and complex. Through continuously development, now we can provide not only top class VDP software but also world-leading total industrial solutions.

Besides China, actually digital printing has been increasing very fast everywhere. Working with the local partners in the different countries, we try our best to fulfill the local interests. That's why more and more professional digital printing users and experts like to choose and recommend Haiyaa.

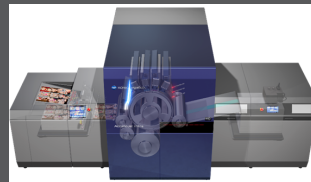
In this PPT, I will give a brief introduction of our technologies, hope you enjoy it.



Commercial value

Bring more business opportunities for digital printing

Making full use of the printer's outstanding performance and its excellent workflow, we try our best to assist the users to produce nearly all kinds of jobs and make deliveries on time.





General Label



ID Card



Cloth Label



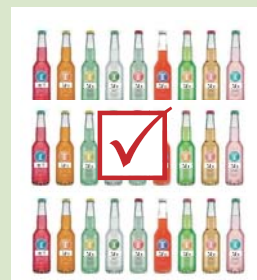
Certificate



Security Label & Packaging



Billing & Statement



Personalized Label & Packaging



Security card/coupon



Haiyaa business focus and has cutting-edge technologies



About us

Company Name: Haiyaa Technologies, Inc.

Founded: 1998

Main business: VDP and related solutions development

Location: Shanghai, China

Public/private company: Private

Sales model: Direct and in-direct sales in China

In-direct sales overseas

Asia Pacific operation:

China	Malaysia	New Zealand
Hong Kong	Singapore	Australia
South Korea	India	Indonesia
Philippines	Taiwan	Thailand
Japan	Vietnam	Sri Lanka

OUR PHILOSOPHY

- Customer oriented
- Focus
- Incremental innovation
- Patience



1998	Founded	Haiyaa StampTool system released	2016	UV fluorescent pattern released	
2003	Start VDP software development, including Merge4Print, VariCatalog, Web2Print...etc, Top 5 digital printing service centers in the biggest cities in China choose Haiyaa	2012	TrueRandom released	Chinese microtext released	
			Random color 1D 2D barcode released	TAGImposer R released	
			Special font effect released	VariCloud released	
2007	Start VariPrint -- Haiyaa flagship product	2013	Haiyaa Anno cloth label order platform released	2018	Haiyaa Accelerator released
	Enter into ID card and cloth label market		Arabic language layout engine released		Multi-layer variable QR released
2008	Olympic Games's personalizd postcard production system		Care label solution released		TAGProof released
	Free style impostion released		Random color stroke & catepillar pattern released		PDFVerifier released
2009	Enter into security label and statement & billing market		Join Dscoop Asia 2013	2020	TAGProof Carelabel released
	Random text style authentication solution released	2014	VDP solution for industrial inkjet printers released		TrueRandom Plus released
	Microtext released		Mini 2D barcode released	2021	LabellImposer released
	Lenticular Image released		Digital Fibre Bacteria Pill pattern released		FonMatrix QR released
2010	TagImposer released	2015	Kaleidoscope Engine released		Microfont QR released
	Top 3 colleges hasing digital printing major choose Haiyaa		BRICS characters released	2022	Haiyaa Zing released
2011	OneTouch released		EXPO characters released	2024	UVPrintRFID released
	Latent image released		Variable heat transfer tag and		AllinOne released
	Anti-copy module released		tagless prepress solution released		VariPrint Cloud released

VDP is not just variable serial number and variable barcode, it can do more...

**we are not an entry-level
utility or an appetizer,
but an one stop solution.**



VDP - VariPrint briefing

The core platform of all of our solutions

“The diversity and complexity of applications in China made VariPrint”

- Why we start development as a plug-in of Acrobat and InDesign and finally give up?
- Why VariPrint build in more than 130 functions?
- Why VariPrint have up to 10 types of imposition style?
- Why VariPrint have dozens of variable text definition setting?
- Why VariPrint have dozens of barcode definition setting?
- Why VariPrint developed many modules which looks no relation with VDP?
-,

Too many Whys lead to many label producers go to VariPrint; long-term and solid technical commitment also lead to more and more digital printer manufactureres are willing to partner with us.





Detail, detail, detail

We have more than **130** logic processing functions that can satisfy any kinds of logic processing requirements.

Why so many functions? it's the judge who is professional who is not.
when you have tough job to do, **you will find it so useful.**

We know the most of the operators are not good at scripting, so we **abandon scripting**, instead to set the parameter only.



VDP - VariPrint barcode

Detail, detail, detail

“Barcode is never as simple as u thought”



Code128Auto same width



End font small or same



Internal quadrangle

Quatering

Type T

Halftone color

Quatering lean



Position mark

Full color

Single color

Multi-layer variable QR

Quatering HV



RGB, CMYK and spotcolor



Overprint



Mirroring for sandwich printing



Middle bar same height



Head font in any position



Black line width inching in pixel level to compensate dot gain



Mini 2D, 5 digits, Datamatrix, A level

17 digits, small to 2.3x2.3mm, A level

More types are coming out soon



VDP - VariPrint imposition

Detail, detail, detail

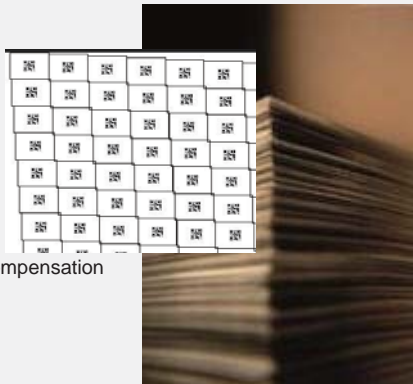
“We have all of imposition styles for digital printing”

	Column 1	Column 2	Column 3	Column 4
Row 1	1	2	3	4
Row 2	5	6	7	8
Row 3	9	10	11	12
Row 4	13	14	15	16
Row 5	17	18	19	20

-
- Sequence imposition + 8 directions
-

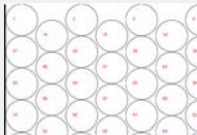
Direction compensation

	Column 1	Column 2	Column 3	Column 4
Row 1	20	19	18	17
Row 2	16	15	14	13
Row 3	12	11	10	9
Row 4	8	7	6	5
Row 5	4	3	2	1



Stack imposition + grouping sheets

Stagger imposition



Continuous number in column direction + grouping rows

Work with digital diecutter

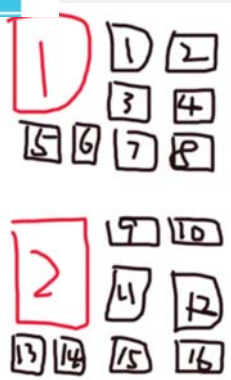


Flexible gap setting



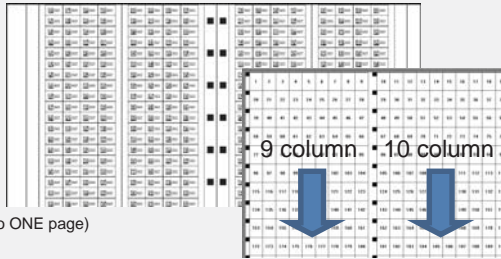
Slightly adjust each gap separately with 0.01mm accuracy to compensate for PVC deformation

Eyemark separately



Free style imposition

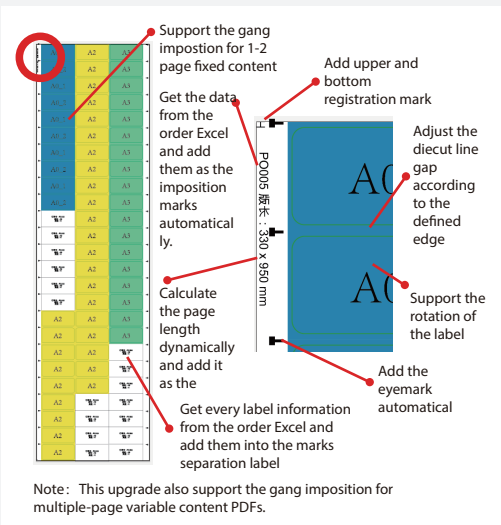
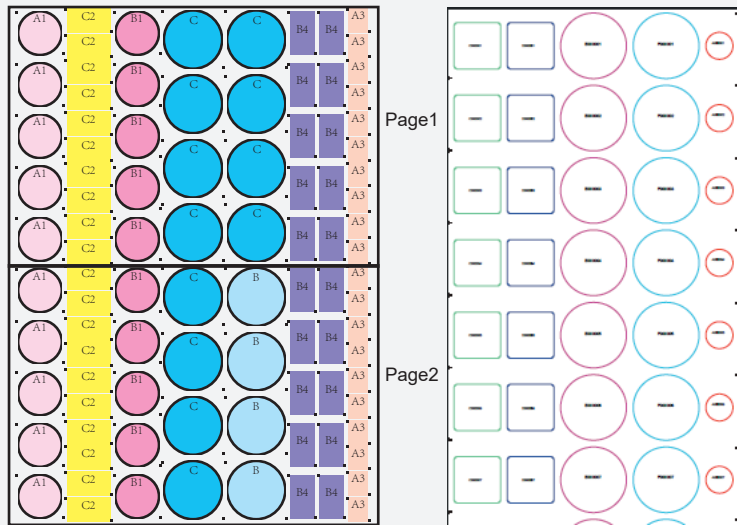
(Impose up to 4 kinds of different labels into ONE page)





VDP - LabelImposer

Optimized gang imposition for label production



“Optimized gang imposition for different types of short-run labels production”

- Many styles for choice
- Easily sorting and packing
- Delivery no more no less
- Paper saving

“Fast and stable”



1-bit TIFF



Postscript



- Standard PPML
- PPML Special for ESKO RIP



PDF



Job description:

1 million pieces of label with black or random color 2D barcode

Printing to PDF time:

within 10 minutes

PDF size:

210MB

Ripping time:

within 10 minutes on the Production Pro RIP



Job description:

100K pieces of label with black 1D barcode

Printing to PDF time:

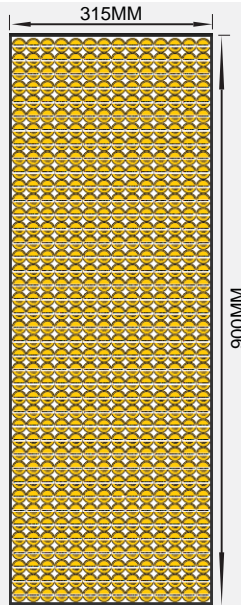
within 2 minutes

PDF size:

17MB

Ripping time:

within 2 minutes on the ESKO 4.0 RIP



Template size: 490kb
Variables: random data text

Detail, detail, detail

The Latest Testing Report

August, 2014

Job description:

500K pieces of label with complex vector image template

Printing to PDF time:

within 3 minutes

PDF size:

15MB

Ripping time:

within 23 minutes on the ESKO 4.0 RIP



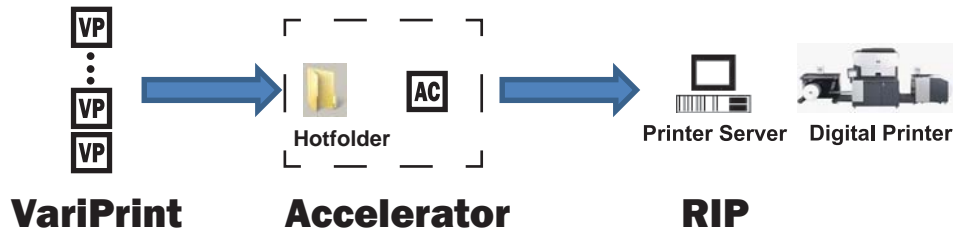
VDP - VariPrint plus Accelerator

World Fastest VDP

Job description: **1,000,000** pcs of label with complex vector image background

Composing time: **15 min** Ripping time: **5 min**

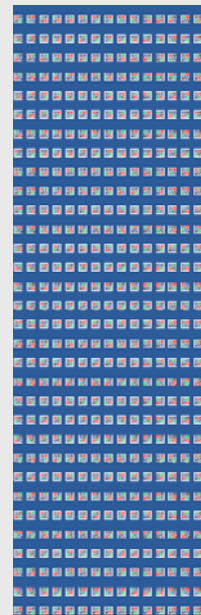
(On the latest version HP Production Pro or HP L&P Printer Server)



Job description:



size:20x30mm



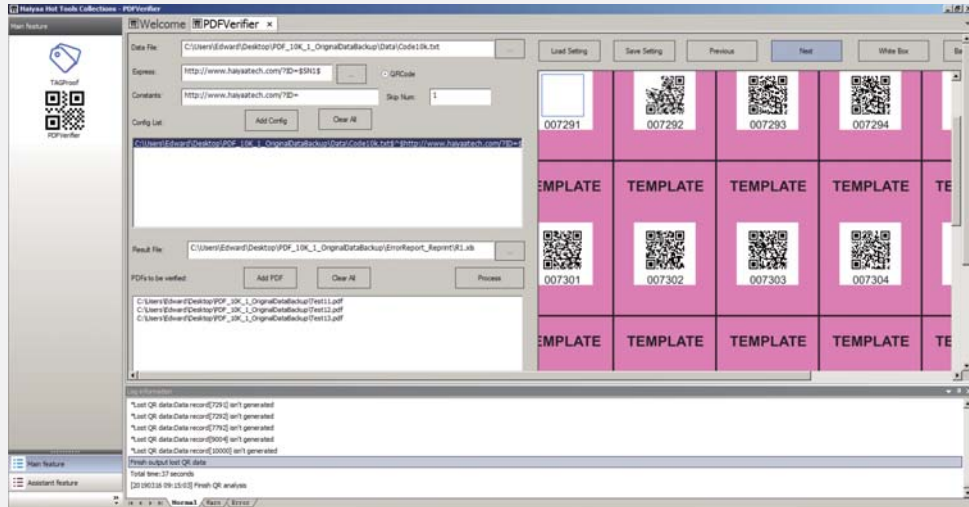
size:300x960mm

Imposition page, 480 pcs per page, total 2083 pages



VDP - PDFVerifier

Last minute PDF verification before ripping



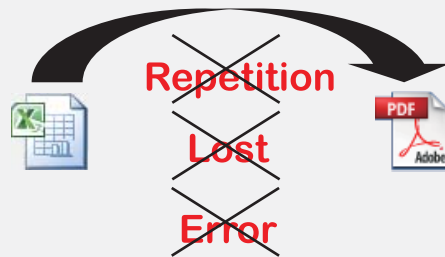
Testing Report

Job description:

1 million pieces of label
with one variable QR
whatever the background
is complex vector image
or not

Varification time:

within 14 minutes



Note: The current version is only available to verify the barcode types as follows, QR, Datamatrix, EAN8, UPCE, ISBN10, UPCA, EAN13, ISBN13, I25, CODE39, CODE128.



Label & Packaging - Targets

We can help in the label and packaging industry



Cosmetics



Electronics



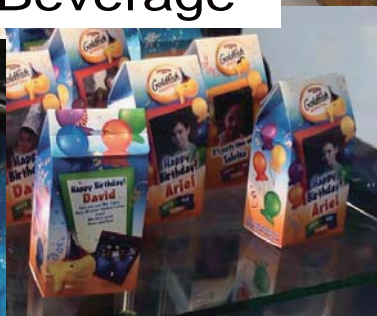
Wine & Liquor



Beverage



Food



Label & Packaging - Brand owner

Brands served by Haiyaa's customers





Label & Packaging - Why variable? Why security? Why strong personalized?

Track-trace

for the brand owner
for the consumer

Haiyaa VariPrint VDP
software

Anti-counterfeit

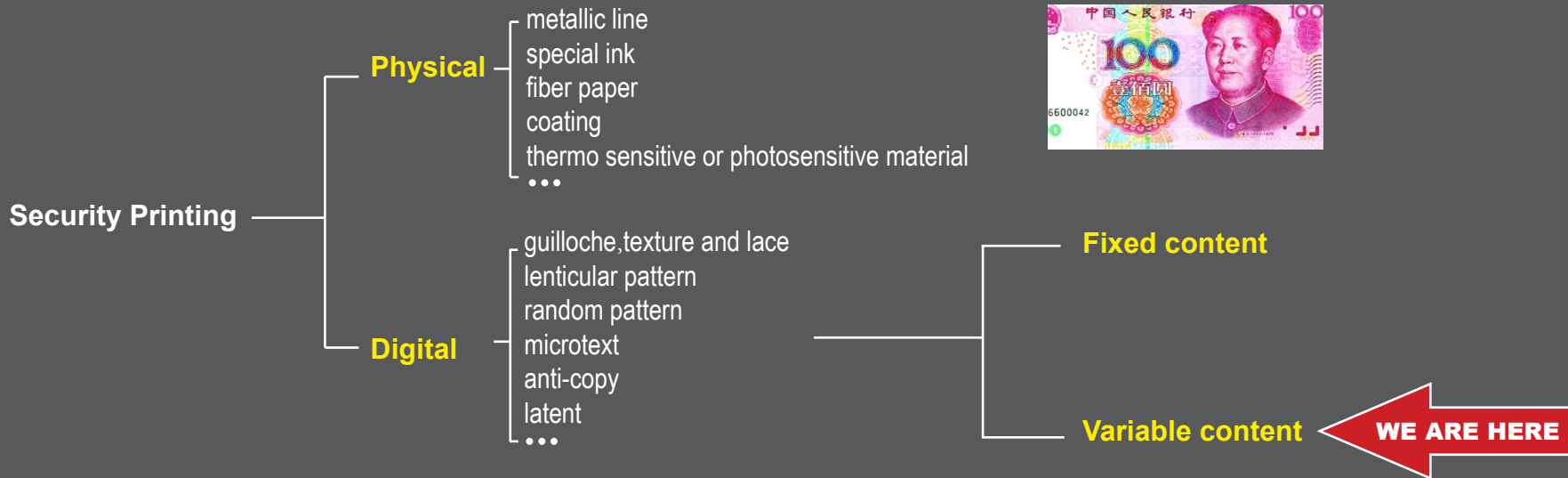
for the brand owner
for the consumer
for the printer

Various of Haiyaa security
optional modules

Promotion

for the brand owner

Haiyaa Kaleidoscope Engine





We develop our security features in 3 directions



- 1. Make full use of smartphone, mobile internet, colorful 2D barcode, various types of authentication pattern to let the consumers enjoy product authentication by themselves.*
- 2. Make the content of security features used previously in traditional offset printer variable and digital.*
- 3. Totally innovative technology developed based on digital printer's latest technology and new substrates.*

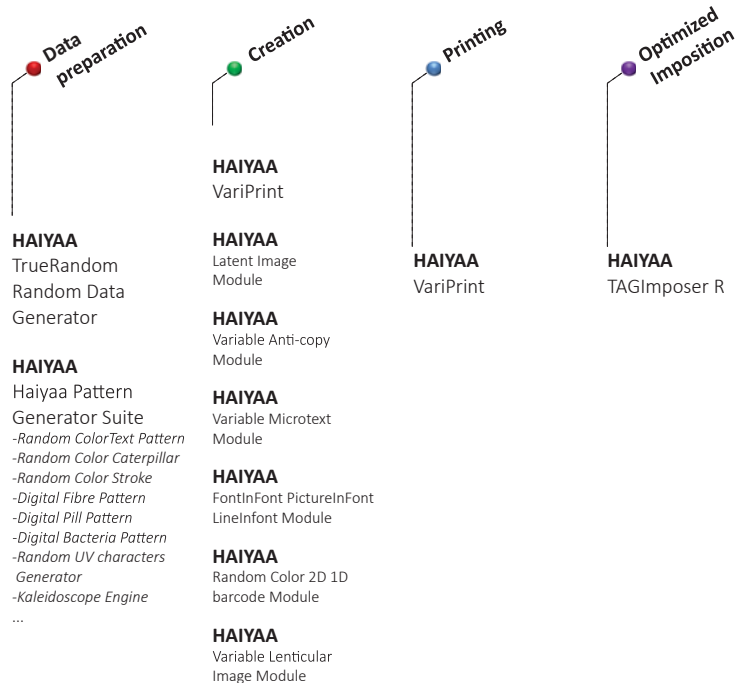




Security Label & Packaging - Workflow

Total Solution

- all digital
- all variable



Why you need random data?

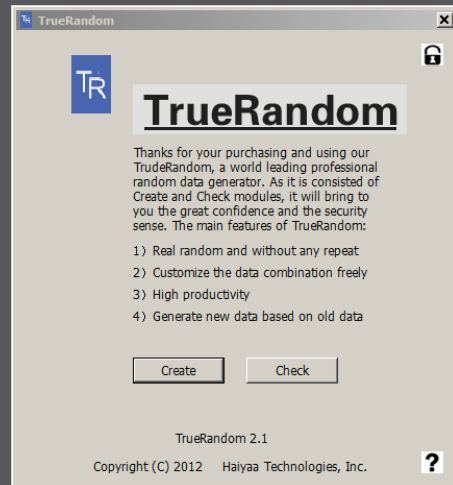
- Due to track-trace, authentication, lottery...
- Unique, random.

Is it real random?

- Real random and without any repeat
- Customize the data combination freely, eg. O, I
- High productivity, it only takes 2 minutes to generate 10 million record data with 7 digits length.
- Generate new data based on old data without repeat
- Provide "Create" and "Check" two modules

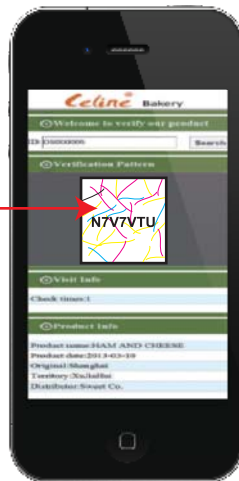
EWKYE3
WEOKRH
FODAU0
CAZAMO
SC87TE
2445BV
3Z295K
TEU000
HOH4P4
BY2RA9

More powerful data repetition checker
TrueRandom Plus is NOW
200 million with 50 digits, only 3 minutes





Security Label & Packaging - Easy and economical authentication solutions for the consumer



When the consumers scan variable 2D barcode using a general 2D barcode reader app, they are directed to the brand owner's cloud server and receive the information about the products authenticity.

Random color text pattern



Random Color Caterpillar & Stroke



8835336133

Digital Fiber pattern



AveragePattern StraightLinePattern

Digital Bacteria Pattern and Pill Pattern



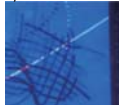
BacteriaPattern

PillPattern

Digital Fiber
Text pattern



Fiber microtext printed
by HP invisible ink



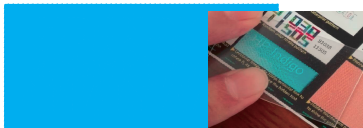
Under normal sunlight

Under UV light



Security Label & Packaging - Variable content of traditional security features

Lenticular Image



Support up to 4 variable layers
Support CMYK and spotcolor
Font size can be smaller to 7pt

Microtext

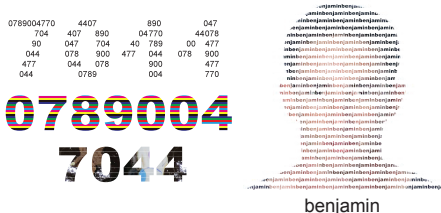
980771

The height of the font reaches to 0.25mm
CMYK and spot color
Support random color matching to another
random color text in the same label

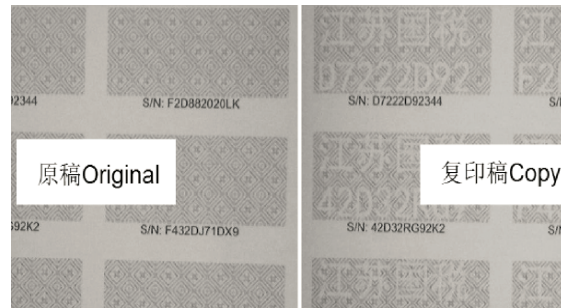
Random Color & Size Code



TextInFont LineInFont PictureInFont



Anti-copy pattern



Which is original? which is photocopy?

Latent Image



See the hidden text by viewing
from a certain angle

Haiyaa Oreo Label

Integrate track-trace, authentication, lottery and credits into ONE label.

Ready now!

Data security guaranteed during the whole label production workflow



Labelling

The variable information on the front side is used to track and trace



Peeling

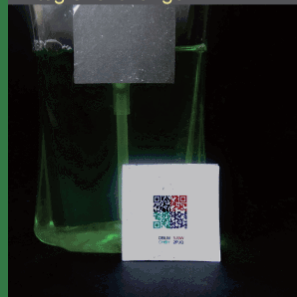
Scan the 2D barcode on the background to see what happen



Can't glue again to guarantee the first use

Reading to compare

Product authentication, lucky draw, credits and integral exchange



The Most Optimized Multi-functional Label Structure In The World

Learn more by scanning 2D



Foreground



Background



A security and personalized flexible package

Background

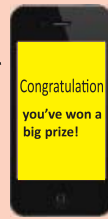


lottery to go

Do product authentication

Peel off and scan the 2D barcodes at the background

Front side



Haiyaa production authentication solution for flexible packaging and shrink sleeves

Compare the fiber pattern appeared on the smartphone and the pattern printed on the front side of the package

If **matched** and **Check Time** is **1**, genuine, if **NOT matched** or **Check Time** is not **1**, fake

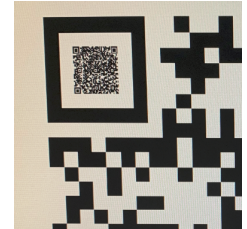
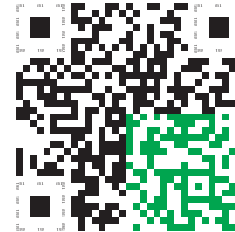
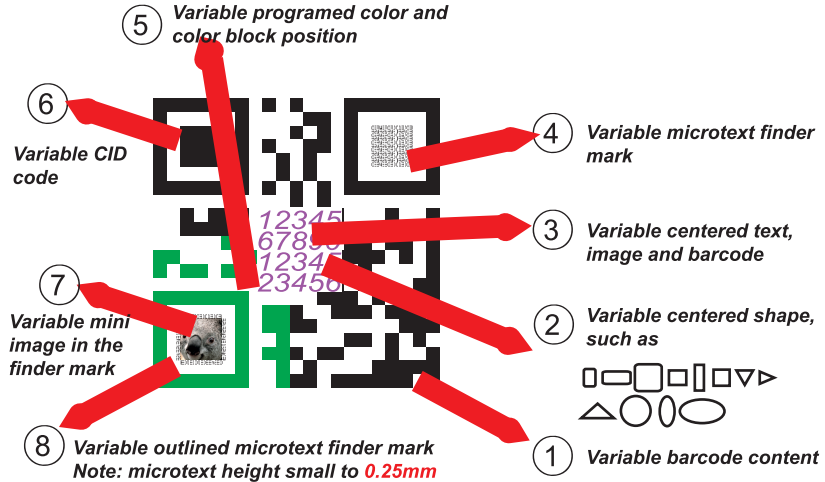
* Same solution can be applied to shrink sleeves



Benifits

- No need a special device to do check.
- No special APP to be installed, just use normal 2D barcode reader in the smartphone with moving internet.
- ONE path printing using Haiyaa technology with HP Indigo sandwich printing to guarantee the registration of the information on both sides.
- No ink at the background, be safe to touch food.

Multi-layer Variable QR





Strong Personalized Label & Packaging for Product Promotion

Just for fun



Aiming at FMCG(Fast Moving Consumer Goods)



Working closely with brand owner's marketing campaign



**Haiyaa Kaleidoscope Engine Application
火井Kaleidoscope变色引擎应用**

Haiyaa Kaleidoscope Engine is used to generate large amount of artwork in which color is variable in every label. Rich colorful label may be more attractive and suitable for marketing campaign. 火井Kaleidoscope引擎用于自动生成海量生成色块随机变化的图案文件，千万万化的图案应用于标签和包装印刷，将吸引更多眼球，从而带动更多产品的销售。

This sample is designed by HAIYAA VariPrint **HAIYAA**

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This sample is designed by HAIYAA VariPrint **HAIYAA**

Haiyaa Kaleidoscope Engine

Generate 10K artwork
PDFs with random
variable color patches
within 8 seconds



Learn more by
scanning 2D

“Identical VI but with higher attractiveness”

**Make more attractive
label and packaging with
Haiyaa Zing.**

SAMPLE
Size: 200x100mm
Quantity: 10,000 pcs
Generation: 14 minutes



ID Card

Solution provider for the biggest ID card manufacturers in Asia



ID Card



Insurance Card



Bank Card



Telecommunication Card



Financial Card



Transportation Card



Others



ID Card - special features

“Two side mirroring, database filtering, gap slightly adjustment, free style imposition...etc, ID card has its own technologies”



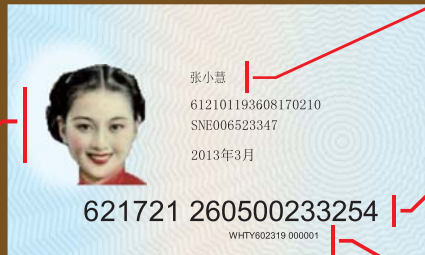
Portrait Blending Technology

(Pay attention to the part around the face)



Data screening

Hidden image



Font scaling with 0.01mm accuracy

Font weight adjustment with 0.01mm accuracy

Auto return or scaling to fit to the frame. If scaling too much, it will show warning during output

Auto masking with high printing productivity



Cloth Label

the world leading cloth label production solution provider



automation

arts

economical

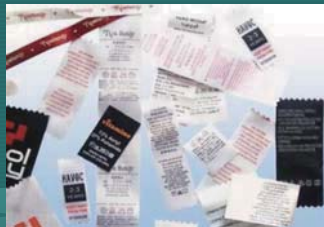
workflow



Traditional Printing



Care Label



Digital Printing



Heat Transfer Tag | Tagless



Hangtag

HAIIYAA

Cloth Label

Brands served by Haiyaa's customers





Cloth Label - Workflow

Total Solution

Data preparation

HAIYAA
AccountDB
Cloth Label version

HAIYAA
Anno Platform

HAIYAA
Parse

HAIYAA
WebConnector

Creation

HAIYAA
VariPrint
Professional version

HAIYAA
Wash Label
Module

HAIYAA
HPGS-Variable Object
Lining

Printing

HAIYAA
VariPrint
Professional version

HAIYAA
RFID data generator

Optimized Imposition

HAIYAA
TAGImposer

HAIYAA
TAGProof

Printing Management

HAIYAA
OneTouch Batch
Printing Utility



“Take the variable data printing as the key component, we explore the total solution for cloth label industry”

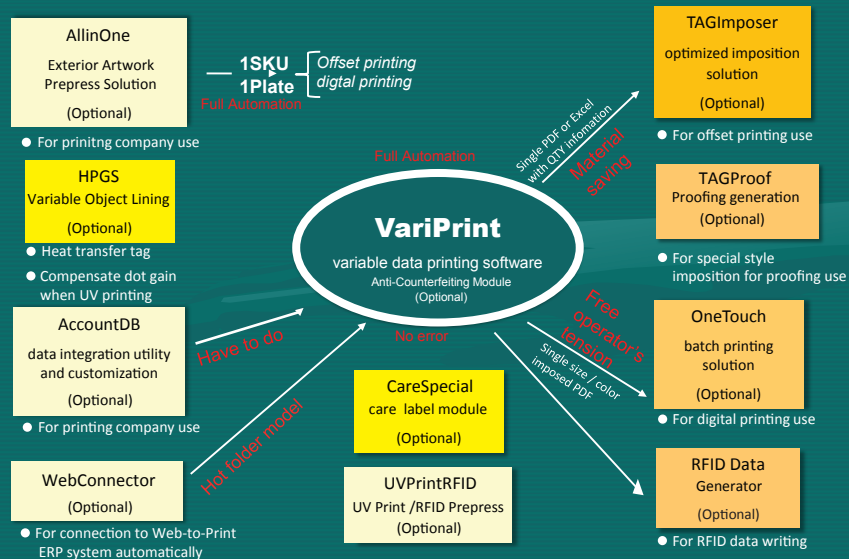
4 very special technologies

VariPrint help to generate layout in ONE template for all style composition. standalone or web driving

CareSpecial care label module can not only do multi-language translation, layout of composition and care instruction in different language automatically, but also calculate to optimize the length for each SKU to save the material.

TAGImposer help to impose different SKU into one or several plates according to each QTY in an economical way to save paper, labor and time.

AllinOne help to impose any style exterior artwork to finished 1SKU 1 plate. With color separation and all of imposition remarks automatically extracted and added, such as color bar, crop mark and text remarks.





Globalization

Share the outstanding variable technologies with more people



Variable No Limits

END