Marketing Bulletin 112009-03

Date: December 3, 2009

From: Panini Marketing   To: Panini Partners

Author: Scott Willis   Product: Panini Vision X AGP
              Sr. Product Marketing Manager

Subject: Vision X Advanced Graphics Printer (AGP) Capabilities Review

---

The purpose of this bulletin is to reinforce awareness about the benefits and applications of the Vision X AGP option. The Panini Vision X is the world's leading check scanner with unmatched capabilities. The AGP option further extends the VX capabilities and provides the perfect solution for check endorsements, validation printing and single-sheet receipt printing.

Overview

The Vision X Advanced Graphic Printer (AGP), included on Vision X AGP and Vision X P models since 2006, is a Panini solution capable of endorsing checks and other items with logos and/or multi-line text with high resolution ink jet, addressing a variety of applications where a multi-line printer or a graphic endorsement is required.

When using AGP, the area and content of the endorsed information is significantly expanded compared to one-line ink jet products and provides superior application flexibility: individual documents can be printed with graphics, multi-line text or a mix of the two. Any windows character is printable by the Vision X AGP, providing a broad range of printing capabilities. The AGP function works in parallel with all other standard Vision X performance features and functions.

Characteristics

The Panini AGP Ink Jet prints graphically on a 12.5 mm (½ inch) height and for the full document length. The printable zone is fixed, and starts at 41 mm (1.6 inches) from the document base then extends up to 53.5 mm (= 41 + 12.5 mm). The quality of graphic printing is a remarkable 200 × 200 dpi, allowing the printing of text in different fonts, signatures, complex logos and data-glyphs, OCR, barcodes and other elements at high resolution to ensure readability with leading recognition engines.

Printing features:

- *Text* can be printed from any available Windows font in 1 Byte/character. Inside the text, a Carriage Return (CR) character can be embedded that will force a line change in the printed text, allowing the distribution of text on several rows. The maximum number of text rows is limited by the chosen font height (using standard fonts it is possible to print a 4-line text on AGP4 – see below).
- A Windows monochrome *bitmap* can be printed. The bitmap can be 100 pixels high (the full printing area) on AGP4 and can be as long as the full document.
- Text and bitmap can be *mixed* in any order in the same document.
- *Intelligent* ink jet: strings and/or bitmaps to be printed can be defined based on content of the MICR codeline and/or content of the front image (e.g. OCR, barcodes, even ICR CAR/LAR). If necessary, the Vision X will reverse track movement to back up the document and allow such printing performance.

Standard AGP printing capability:

- The AGP**1** can print <u>one</u> line of text in any Windows font, in up to 4 alternative positions (corresponding to each of the four lines in the AGP4 full configuration) within the available printing area of ½ inch (12.5mm) height × full document length, depending on the specific customer requirements.

    NOTE: The AGP1 can be considered as a *software-height-adjustable* 1-line inkjet printer, providing a competitive advantage in flexibility and convenience to the Vision X vs. competing models equipped with a *manually* adjustable printer.

- The AGP**2** can print <u>two</u> lines of text in up to 3 alternative positions as shown in the pictures below:
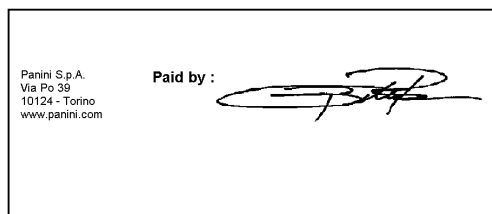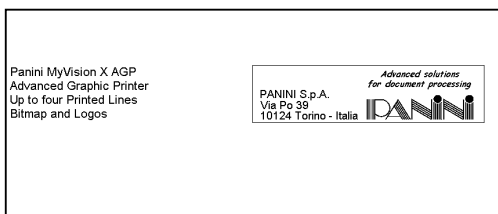

The printable area corresponds to ¼ inch and can be also used for high-resolution mini-logos and/or special characters.

- The AGP**4** (full configuration) can print <u>four</u> lines of text and/or logos/graphics using the entire printing area of ½ inch height × full document length. Examples of text and graphics combinations are shown:

In all cases, the print string and/or graphics are chosen by the application software for each item to be printed, as well as determining the vertical printing position (in the case of AGP1 or 2).

The Vision X with AGP1 or 2 may be upgraded to higher print capability by downloading and using dedicated software keys (*UP.VX.AGPx-y* upgrade codes), similar to upgrades for feeder capacity and throughput.

Validation Function

2008 research by Panini revealed that AGP is usable for most *validation* needs – e.g. printing date, time, branch location, teller ID, sequence number etc. on different types of items (checks, deposit slips, cash in/out tickets, etc.). Banks commonly use dedicated inkjet or impact printers for validation and with the AGP they no longer need a separate printer.

Many banks are choosing *hybrid* printers exploiting the same print engine (inkjet or impact) for both receipt (on paper roll) and validation (on cut sheet). This usually implies that the print engine is mechanically structured so that validation printing on cut sheets is limited to the width of the paper roll. With AGP, not only can we print on the *whole width* of the document, but validation printing can usually take place in the *same pass of document scanning* (when printing on the BACK on the document), instead of requiring a separate action by the teller.

Consumables

The Vision X AGP, built on Hewlett-Packard TIJ 2.5 technology, has been designed to be used only with the Panini CA-00140-00 (HP Q2344A) or the Panini CA-00165-00 (Universal Black) cartridges. Use of

other ink cartridges could result in reduced print quality, ink leakage in the machine, repair difficulties or other performance hindrances not covered by the machines warranty or technical support.

Expected life span of the ink cartridge is approximately 7.5M characters at the default settings (16 pt Arial font) with the highest print quality (1/3 or 2/3 cartridge life extension is expected when printing at normal or draft settings respectively), or approximately 1.4B ink drops.

NOTE: when counting ink drops, the AGP consumable proves much more economical than the standard 1-line inkjet cartridge (HP 6602A), which has a 112M drop yield.

Codes

Product codes which are relevant to AGP are indicated below:

Vision X AGP model	Description
VXxx.1.xF.AGPx	• VX followed by throughput indicator (50, 75 or 100) • F preceded by feeder size indicator (1, S or F) • AGP followed by number of lines capacity (1, 2 or 4)
Vision X P model	**Description**
VXxx.Px.xF.AGPx	• Same as above, except P followed by 1 or 2 (active pockets)
AGP upgrade	**Description**
UP.VX.AGPx-y	• AGP followed by type of upgrade (1 to 2, 2 to 4 or 1 to 4 lines)