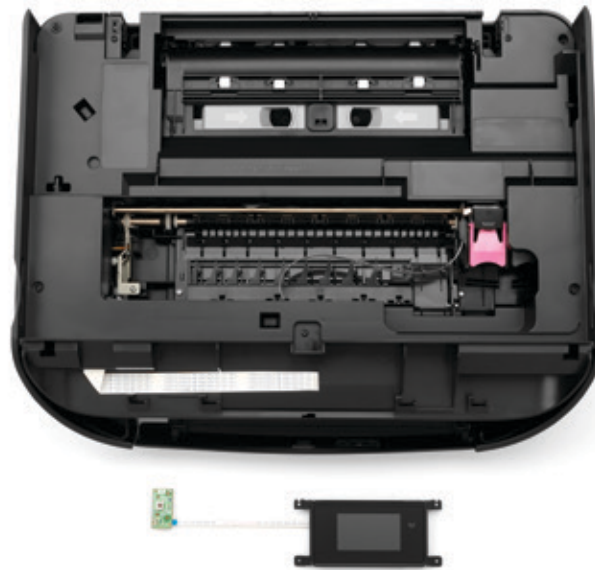# HP OEM Scanning Imager 850

Small, easy, affordable

215.9 mm (8.5 in) print width

**HP TIJ2.X Gen 3
integrated ink cartridges:**
K + CMY

Print Speed:
Approximately 4.6 cm/sec (1.8 in/sec [ips])
when printing a 5.6 cm (2.2 in) wide image
in draft mode

Standard connectivity:
One high-speed USB 2.0 port plus
eight GPIOs and a serial port
for board-to-board communications

**Decoupled service station
with optional standalone
spittoon (P/N F0L83A)**

**Customizable Windows
software driver**

The HP OEM Scanning Imager 850 (SI-850) offers OEMs a proven, versatile, color inkjet printer mechanism that minimizes development cost and effort, and speeds time-to-market.

Small format

The SI-850 is a great fit for small-footprint applications. It uses a single black ink cartridge and a single tri-color ink cartridge which take up very little space and equate to a small printer mechanism. This small size means you have space to work with as you customize the printer mechanism into your final printing solution.

The SI-850 is the printer mechanism, input tray and front panel from an HP Envy 4520 multi-function printer.

Easy-to-use

For OEMs, the SI-850 comes with scripts that make paper path control simple. With the SI-850 you get a Top of Form input, a Cover Open input, five GPIOs, one additional dedicated input, and a serial port to customize the printer mechanism for your applications. End users will enjoy the snap-in ease of inserting and removing these ink cartridges, it's that easy!

Affordable

The HP SI-850 is our entry-level printer mechanism. It packs high-quality printing into a very affordable device – in terms of both the printer mechanism and the supplies.

The HP SI-850 is a proven, compact printer mechanism that uses advanced color thermal inkjet technology (TIJ). Flexibility of design and range of components combine to provide the functionality you and your customers need. This easy-to-integrate printing mechanism is perfect for OEMs who:

• Want a cost-effective, flexible development platform already tested and validated with HP's proven expertise

• Value the advantages of TIJ and the competitive edge that comes from partnering with a recognized technology leader

Reliable

The SI-850 is a printer mechanism and includes:

• Scanning printer mechanism, with a paper-based media path
• Two print cartridge stalls
• Cartridge service station
• Optional standalone service station spittoon.

The SI-850 is quiet, compact and designed to provide easy access to the print cartridges. It is capable of excellent print speeds across a variety of applications.

Wide-ranging print zone

The SI-850 is designed with a 215.9 mm (8.5 in) print zone, which supports a wide range of media sizes. You may customize the media path down to a 127 mm (5 in) print zone if you have smaller form factor applications like small labels, fingernails, passports, braille characters, well-logging reports or CDs/DVDs.

Integration options

The SI-850 printer mechanism comes with a paper-based media path that can be used as is for label or other paper-based applications. For other applications, HP reference designs provide options for modifying the printer mechanism to accept your own media path. This is accomplished by either modifying the existing printer base or by using your own custom sheet metal base.

Empty tri-color   Empty black

Customizable software driver

To facilitate quick integration, HP designed a software driver for the SI-850 that permits extensive customization. You can use the driver to define your media sets and route each of them to whichever existing print mode is desired.

The driver can also be tailored to present a feature-rich user interface (with or without OEM brand identity) or a simplified driver that offers only the functions required for the application, such as:

• Print-quality controls to balance speed versus resolution

• Media type and size selection

• Layout controls (orientation, size, and borderless printing)

• Printer status and ink status indicators

Outstanding color print quality

The SI-850 offers a four-color ink system to provide an optimal combination of print quality and performance suitable for most applications. This technology combines a pigment-based black print cartridge with a dye-based tri-color (CMY) print cartridge to produce high-quality images and crisp, laser-like text.

Depending on the media, this system can achieve outstanding lightfastness and fade resistance for up to 60+ years.

HP's photo-quality print cartridges offer:

• **Exceptional print quality** – The small drop size provides high-resolution black and white and color print over a wide range of media.

• **Superior photo quality** – The four-color ink system produces long-lasting, brilliant colors.

• **Compact design** – Low-profile packaging saves space so you can build smaller products.

• **Proven reliability** – HP's worldwide recognition for product quality, reliability, and service creates a winning combination for you as an OEM partner.

• **Ease-of-use** – Simple, quick replacement minimizes downtime.

• **Economical output** – Efficient ink delivery system provides a low cost-per-page advantage.

Versatile, economic, high-quality ink cartridges

The SI-850 is designed to work with OEM generic versions of the HP 63 photo-quality ink cartridges. The ink cartridges offer all the advantages of HP's latest inkjet technology. Hundreds of tiny nozzles, firing up to 24 kHz, allow high-quality printing at high speeds.

Small drop size and precise ink drop placement produce consistently superb image and text quality in color and black-and-white on a wide variety of media.

Optional empty ink cartridges

You have the option of working with an approved HP third-party ink filler to have empty ink cartridges filled with the third-party's ink. This allows you more flexibility in the ink solutions you offer your customers. You are fully responsible for the ink performance, servicing and overall health of the printer mechanism. HP can provide a list of the approved third-party ink fillers upon request.

HP engineering expertise and support

HP works with you to quickly adapt and customize this printer mechanism to meet your particular market needs. These products provide a high return on investment compared to standard consumer printing platforms.

HP OEM Scanning Imager 850 (SI-850) Specifications

Product offering	Printer mechanism, front panel, input tray and internal Class 2 power supply based on HP Envy 4520 multi-function printer with custom firmware and software and optional service station spittoon to ease product integration. Upper covers included but intended only for shipping integrity and not intended for OEM integration.
P/N	F0L74A
Print speed	Approximately 4.6 cm/sec (1.8 ips) printing a 5.6 cm (2.2 in) wide image in plain paper draft mode (based on HP Envy 4520 media path)
Print quality	Same as HP Envy 4520 (based on HP Envy 4520 media path)
Connectivity	One high-speed USB 2.0 (Wi-Fi is not supported), 8 IOs (Top of Form, Cover Open, 5 OEM-defined GPIOs, one dedicated input) via FFC connectors on main PCA, one TTL level serial port using an ISO HDLC-based data link layer for board-to-board communications (requires soldering to HP board)
Printer ID customization	Device ID 'CID' field mapped to configurable driver plus programmable serial number, manufacturer, brand name, model name, model number, and USB VID/PID (no USB device ID string status extensions)
NVRAM customization	Programmable OEM fields
Supported image lengths	2.54 cm - 55.88 cm (1 in - 22 in)
Printer behavior customization	• Ability to customize the imager's mechanical behavior via scripts • Ability to trigger printer actions via GPIOs • Ability to trigger printer actions via PC software over software-firmware interface from PC and over serial port
Available printer status	• Available via front panel/user interface (front panel not required for operation) • Available via software-firmware interface over USB and via serial port • Includes printer error codes and estimated print cartridge ink levels
Ink cartridge alignment	Manual ink cartridge alignment, pattern fits onto a CD/DVD
Edge detection / top of form	Via GPIO(s) (no blue light optical sensor) 76.2 cm (30 in) maximum supported Top of Form sensor to printzone distance
Power supply	• Class II (2-wire) LPS universal power supply, Internal, 32V / 15W Nominal Output • Optional Class I (3-wire) LPS universal power supply, external, 32V / 50W Nominal Output (P/N F0L83A) • 3.3V, 100 mA power provided via FFC connector on main PCA
Operating environment	• Operating temperature range: 5°C to 40°C (41°F to 104°F), 15°C to 32°C (59°F to 90°F) C recommended • Operating humidity range: 15% to 80% RH (non-condensing), 20% to 80% recommended • Storage temperature range: -40°C to 60°C (-40°F to 140°F) • Non-operating humidity range: 10% to 90% (non-condensing)
Software driver	Localized, customizable Windows software driver and toolbox Windows 8, Windows 7, Windows Vista, Windows XP SP3 or greater (32-bit only)
Dimensions	(W x D x H) 445 x 374 x 120 mm (17.52 x 14.45 x 4.75 in)
Weight	3.935 kg (8.68 lb) (scanning imager only)

HP OEM Scanning Imager 850 (SI-850) Print Cartridge Specifications

Cartridge	OEM HP63 Black Ink Cartridge	OEM HP63 Tri-color Ink Cartridge
P/N for filled	F0L75A	F0L76A
P/N for empty	F0L77A	F0L78A
Ink cartridge type	Integrated ink cartridge, TIJ 2.X Gen 3	Integrated ink cartridge, TIJ 2.X Gen 3
HP ink type	Black pigmented aqueous ink	Cyan, magenta and yellow dye-based aqueous ink
Resolution	600 dpi	300 dpi
Nozzle count	328	588 (196 x 3), with low and high drop weight nozzles
Print swath	~9/16"	~1/3"
Maximum firing frequency	24 kHz	24 kHz
Average drop volume	~21.6 ng with HP ink	~3.3 to 10.5 ng (depending on print mode) with HP ink
Average customer available ink	~29.1 ml (1.02 fl oz) with HP ink	~22.5 ml (.79 fl oz) (total) with HP ink
Dimensions (L x W x H)	65.58 mm x 31.94 mm x 40.21 mm (2.58 in x 1.26 in x 1.58 in)	65.58 mm x 31.94 mm x 40.21 mm (2.58 in x 1.26 in x 1.58 in)

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