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## Infoprint 4100-HD3/HD4 Printer (4100-HD3/HD4)

This chapter describes Infoprint 4100-HD3/HD4 printer characteristics. The Infoprint 4100-HD3/HD4 printer is a channel-attached or LAN-attached, continuous-forms printer that uses laser and electrophotographic technology to print text, images, graphics, and bar codes at up to 1220 ipm (impressions per minute). The Infoprint 4100-HD3/HD4 printer uses the Advanced Function Common Control Unit (AFCCU) based on RISC technology, which provides as standard the Advanced Function Image and Graphics (AFIG) feature and the Decompression Performance Enhancement (DPE) feature.

The Infoprint 4100-HD3/HD4 printer also has switchable 480/600 pels-per-inch resolution and the Print Quality Enhancement (PQE) function, which smooths edges on diagonal lines, protects fine details, improves the fidelity of images, and allows for adjustment of the boldness of text and the darkness of images.

[Figure 47. Infoprint 4100-HD3/HD4 Printer](#)



[Table 140](#) summarizes the printer characteristics for the Infoprint 4100-HD3/HD4 printer.

[Table 140. Infoprint 4100-HD3/HD4 Printer Characteristics](#)

Printer Characteristic	Infoprint 4100-HD3/HD4 Printer Characteristic Value
Print technology	Laser
Datastreams	IPDS
Form type	Continuous
Number of input bins	n/a

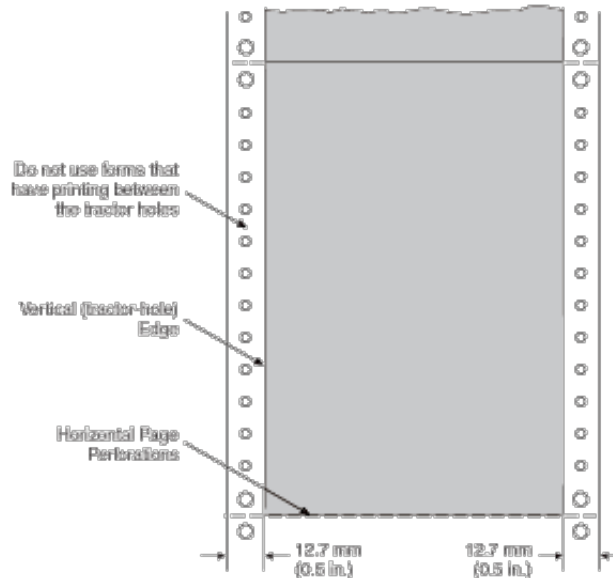
Number of output bins	n/a
Finisher attachment	n/a
Manual forms feed	n/a
Envelope printing	n/a
MICR printing	yes <sup>1</sup>
Duplex printing	yes
Color	yes <sup>1</sup>
Adjust print-quality levels	yes
Print resolution	480 dpi 600 dpi
Maximum printing rates for letter (8.5 x 11 inches)	
inches per second	56
inches per minute	3360
Maximum printing rates for letter in pages per minute <sup>2</sup>	
1-up landscape (8.5 inches long) simplex	395
1-up landscape (8.5 inches long) duplex	790
2-up portrait (11 inches long) simplex	610
2-up portrait (11 inches long) duplex	1220
Maximum printing rates for 6 inch x 9 inch in pages per minute <sup>1</sup>	
3-up portrait (9 inches long) simplex	1119
3-up portrait (9 inches long) duplex	2238
Maximum printing rates for A4 (210 x 297 mm)	
mm per second	1422
mm per minute	85344
Maximum printing rates for A4 in pages per minute <sup>2</sup>	
1-up landscape (210 mm long) simplex	287
1-up landscape (210 mm long) duplex	574
2-up portrait (297 mm long) simplex	574
2-up portrait (297 mm long) duplex	1148
Maximum printing rates for A5 (210 x 148 mm) in pages per minute <sup>1</sup>	
3-up portrait (210 mm long) simplex	1218
3-up portrait (210 mm long) duplex	2436
Maximum usage in pages per month (duty cycles) <sup>3</sup>	
Letter: 1-up landscape (8.5 inches long)	19,800,000 duplex
Letter: 2-up portrait (11 inches long)	30,100,000 duplex
A4: 1-up landscape (210 mm long)	19,800,000 duplex
A4: 2-up portrait (297 mm long)	28,000,000 duplex
6 x 9: 3-up landscape	55,000,000 duplex
A5: 3-up landscape (210 mm long)	60,000,000 duplex
<p>1. Customer Changeable Developer is available allowing the operator to change the developer, helping to increase system availability for MICR or highlight color printing. Please contact your IBM sales representative for availability status.</p> <p>2. Maximum printing rate is the maximum number of pages of the indicated size and configuration that can be printed at the constant speed of paper movement shown for each printer. Rates for pages of different sizes and configuration can be calculated by dividing the form length into the printer speed. Actual printing rate will be less if the printer cannot reach this rate due to complexity or density of the data or the ability of the system to deliver data at this rate.</p> <p>3. Maximum usage is based on operating 7 days a week, 24 hours a day, at maximum printing rate with normal maintenance and operations activity. IBM does not recommend reaching this monthly maximum on consistent basis.</p>	

The printer can print to the horizontal page perforations and within ½-inch (12.7 mm) of either vertical (tractor hole) edge of the form. See [Figure 48](#). With tractorless paper, the printer can print to ½-inch (12.7 mm) from either edge of the form without print quality degradation.

Print quality may be degraded when printing near folding perforations, an internal perforation, or any cut in the form. To ensure correct operation and print quality, maintain the following distances:

- From non-folding and internal perforations: 0.05-inch (1.27 mm)
- From folding perforations: for text, OCR, and bar codes: 0.33-inch (8.5 mm); for images and solid-area fill: 0.05-inch (1.27 mm)
- From binder holes and cuts: 0.1 inch-(2.54 mm).

[Figure 48. Printable Area on the Infoprint 4100-HD3/HD4 Printer](#)



Refer to the *Continuous Forms Advanced Function Printers: Forms Design Reference*, G544-3921.

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## Media Specifications

The Infoprint 4100-HD3/HD4 printer accepts the following media:

### Media types:

Preprinted or blank fanfold forms, roll-feed paper, some labels

### Media widths:

#### Tractor Feed

8.3 to 19.5 inches (210 mm to 495 mm) with tractor feed

#### Tractorless Feed

8.0 to 19.5 inches (203 mm to 495 mm) with tractorless feed

### Media lengths:

- 3 to 14 inches (76 mm to 356 mm) using the Internal Stacker Special Feature
- 3 to 28 inches (76 mm to 711 mm) using post-processing equipment
- 3 to 54 inches (76 mm to 1372 mm) with the Signature Page feature and suitable post-processing equipment

### Note:

The internal stacker is only available at the slower speed in simplex mode. Form lengths less than 7 inches (178 mm) are folded in multiples by the forms supplier and the stacker. (For example, forms 3.5 inches length may be folded every 7 inches.)

## Media weights:

The following paper weights are supported:

- Duplex pinless for Infoprint 4100-HD3/HD4 supports paper weights between 12 and 42 pounds (45 and 157.5 gsm) bond are supported. Post-processing equipment is required for paper weights less than 16 pounds.
- Duplex pinfeed for Infoprint 4100-HD3/HD4 supports paper weights between 12 pounds and 41 pounds (45 to 157.5 gsm) are supported. Post-Processing equipment is required for paper less than 16 pounds.
- Dual simplex pinfeed for Infoprint 4100-HD3/HD4 supports paper weights between 12 and 42 pounds (45 and 157.5 gsm) are supported. Post processing equipment is required for paper weights less than 16 pounds.

### Note:

Pinless printing is not supported on simplex printers, or in dual simplex mode.

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## Attachments

The Infoprint 4100-HD3/HD4 printer supports a maximum of two attachments. These attachments can be:

- System/370 parallel channel
- ESCON channel
- Token Ring (TCP/IP)
- Ethernet (TCP/IP)
- Gigabit Ethernet (SX) TCP/IP
- Gigabit Ethernet (TX) TCP/IP
- FICON

A maximum of two attachments are supported. A maximum of 1 TCP/IP attachment is supported. The 2 attachments may be the same type for ESCON and System/370 Parallel Channel or mixed types (like ESCON and Ethernet).

When printing in duplex configuration, only one attachment can be active at a time. If both attachments are to the same system, or to a tightly-coupled system, and the attachments are of the same type (example, both are ESCON or both are parallel channel), then switching between the two attachments can be performed dynamically by the host system. If the attachments or host differ, or the hosts are not tightly-coupled, then the switch must be performed manually by the operator. The printer must be disabled from the current system and attachment before it can be enabled to the other attachment.

**System/370 Parallel Channel:** S/370 parallel channel attachment is supported on OS/390.

For S/370 parallel channel attachment, a control unit position on a S/370 parallel block multiplexer channel is required on a 3090 or ES/9000 processor. The S/390 Parallel Enterprise Server and the S/390 Multiprise 2000 server are also supported for S/370 parallel channel attachments. Attachment is also supported via the 9034 ESCON Converter Model 1. The S/370 parallel channel is not recommended for data intensive applications.

**ESCON Channel:** ESCON channel is supported on OS/390 printing environments.

The Infoprint 4100 may be attached natively to IBM ESCON channels. Attachment is also supported via the 9032/9033 ESCON Directors and 9036 ESCON Remote Channel Extender Model 1 and Model 2.

**Token-Ring (TCP/IP) Attachment:** Token Ring (TCP/IP) attachment is supported in Infoprint Manager for AIX, and Infoprint Manager for Windows printing environments.

The Infoprint 4100 is connected to the host Token Ring through the IBM Token Ring cabling via the Token-Ring adapter, which is contained in the AFCCU. The control unit can be attached to either a 16 Mbit/sec or a 4 Mbit/sec Token Ring LAN. The Token Ring attachment is not recommended for data intensive applications.

**10/100 BaseT Ethernet (TCP/IP) Attachment:** The 10/100 BaseT Ethernet (TCP/IP) attachment is supported in Infoprint Manager for AIX and Infoprint Manager for Windows printing environments.

An Ethernet Adapter Card is supplied with specify feature number 9993 and special feature number 4165. The adapter card is installed in the Infoprint 4100 AFCCU processor. The Infoprint 4100 may then be attached to an Ethernet LAN via Ethernet Twisted Pair cable.

**Gigabit Ethernet SX (TCP/IP):** The Gigabit Ethernet SX attachment feature is a TCP/IP attachment that offers high-speed data transfers using multimode optical fiber.

This feature is also known as 1000Base-SX Ethernet. The Gigabit Ethernet SX feature can be used to connect to a print server running PSF or Infoprint Manager software. The connection to the server can be direct (point-to-point) or through standard Gigabit Ethernet SX LAN connections. The printer attachment receives data in the form of Intelligent Printer Data Stream (IPDS described in *IBM Reference Publication*, S544-3417). This attachment complies with the IEEE 802.3z standard which is part of the IEEE 802.3 (2000) standard.

This attachment supports 1000 Mb multimode fiber links to an optical Ethernet network.

**Gigabit Ethernet TX (TCP/IP) Attachment:** The Gigabit Ethernet TX feature is a TCP/IP attachment that offers high speed data transfers using standard Category 5 UTP copper cabling.

This feature is also known as 10/100/1000 Base-T Ethernet or 1000Base-T Ethernet. The Gigabit Ethernet TX feature can be used to connect to a print server running PSF or Infoprint Manager software. The connection to the server can be direct (point-to-point) or through standard Gigabit Ethernet TX (copper) LAN connections. The printer attachment receives data in the form of Intelligent Printer Data Stream (IPDS described in *IBM Reference Publication*, S544-3417). The attachment complies with the IEEE 802.3ab standard which is part of the 802.3 (2000) standard. The Gigabit Ethernet TX attachment is a 10/100/1000Base-T PCI adaptor that utilizes a RJ-45 connector to connect to a customer-supplied Category 5 Ethernet cable. When used with standard Category 5 Ethernet cabling, the maximum cable segment distance is 100 meters. This attachment supports 10 Mb, 100 Mb, and 1000 Mb links to an Ethernet network. The IEEE 802.3 (2000) standard specifies that Category 5 Ethernet facility wiring may be used with 1000Base-T if it meets certain new transmission parameter requirements.

**FICON Attachment:** FICON channel attachment is supported in the PSF for OS/390 printing environments. The Infoprint 4100 may be attached natively to IBM FICON Channels (9672-G5, 9672-G6, 900Z). The FICON attachment is supported with both Long Wave and Short Wave versions.

Attachment is also supported via the 2032 Director and the 2042 Director, as well as to the remote end of an IBM 2029 Dense Wavelength Division Multiplexor.