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Infoprint 4100-HD1/HD2 and 4100-PD1/PD2 Printers (4100-HD1/HD2 and 4100-PD1/PD2)

This chapter describes Infoprint 4100-HD1/HD2 and Infoprint 4100-PD1/PD2 printer characteristics. The Infoprint 4100-HD1/HD2 and 4100-PD1/PD2 printers are channel-attached or LAN-attached, continuous-forms printers that use laser and electrophotographic technology to print text, images, graphics, and bar codes at up to 762 ipm (impressions per minute). The Infoprint 4100-HD1/HD2 and 4100-PD1/PD2 printers use 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-HD1/HD2 has a hard hot roll which provides high print quality. The Infoprint 4100-PD1/PD2 has a soft hot roll which provides premium print quality.

The Infoprint 4100-HD1/HD2 and 4100-PD1/PD2 printers also have 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 45. Infoprint 4100-HD1/HD2 and 4100-PD1/PD2 Printers

Table 139 summarizes the printer characteristics for the Infoprint 4100-HD1/HD2 and 4100-PD1/PD2 printers.

Table 139. Infoprint 4100-HD1/HD2 and 4100-PD1/PD2 Printer Characteristics

Printer Characteristic	Infoprint 4100-HD1/HD2 and 4100-PD1/PD2 Printers Characteristic Value
Print technology	Laser

Datastreams	IPDS
Form type	Continuous
Number of input bins	Up to 16 inch (406 mm) stack of paper (box)
Number of output bins	Up to 14 inch (356 mm) stack of paper
Finisher attachment	n/a
Manual forms feed	n/a
Envelope printing	n/a
MICR printing	yes[1]
Duplex printing	yes
Color	yes[1]
Adjust print-quality levels	yes
Print resolution	480 dpi 600 dpi
Maximum printing rates for letter (8.5 x 11 inches)	
inches per second	35
inches per minute	2100
Maximum printing rates for letter in pages per minute[2]	
1-up landscape (8.5 inches long) simplex	247
1-up landscape (8.5 inches long) duplex	494
2-up portrait (11 inches long) simplex	381
2-up portrait (11 inches long) duplex	762
Maximum printing rates for 6 inch x 9 inch in pages per minute[1]	
3-up portrait (9 inches long) simplex	700
3-up portrait (9 inches long) duplex	1400
Maximum printing rates for A4 (210 x 297 mm)	
mm per second	889
mm per minute	53340
Maximum printing rates for A4 in pages per minute[2]	
1-up landscape (210 mm long) simplex	333
1-up landscape (210 mm long) duplex	666
2-up portrait (297 mm long) simplex	359
2-up portrait (297 mm long) duplex	718
Maximum printing rates for A5 (210 x 148 mm) in pages per minute[1]	
3-up portrait (210 mm long) simplex	761
3-up portrait (210 mm long) duplex	1522
Maximum usage in pages per month (duty cycles)[3]	
Letter: 1-up landscape (8.5 inches long)	12,100,000 duplex
Letter: 2-up portrait (11 inches long)	18,800,000 duplex
A4: 1-up landscape (210 mm long)	12,400,000 duplex
A4: 2-up portrait (297 mm long)	17,500,000 duplex
6 x 9: 3-up landscape	34,400,000 duplex
A5: 3-up landscape (210 mm long)	37,500,000 duplex

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.
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.
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.

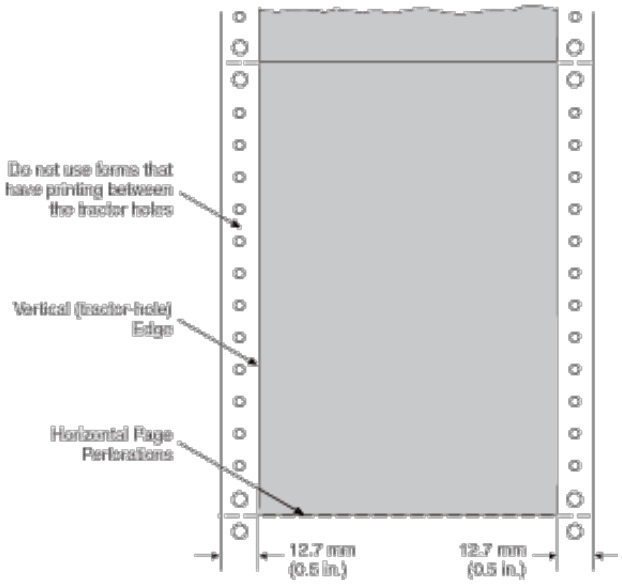
Printable Area

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 46. 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 46. Printable Area on the Infoprint 4100-HD1/HD2 and 4100-PD1/PD2 Printers



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

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Media Specifications

The Infoprint 4100-HD1/HD2 and 4100-PD1/PD2 printers accept 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:

- 5.82 to 17 inches (148 mm to 432 mm) with tractor feed using the internal stacker
- 5.82 to 54 inches (148 mm to 1372 mm) with the Signature Page feature and suitable post-processing equipment

Media weights:

The following paper weights are supported:

- Duplex pinless for Infoprint 4100-PD1/PD2 supports paper weights between 12 and 28 pounds (45 and 105 gsm) bond are supported. Post-processing equipment is required for paper weights less than 16 pounds.
- Duplex pinless for Infoprint 4100-HD1/HD2 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-PD1/PD2 supports paper weights between 12 and 28 pounds (45 and 105 gsm) bond are supported. Post-processing equipment is required for paper weights less than 16 pounds.
- Duplex pinfeed for Infoprint 4100-HD1/HD2 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-HD1/HD2 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.
- Dual simplex pinfeed or Infoprint 4100-PD1/PD2 supports paper weights between 12 and 28 pounds (45 and 105 gsm) game bond 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.

Attachments

The Infoprint 4100-HD1/HD2 and 4100-PD1/PD2 printers support a maximum of two attachments. These attachments can be:

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

The two attachments may be the same (for example, 2 ESCON channels), or mixed (for example, 1 ESCON and 1 Token-Ring). The exception is that the printer can have only 1 TCP/IP attachment of any flavor. You cannot have 2 Token-Ring or 2 FDDI attachments, or a combination of 1 Token-Ring or 1 FDDI attachments.

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

System/370 parallel channel attachment is supported on PSF/MVS, PSF/VM, and PSF/VSE printing environments. For S/370 parallel channel attachment, a control unit position on a S/370 parallel block multiplexer channel is required on an IBM 3090 or ES/9000 processor. The following processors are also supported for S/370 parallel channel attachments, S/390 Parallel Enterprise Server, and the S/390 Multiprise 2000 servers. Attachment is also supported via the 9034 ESCON Converter Model 1.

ESCON Channel

ESCON channel is supported on PSF/MVS, PSF/VM, and PSF/VSE printing environments. The IBM Infoprint 4100 Duplex may be attached natively to IBM ESCON channels (3090-J, 9021, 9121, 9221, 9672, 2003). 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 on PSF for OS/2 and PSF for AIX printing environments along with

selected RS/6000 and AS/400 models. The Infoprint 4100-HD1/HD2 -PD1/PD2 printer is connected to the host Token-Ring through the IBM Token-Ring cabling via the Token Ring High-performance adapter, which is contained in the AFCCU. The control unit can be attached to either a 16Mbit/sec or a 4Mbit/sec Token-Ring LAN. The TCP/IP Token-Ring Attachment will attach to the following devices:

- 8228 Token Ring Multistation Access Unit attached to an AS/400 or RS/6000 processor
- 8230 Token Ring Network Controller Access attached to an AS/400 or RS/6000 processor
- 8228 Token Ring Multistation Access Unit attached to a 3172, 3174, 3745, 3725, or 3720 attached to a 3090, ES/9000, or 308X processor
- 8230 Token Ring Multistation Access Unit attached to a 3172, 3174, 3745, 3725, or 3720 attached to a 3090, ES/9000, or 308X processor

  The printer may be located at a maximum distance of 100 meters (333 ft) from the 8228 Multistation Access Unit or 8230 Controlled Access Unit.

  The distance between the 8228 Multistation Access Units can be increased with either the 8220 or 8219 Optical Fiber Repeater.

- Installation Instructions are provided with the feature.

Ethernet (TCP/IP) Attachment

An Ethernet Adapter Card (P/N 00G3369) is supplied with Specify Feature 9990 and Special Feature 4161. This is installed in the processor of the AFCCU of the IBM Infoprint 4100 HS1/PS1. The IBM Infoprint 4100 HS1/PS1 may then be attached to an Ethernet LAN via one of the following means:

- Ethernet Thin Coax
  - IBM Supplies a Thin Coax wrap connector (P/N 02G7433)
- Ethernet Thick Coax
  - IBM Supplies the Thick Coax wrap connector (D-shell connector; P/N 71F1167)
- Ethernet Twisted Pair
  - IBM Supplies a Twisted Pair Transceiver (P/N 00G2906)
  - IBM Supplies a Twisted Pair Wrap plug (P/N 00G2380)

FDDI (TCP/IP) Attachment

FDDI (TCP/IP) attachment is supported on PSF for AIX, Infoprint Manager for AIX, and Infoprint Manager for NT and 2000 printing environments for selected RS/6000 models. The Infoprint 4100 printers are connected to the host FDDI through FDDI 62.5/125 multi-mode fiber cabling using SC connectors via the FDDI Single Station adapter, which is contained in the AFCCU. The FDDI (TCP/IP) attachment will attach to the following devices:

- Directly to RS/6000
- 8260 Multiprotocol Intelligent Switching Hub attached to an RS/6000 processor.

The printers may be located at a maximum distance of 2 Kilometers from the 8260 Multiprotocol Intelligent Switching Hub or RS/6000 processor.

Gigabit Ethernet Attachment

The Gigabit Ethernet attachment is supported in Infoprint Manager for AIX printing environments. The Infoprint 4100 printers are attached to the Ethernet LAN by way of a 62.5 mm SC fiber optic cable.

FICON Attachment

FICON channel attachment is supported in the PSF for OS/390 printing environments. The Infoprint 4100 printers may be attached natively to IBM FICON Channels (9672-G5, 9672-G6, and 900Z).

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