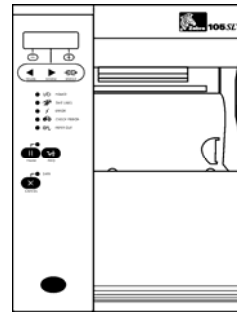




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ZEBRA 105SL™ PRINTER SPECIFICATIONS

Specifications are provided for reference and are based on printer tests using Zebra brand ribbons and labels. Results may vary in actual application settings or when using other than recommended Zebra supplies. Zebra recommends always qualifying any application with thorough testing.

Standard Features

- 203 dpi print resolution
- Thin film print head with E³® Element Energy Control
- Thermal transfer and thermal direct printing of bar codes, text, and graphics
- ZPL® or ZPL II® programming language, selectable through software or front panel
- Fast 32 bit processing
- Download upgradeable FLASH firmware.
- 6MB SDRAM Memory (3MB User Available)
- 4MB Flash Memory (2MB User Available)
- Simultaneous ATA-style PCMCIA and Compact Flash (CF) memory card support up to 256 MB each (current market availability) for additional storage of fonts, graphics, logos, templates, and label formats, or preprogrammed with optional and international scalable fonts. PCMCIA is externally accessible and hot-swappable. CF is internal.
- Standard LCD control panel: Back-lit, 2 line, 16 characters w/ full menu to change set-up options
- Serial RS-232 and IEEE 1284 (nibble mode) bi-directional parallel interface
- Transmissive media sensor
- Zebra® printer driver for Windows™ 3.X and 95/98/NT/2000 operating systems
- Internal Real-Time Clock

Optional Features

- Print head 300 dpi (12 dots/mm)
- Full-width rotary cutter- software controlled to cut labels individually or in strips (not compatible with rewind and peel options). Note: Catch tray orderable separately.
- Media rewind spindle – internal rewind onto 3" core
- Label peel and liner rewind - for print-and-apply
- Internal fan-fold media supply bin (not compatible with rewind and peel options)
- Reflective (black mark) media sensing option
- RS422/485 serial adapter interface
- Internal or external ZebraNet™ PrintServer II – provides cost effective Ethernet connectivity to 10Base-T networks and enables the use of ZebraLink Webview and Alert features.
- Internal or external ZebraNet 10/100 Print Server - supports 10Base-T, 100Base-TX and fast Ethernet 10/100 auto-switching networks and enables the use of ZebraLink Webview and Alert features.
- ZebraNet Wireless Print Server – provides an internally integrated wireless Ethernet option and supports Symbol and Cisco radio cards.

- APL-I firmware- Allows a 203dpi Zebra printer to parse and print IPL code intended for an Intermec 3400D or 86xx printer (with APL-I firmware installed ZPL is no longer recognized and ZPL features are no longer recognized).
- APL-D firmware allows 203dpi (8dots/mm) Zebra printer to parse and print DPL code intended for Datamax Prodigy Plus, Prodigy or Allegro printers. (With APL-D installed, ZPL programming language is not recognized and ZPL specific features are not available).
- Twinax or Coax interface option
- Factory Installed 64 MB (61 MB user available) Flash Memory Option
- PCMCIA Flash memory slot (factory installable only) – for additional storage of fonts, graphics, logos, templates and label formats or pre-programmed with optional and international scalable fonts.

ZebraLink Solutions

Software

- **ZebraDesigner Pro** – An intuitive, easy-to-use software program for creating complex label designs. (Option)
- **ZebraDesigner** – Offers basic features for simple label design
- **ZebraNet Bridge Enterprise** – Centrally manage Zebra printers from a single PC screen anywhere on your global network.
- **ZebraNet Utilities v 7.0** – Provides enhanced printing, conversion, and administration capabilities; message management; and more.
- **Zebra Universal Driver** – The most powerful driver available from Zebra

Networking Options

- ZebraNet Wireless PrintServer (internal)
- ZebraNet 10/100 PrintServer (internal or external)
- ZebraNet PrintServer II (internal or external)
- IBM twinax/coax interfaces (internal)

Firmware

- **ZPL II** – Universal language for Zebra printers. Simplifies label formatting and enables format compatibility with existing systems that run Zebra printers.
- **APL** – Zebra's Alternative Programming Language allows integration into mixed printer environments without re-programming formats.
- **Web View** – Connect and control Zebra bar code printers via the printer's Web interface using a common Web browser.
- **Alert** – Printers equipped with ZebraNet print servers provide alerts via any email-enabled, wired, or wireless device to minimize downtime.

Printing Specifications

- 203 dpi resolution (8 dots/mm), Dot size (W x L):
 - 0.0049" x 0.0049" (0.125mm x 0.125mm)



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- 300 dpi resolution (12 dots/mm), Dot size (W x L):
 - 0.0033" x 0.0039" (0.084mm x 0.10mm)
- First dot location measured from inside media edge:
 - 0.10" ±0.035" (2.5mm ±0.89mm)
- Maximum print width: 4.09" (104mm)
- Maximum continuous media print length:

203 dpi	300 dpi
106"/2692mm	65"/1651mm

- Media registration tolerance: *
 - Vertical ≤ ±0.050" (±1.3mm), non-continuous media
 - Horizontal ≤ ±0.050" (±1.3mm)
- Programmable print speeds:
 - 203 dpi model = 2.0" (51mm) through 8.0" (203mm) per second in 1" increments
 - 300 dpi model = 2.0" (51mm) through 8.0" (203mm) per second in 1" increments

Media Specifications

- Maximum non-continuous label length: 39" (991mm)
- Media type: continuous, die-cut, (optional black mark)
- Media web width (label and liner): 0.79" (20mm) to 4.52" (115mm)
- Minimum label length: *
 - Rewind mode: 0.25" (6mm)
 - Peel mode: 0.5" (13mm)
 - Tear-off mode: 0.7" (18mm)
 - Cutter mode: 1.5" (38mm)
- Media thickness (label and liner): 0.003" (0.076mm) to 0.012" (0.305mm)
- Maximum media roll size: 8.0" (203mm) O.D. on a 3" (76mm) I.D. core
- Maximum internal fan-fold pack size: 8.0"L (203mm) x 4.5"W (114mm) x 4.5"H (114mm)
- Transmissive (gap) sensing standards:
 - Interlabel gap: 2 - 4mm, preferably 3mm
 - Sensing notch: 0.25"W (6mm) x 0.12"L (3mm)
 - Sensing hole: 0.125" (3mm) diameter
- (Optional black mark kit) -
 - Black mark length (parallel to inside media edge): 0.12" - 0.43" (3 - 11mm)
 - Black mark width (perpendicular to inside media edge): ≥ 0.43" (≥ 11mm)
 - Black mark location: within 0.040" (1mm) of inside media edge
 - Black mark density: > 1.0 Optical Density Units (ODU)
 - Maximum media density: 0.5 ODU

Ribbon Specifications

- Ribbon width: 0.79" (20mm) to 4.5" (114mm)
- Standard Lengths: 984' (300m) or 1476' (450m)
Provides 2:1 and 3:1 media roll to ribbon ratios
- Maximum ribbon roll size: 3.2" (81.3mm) O.D. on a 1.0" (25.4mm) I.D. core
- Ribbon wound coated-side out

Font Specifications

203 dpi (8 dots/mm)

Fonts	Matrix (in dots) (H x W)	Type†	Minimum Char. Size (H x W)	Maximum C.P.I.
A	9 x 5	U-L-D	.044" x .029"	33.9
B	11 x 7	U	.054" x .044"	22.6
C,D	18 x 10	U-L-D	.088" x .059"	16.9
E	28 x 15	OCR-B	.138" x .098"	10.1
F	26 x 13	U-L-D	.128" x .079"	12.7
G	60 x 40	U-L-D	.295" x .236"	4.2
H	21 x 13	OCR-A	.103" x .093"	10.7
GS	24 x 24	SYMBOL	.118" x .118"	8.4
Ø	variable	U-L-D	variable	N/A

300 dpi (12 dots/mm)

Fonts	Matrix (in dots) (H x W)	Type†	Minimum Char. Size (H x W)	Maximum C.P.I.
A	9 x 5	U-L-D	.030" x .020"	50.0
B	11 x 7	U	.037" x .030"	33.3
C,D	18 x 10	U-L-D	.060" x .040"	25.0
E	41 x 20	OCR-B	.137" x .087"	11.5
F	26 x 13	U-L-D	.087" x .053"	18.8
G	60 x 40	U-L-D	.200" x .160"	6.3
H	30 x 19	OCR-A	.100" x .093"	10.7
GS	24 x 24	SYMBOL	.080" x .080"	12.5
Ø	variable	U-L-D	variable	N/A

† U - Uppercase L - Lowercase D - Descenders

- Bitmap fonts A through H and GS symbols are expandable up to 10 times, height and width independent
- Smooth scalable font Ø (CG Triumvirate™ Bold Condensed) is expandable dot-by-dot, height and width independent
- IBM® Code Page 850 International Characters

Bar Code Symbolologies & Specifications

- Bar code modulus "X" dimension:
 - Picket fence (non-rotated) orientation:
 - 203 dpi = 4.9 mil to 49 mil
 - 300 dpi = 3.3 mil to 33 mil
 - Ladder (rotated) orientation:
 - 203 dpi = 4.9 mil to 49 mil
 - 300 dpi = 3.9 mil to 39 mil
- Bar code ratios: Dot selectable from 2:1 to 3:1
- Linear bar codes: Code11, Code 39, Code 93, Code 128 with subsets A/B/C and UCC Case Codes, ISBT-128, UPC-A, UPC-E, EAN-8, EAN-13, UPC and EAN 2 or 5 digit extensions, Plessey, Postnet, Standard 2 of 5, Industrial 2 of 5, Interleaved 2 of 5, LOGMARS, MSI, Codabar
- 2-dimensional bar codes: 2-dimensional bar codes: Codablock, PDF-417, Micro-PDF417, Code 49, DataMatrix, Maxi Code, QR Code, Aztec



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Zebra Programming Language® (ZPL® and ZPL II®)

- Communicates in printable ASCII characters
- Unicode™ - Compliant (Version V60.14 and higher)
- Compatible with mainframe, mini, and PC hosts
- Downloadable objects include graphics, scalable and bitmap fonts, label templates and formats
- Adjustable print cache
- Data compression
- Automatic memory allocation for format while printing
- Automatic serialization of fields
- Format inversion (white on black)
- Mirror-image printing
- Four position field rotation (0°, 90°, 180°, 270°)
- Slew command
- Programmable label quantities with print, pause, cut control
- Status messages to host upon request

Communications Specifications

- Standard IEEE 1284 (nibble mode) bi-directional parallel interface
- Standard high-speed RS-232C serial interfaces:
 - Configurable baud rate (110 – 57.6kB), parity, and data bits. Stop bits are fixed at 1.
 - Software (XON/XOFF) or hardware (DTR/DSR) communication handshake protocols
- RS-422/485 serial interface (may require optional adapter)
- ZebraNet™ MPS ethernet network print server option (10BASE2 or 10BASE-T)
- **NEW** ZebraNet™ Wireless Card Socket option
- Twinax/Coax interface option

Electrical Specifications

- Universal power supply with power factor correction 90-264VAC, 48-62Hz.
- Power Consumption
Idle = 19W
Printing = 180W (printing pause test label at speed A)
- Agency approvals: UL 1950, CISPR 22 (class B), IEC 950, 801-2, -3, and -4 standards, CSA 950, Canadian Doc. (class A), FCC (class A), CE compliance

Physical Specifications

- Height: 15.5" (394mm)
- Width: 11.2" (283mm)
- Depth: 19.5" (495mm)
- Weight: 55lbs. (25kg)
- Shipping Weight: 63lbs. (29kg)

Environmental Specifications

- Operating environment:
Thermal transfer = 40° to 104°F (5° to 40°C)
Thermal direct = 32° to 104°F (0° to 40°C)
20% to 85% non-condensing R.H.
- Storage/Transportation environment:
-40° to 140°F (-40° to 60°C)
5% to 85% non-condensing R.H.

Preventative Maintenance

Zebra recommends cleaning the printer on a regular basis using standard Zebra printer parts and cleaning supplies. Consult your *User's Guide* for further details.

- **Cleaning:**

The exterior is cleaned with a lint-free cloth, and if necessary, a mild detergent solution or desktop cleaner. Interior components (printhead, platen roller, media sensor, peel bar, ribbon and media paths) are cleaned with alcohol or blown air to remove any particles.

* Print Registration: Media registration and minimum label length are affected by media type and width, ribbon type and print speed. Performance improves as these factors are optimized. Zebra recommends always qualifying any application with thorough testing.