



## Zebra Technologies Corporation

333 Corporate Woods Parkway  
Vernon Hills, Illinois 60061.3109 U.S.A.  
Telephone +1.847.634.6700  
Facsimile +1.847.913.8766  
www.zebra.com



# ZEBRA TLP 3844-Z™ 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

- OpenACCESS™ design for easy media loading
- 300 dpi print resolution (12 dots/mm)
- Thermal transfer (TLP) printing of bar codes, text, and graphics
- Fully enclosed 5.0" (127mm) media compartment
- Double-walled ABS case construction
- ZPL® or ZPL II® programming language, software selectable
- 32 bit RISC processor
- 8MB Standard SDRAM Memory (4MB available to user)
- 4MB Standard Flash Memory (2.75 available to user)
- Zebra E<sup>3</sup> Printhead Energy Control
- Triple communications interface: RS-232 Serial, Bi-directional Centronics® parallel (36 Pin) & USB v. 1.1
- Auto-Calibration
- 16 resident expandable bitmap fonts
- One resident scalable font
- Auto-switching 120V and 240V power supply
- Linear & 2-D bar code symbologies
- Transmissive and reflective media sensing
- Head-up sensor
- Standard Tear-off mode feature
- Windows driver
- Programmable print speeds of 2, 3 and 4 inches/second (ips)

## Optional Features

- **8MB Flash Memory w/ Real Time Clock**—for a total of 12MB (10.75 available to user) for applications requiring additional levels of memory and time and date information for applications that require date or freshness coding.
- **Label Dispenser** – Label peel and present with label taken sensor.
- **ZebraNet™ Print Server II** – internal or external (via parallel connection) interface enables Ethernet 10Base-T network printing..
- **Cutter** – may be used on the following media types with a maximum thickness of 0.007" (0.18mm) and minimum label length of 1.0" (25.4mm)
  - **Continuous Paper** - Most receipt or fax paper is generally acceptable
  - **Label Liner** – Cuts on the liner only. Cutter should not be used to cut through labels as adhesives may cause jams
  - **Tag Stock** – Tag stock is generally acceptable as long as it is no more than 0.007" (0.18mm) thickness
- **External Rewinder** – allows rewinding of labels to be applied later or liner only in peel and present mode
- **Font Packs** – Asian and other international font kits
- **Media Adapter Guide** – supports wristband media

## 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 PrintServer II (internal or external)

### Firmware

- **ZPL II** – Universal language for Zebra printers. Simplifies label formatting and enables format compatibility with existing systems that run Zebra printers.
- **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 will notify you via any email-enabled, wired, or wireless device to minimize downtime.

## Printing Specifications

- Resolution: 300 dots/inch (dpi) (12 dots/mm)
- Dot Pitch: 0.0049" (0.125mm)
- Maximum print length: 39.0" (991mm) w/Std memory
- Minimum print length: 0.005" (0.125mm – one dot)
- Maximum print width: 4.09" (104mm)
- Minimum print width: 0.005" (0.125mm – one dot)
- Programmable print speed: 2, and 4 ips (51,76 and 102mm/s)

## Ribbon Specifications

**NOTE:** For optimum print quality and printer performance, use of Zebra genuine ribbon is recommended as well as a notched ribbon core.

- Ribbon Width: 1.33" (33.8mm) to 4.30" (110mm).
- Ribbon Capacity: 1 roll of ribbon per 1 roll of media
- Core ID: 0.5" (12.7mm).
- Ribbon OD: 1.36" (33mm).
- Ribbon Length: 244' (74m) using 0.000328" ribbon thickness
- Ribbon Type: Wax, wax/resin and resin.

## Media Specifications

**NOTE:** For optimum print quality and printer performance, use of Zebra genuine supplies is recommended.

- Media Width: 1.00" (25.4mm) – 4.25" (108mm)
- Media Width w/ 4" Media Guide: 0.875" (22mm) – 2.8" (71mm)
- Label Length:
- Minimum - 0.38" (9.7mm)
- Minimum with label taken sensor used - 0.50" (12.7mm)
- Maximum with standard memory - 39.00" (990mm)
- Core Inner Diameter: 1.00" (25.4mm), 1.5" (38mm)
- Max Roll Diameter: 5.00" (127mm)
- Media Thickness: 0.003" (0.007mm) - 0.007" (0.18mm)
- Media Sensing: gap, black line, notch
- Media Types - Roll-fed or fan-fold, die cut or continuous direct thermal labels with or without black mark, tag stock, continuous receipt paper, and wristband stock.

## Calibration Procedure

- The 3844-Z is equipped with a standard auto-calibration feature that initiates automatically during start-up of the printer - utilizing two to four labels to calibrate for efficient operation and less waste. The printer will also save the new settings in memory until the next calibration is performed.
- A manual calibration procedure can also be performed, if required. Consult your User's Guide for more details on the specific manual calibration steps.

## Font Specifications 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"	50.8
B	11 x 7	U	.037" x .030"	33.8
C,D	18 x 10	U-L-D	.060" x .040"	25.4
E	41 x 20	OCR-B	.138" x .085"	11.5
F	26 x 13	U-L-D	.085" x .053"	19.06
G	60 x 40	U-L-D	.200" x .160"	6.36
H	30 x 19	OCR-A	.100" x .098"	10.02
GS	24 x 24	SYMBOL	.80" x .80"	12.7
P-V		U-L-D		
Ø	15 x 12	U-L-D	Scalable (Smooth) Font	

\*U = upper case, L = lower case, D = descenders

- Character Fonts: Standard bitmapped Zebra fonts: A, B, C, D, E (OCR-B), F, G, H, (OCR-A), GS, P, Q, R, S, T, U, V & Ø Smooth font (CG Triumvirate™ Bold Condensed).
- Character Sets: IBM® Code Page 850 International characters & graphic symbols
- Supports user defined fonts and graphics – including custom logos
- Bitmap fonts are expandable up to 10 times, height and width independent. Fonts E and H (OCR-B and OCR-A), however, are not considered in spec when expanded.
- Smooth scalable font Ø (CG Triumvirate™ Bold Condensed) is expandable dot-by-dot, height and width independent, while maintaining edges to a max. 1500 x 1500 dots.
- IBM® Code Page 850 International Characters available in fonts A,B,D,E,F,G and Ø through software control.

## Bar Code Symbologies & Specifications

- B Bar code ratios: 2:1 (non-rotated) and 3:1
- Linear bar codes: Code 11, Code 39, Code 93, Code 128, UPC-A, UPC-E, EAN-8, EAN-13, EAN-14, UPC-A and UPC-E with EAN 2 or 5 digit extensions, Plessey, POSTNET, Standard 2 of 5, Industrial 2 of 5, Interleaved 2 of 5, LOGMARS, MSI, Codabar, RSS-14 (limited, truncated, stacked)
- 2-dimensional bar codes: PDF417, MicroPDF-417, Code 49, Maxicode, Codablock, Data Matrix, QR code, RSS Composite

## Zebra Programming Language (ZPL/ ZPL II)

- Communicates in printable ASCII characters
- Compatible with mainframe, mini, and PC hosts
- Downloadable objects include graphics and bitmap fonts, label templates and formats
- 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
- Status messages to host upon request

## Communications Specifications

- Centronics® Parallel (36 Pin) connector ports
- RS-232 Serial interface
- USB v 1.1
- Optional internal Ethernet (ZebraNet PrintServer II)

## Electrical Specifications

- Auto-detectable (PFC Compliant) 100-240VAC, 50-60Hz

## Agency approvals

- Emissions: FCC Part 15, Subpart B, VCCI, C-Tick
- Emissions and Susceptibility: (CE): EN55022 Class-B, EN61000-3-2, EN61000-3-3 and EN55024
- Safety: CB Scheme IEC 60950:1991 +A1 +A2 +A3 +A4, UL 60950 and C-UL, IRAM, NOM, AAMI

## Physical Specifications (no options installed)

TLP 3844-Z	
Height	6.8" (173 mm)
Width:	7.8" (198 mm)
Depth:	9.4" (238 mm)
Weight:	3.7lbs (1.7kg)

## Environmental Specifications

- Operating Temperature: 40° to 105°F (5° to 41°C)
- Storage Temperature: -40° to 140°F (-40° to 60°C)
- Operating Humidity: 10% to 90% non-condensing R.H.
- Storage Humidity: 5% to 95% 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.