ZEBRA® GC420™ D/T PRINTER SPECIFICATIONS

Specifications are provided for reference and are based on printer tests using Genuine Zebra™ supplies. 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

- 32 bit RISC processor
- EPL2® and ZPLII® programming languages
- Triple connectivity: Serial, USB and Parallel
- 4 ips maximum print speed
- 203 dpi print resolution (8 dots/mm)
- 4.09" print width
- Direct Thermal (d) and Thermal Transfer (t) printing of barcodes, text and graphics
- 8 MB of Flash memory (6 MB user available)
- 8 MB SDRAM - (2 MB user available)
- OpenACCESS™ design for easy media loading
- Head-up sensor
- Reflective and transmissive media sensing
- Metal tear edge
- 5"outside diameter media capability
- Fan-fold media feed slot
- 5 resident expandable bitmap fonts (USA, European)
- Multiple DOS and Windows® codepage support
- Windows drivers
- Printer utilities
- Linear & 2-D barcode symbologies

Accessories

- ZKDU™ – Keyboard display unit for ZPL® and EPL™
- KDU Plus™ – Full-size keyboard with LCD for stand-alone printing applications

ZebraLink™ Solutions

Software

- **ZebraDesigner™ Pro** – An intuitive, easy-to-use software program for creating complex label designs (optional)
- **ZebraDesigner** – Offers basic features for simple label design (standard)
- **ZebraNet™ Bridge Enterprise** – Centrally manage Zebra printers anywhere on your global network from a single PC screen (optional)
- **ZebraNet Utilities v 7.0** – Provides printer administration, management, alerting capabilities and more for Windows 95/98/2000/2003/ME/NT/XP (standard)
- **ZebraDesigner Windows Driver** – Microsoft® Certified for Windows Vista® 7/8/8.1/2008/2012 (downloadable from www.Zebra.com)
- **ZBI™ 2.0** – Powerful programming language that lets printers run standalone applications, connect to peripherals and much more (optional)
- **ZBI-Developer** – Programming environment for developers to simplify creation, testing and distribution to printers of complex ZBI 2.0 programs (standard with ZBI 2.0)

Firmware

- **EPL2** – Eltron Programming Language simplifies label formatting and enables format compatibility with legacy applications
- **•ZPL II** – Universal language for Zebra printers. Simplifies label formatting and enables format compatibility with existing systems that run Zebra printers.

Printing Specifications

- Resolution: 203 dots/inch (dpi) (8 dots/mm)
- Dot Pitch: 0.0049" (0.125mm)
- Maximum Print Length: 39.0" (991 mm)
- Minimum Print Length: 0.005" (0.125 mm - one dot)
- Maximum Print Width: 4.09" (104 mm)
- Minimum Print Width: 0.005" (0.125 mm - one dot) Programmable Print Speed: 2,3,4 ips (51,76 and 102 mm/s)
- Barcode Modulus "X" Dimension: 5 mil to 50 mil

Media Specifications

- Media Width: 1.00 - 4.25" (25.4 -108 mm)
- Label Length:
  - Minimum - 0.38" (9.6 mm)
  - Maximum with standard memory - 39" (990 mm)
- Core Diameter: 1.00 -1.5" (25.4 - 38 mm)
- Max Roll Diameter: 5.00" (127 mm)
- Media Thickness: 0.003 - 0.007" (0.08 - 0.18 mm)
- Media Sensing: gap, black line, notch
- Media Type:
  - Roll-fed or fan-fold
  - Label stock (die cut or continuous, direct thermal or thermal transfer)
  - Tag stock (die cut or continuous, direct thermal or thermal transfer)
  - Receipt paper (continuous, direct thermal)
  - Wristband stock (direct thermal or thermal transfer)

Ribbons/Ribbon System (GC420t)

- Ribbon Width: 1.33 - 4.3" (33.8 - 110 mm)
- Ribbon Capacity: 1 roll ribbon per roll media
- Ribbon OD: 1.34" (34 mm)
- Core ID: 0.5" (12.7 mm)
- Ribbon Length: 244' (74 M) using 0.000328" ribbon thickness
- Ribbon Type: wax, wax/resin and resin
- Detection: Ribbon out sensor wheel. Detects when wheel is moving and senses when ribbon is out.

ZPL 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

ZPL Font Specifications
203 dpi (8 dots/mm)

Font	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 .030"	33.3
B	11 x 7	U	.054" x .044"	22.7
C,D	18 x 10	U-L-D	.089" x .059"	16.9
E	28 x 15	OCR-B	.138" x .098"	10.2
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"	10.8
GS	24 x 24	SYMBOL	.118" x .118"	8.5
P-V		U-L-D	Backward Compatible w/ S-300	
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*)
- 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.

SPECIFICATIONS ARE SUBJECT TO CHANGE WITHOUT NOTICE

- 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

ZPL Barcode Symbologies

- Barcode ratios: 2:1 (non-rotated) and 3:1
- Linear barcodes: 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, POST- NET, Standard 2 of 5, Industrial 2 of 5, Interleaved 2 of 5, LOGMARS, MSI, Codabar and GS1 DataBar™ (formerly RSS)
- 2-dimensional barcodes: PDF417, MicroPDF-417, Code 49, Maxicode, Codablock, Data Matrix, QR code and Aztec

EPL Programming Language (EPL2)

- ASCII EPL2 programming language (Page Mode)
- Field rotations
- Variable field support (up to 100)
- Counter support (up to 10)
- Variable field addition and subtraction
- Status reporting
- Form, fonts and graphics storage
- Simple set of formatting commands
- Support of selected barcodes

Font Specifications
Standard bitmap font set

Type	Width	Height	Sp	C.P.I.	Chars
Font 1	8	12	2	20.3	160
Font 2	10	16	2	16.9	160
Font 3	12	20	2	4.5	160
Font 4	14	24	2	12.7	160
Font 5	32	48	4	5.6	80

Barcodes

- Linear barcodes: Code 39, Code 128A, B & C (User selectable/Auto), UCC/EAN-128, Code 93, Codabar, Interleaved 2 of 5, UPC-A, UPC-E, UPC-A with 2 and 5 add on, UPC-E with 2 and 5 add on, EAN 13, EAN 8, EAN 13 with 2 and 5 add on, EAN 8 with 2 and 5 add on, Postnet (5, 9,11 & 13 digit), Japanese Postnet, Plessey (MSI-1), MSI-3, German Post Code, RSS-14 (limited, truncated, stacked)
- 2-dimensional barcodes: Maxicode (modes 2,3,4,6), PDF417 (MicroPDF417 and MacroPDF417), Data Matrix Code pages supported:
  - DOS: 437, 850, 851, 852, 855, 857, 860, 861, 862, 863, 865, 866, 869, 737, Big 5, GB2312, GB18030
  - Windows: 1250, 1251, 1252,1253, 1254, 1255,1256, and 1257

Interface/Connectivity Types

- Serial- RS232:
  - Software selectable:
    - ➤ baud rate (default 9600)
    - ➤ parity (default none)
    - ➤ data length (default 8)
    - ➤ stop bit (default 1)
  - Flow control: hardware and software
  - Connector: DB-9 Type: 9 pin D Sub connector female (standard)
  - Includes +5 VDC - 160 mA power output capability
- Parallel:
  - Centronics
  - Connector: 36 Pin
  - Includes +5VDC - 300mA power output capability
- USB:
  - Version 1.1, bi-directional
  - Supported in Win98 and Win98SE, Win Me and Windows 2000 platforms
  - Connector: Type B Female

Electrical Specifications

- Auto-ranging external power supply with C7 type connector
- Output: 20 VDC, 2.5A
- Input: 100-240 VAC, 50-60 Hz

Agency Approvals

- **Emissions**: FCC Part 15, Subpart B (Class B), ICES 003, VCCI, C-Tick, CQC, EAC, KCC, BSMI, ICES-003
- **Emissions and Susceptibility**: EN55022 (Class B), EN55024, EN61000-3-2, EN61000-3-3
- **Safety**: CB Scheme IEC 60950-1, TUV NRTL, C-Tick, CCC, NOM, EAC, KCC, BSMI, BIS, INMETRO

Physical Specifications

	GC420d	GC42111
Height	6.7" (170 mm)	6.8" (173 mm)
Width:	7.9" (201 mm)	7.9" (201 mm)
Depth:	8.2" (208 mm)	9.4" (239 mm)
Weight:	3 lbs (1.4 kg)	3.2 lbs (1.5 kg)

Operating Environment

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

Preventative Maintenance

Zebra recommends cleaning the printer on a regular basis using standard Zebra 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 can be used. Interior components (printhead, platen, media path and dispenser bar) are cleaned with alcohol or blown air.

Media Registration

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