



SEE MORE. DO MORE.



ZEBRA® GK420D™ & GK420T™ PRINTER SPECIFICATIONS

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

- Maximum speed 5 ips (127 mm/sec)
- OpenACCESS™ design for easy media loading
- 203 dpi print resolution (8 dots/mm)
- Direct thermal (d) and Thermal transfer (t) printing of bar codes, text, and graphics
- Fully-enclosed 5.0" (127 mm) media compartment
- Dual-wall frame construction
- ZPL II® programming language
- EPL2 page mode programming language
- EPL Line Mode support (GK420d)
- 32 bit RISC processor
- 8 MB Standard SDRAM memory (3 MB available to user)
- 4 MB Standard Flash memory (1.5 MB available to user)
- Zebra E³™ Printhead Energy Control
- Triple communications interface: Serial, USB & Parallel
- User interface feed button (ZPL® style)
- Odometer for print length tracking
- Unicode™ compliant for multi-language printing
- Auto-calibration of media
- 16 resident expandable bitmap fonts (ZPL language)
- One resident scalable font (ZPL language)
- 5 resident expandable bitmap fonts (EPL language)
- Auto-switching 100-240V power supply
- IEC 60601-1 Certified (GK420 Healthcare models only)
- Transmissive and reflective media sensing
- Head-up sensor
- Programmable print speed: 2, 3, 4 & 5 ips (51, 76, 102, 127 mm/sec)
- Standard tear-off mode feature
- Zebra printer driver for Windows®
- ENERGY STAR® 2.0 qualified

Optional Features

- **Dispenser (peeler)** – Label peel and present with label present sensor (not available on GK420 Healthcare)
- **Ethernet** - 10/100 internal offered in combination with USB interface (replaces Serial and Parallel ports)
- **Font Packs** – Asian and other international font kits
- **Power Cord** – US, Europe, UK, Australia, Argentina, Japan, and China
- **ZBI 2.0™** – Field installed via activation key

Accessories

- **ZKDU™ and KDU Plus™** – keyboard display units for stand-alone printing solutions

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 (standard)
- **ZebraNet™ Bridge Enterprise** – Centrally manage Zebra printers anywhere on your global network from a single PC screen (option)
- **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®, Windows 7, Windows 8 Windows 8.1, Windows 2008, and Windows 2012 (downloadable from www.Zebra.com)



SEE MORE. DO MORE.



- **ZBI 2.0** – Powerful programming language that lets printers run standalone applications, connect to peripherals, and much more (option)
- **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)
- **POS Driver** – Supports integration with Windows-based point-of-sale applications.

Networking Options

Ethernet - 10/100 internal - Offered in combination with USB & Serial interface (replaces Serial and Parallel ports)

Firmware

- **EPL2** – Eltron Programming Language simplifies label formatting and enables format compatibility with legacy applications
- **EPL** – Line Mode support (GK420d) enables format compatibility with legacy applications
- **ZPL II** – Zebra Programming Language Provides sophisticated label formatting and printer control. Compatible with tabletop and mobile 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

Parameter	203 dpi (8 dots/mm)
Dot pitch	0.0049" (0.125 mm)
Maximum print length	39.0" (991 mm)
Minimum print length	0.005" (0.127 mm – one dot)
Print length in line mode	Unlimited (GK420d)
Maximum print width	4.09" (104 mm)
Minimum print width	0.005" (0.127 mm – one dot)
Programmable print speed	2, 3, 4 & 5 ips (51, 76, 102, 127 mm/sec)
Bar code modulus "X" dimension	203 dpi = 5 mil to 50 mil

Media Specifications

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

- Media Width: 0.75" (19 mm) – 4.25" (108 mm)
- Label Length:
 - Using tear off mode:

Minimum Length	Model	Printing Mode
0.38" (9.7 mm)	GK420d	Direct thermal
0.38" (9.7 mm)	GK420t	Thermal transfer
0.5" (12.7 mm)	GK420t	Direct thermal

- Minimum using dispenser - 0.50" (12.7 mm)
- Maximum - 39.00" (990 mm)
- Core Inner Diameter: 0.5" (12.7 mm), 1.0" (25.4 mm), 1.5" (37.1 mm)
- Max Roll Diameter: 5.00" (127 mm)
- Media Thickness: 0.003" (0.08 mm) - 0.0075" (0.19 mm)
- Media Sensing: fixed reflective and transmissive gap, black line, and notch
- Media Types: Roll-fed or fan-fold, die cut or continuous direct thermal labels with or without black line, tag stock, continuous receipt paper, and wristbands
- Dispenser peeler (optional) may not work with all media types and should be tested for media compatibility.

Calibration Procedure

- The GK420 is equipped with a standard auto-calibration feature that can be set to initiate 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.

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



SEE MORE. DO MORE.



- 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.
- 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 Symbolologies

- **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, POSTNET, 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

EPL Font Specifications

203 dpi (8 dots/mm)

Font	Width (dot)	Height (dot)	CPI
1	8	12	20.3
2	10	16	16.9
3	12	20	4.5
4	14	24	12.7
5	32	48	5.6
8-Simp	32	32	6.3*
8-Trad	32	32	6.3*

* Spacing of Asian characters is controlled via the i command. The formula for CPI is $203 / (32 + i)$. Thus as i increases, CPI decreases. For example: If i = 2, CPI = $203/34 = 6.0$



SEE MORE. DO MORE.



EPL Barcodes Symbolologies

- **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, and GS1 DataBar (formerly RSS)
- **2-dimensional Barcodes:** Maxicode (modes 2,3,4,6), PDF417, MacroPDF417, QR Code, Data Matrix, and Aztec

Communications Specifications

- Centronics® Parallel (36 Pin) connector ports
- RS-232 auto-sensing, adaptive Serial interface, DB-9
- USB V1.1, bi-directional
- Internal 10/100 Ethernet – optional (replaces Serial and Parallel ports)

Electrical Specifications

- Auto-detectable (PFC Compliant) 100-240VAC, 50-60Hz rated at 70Watts
- ENERGY STAR 2.0 qualified printers
- IEC 60601-1 Certified (GK420 Healthcare models only)

Agency Approvals

G-Series GK420 Models (excluding Healthcare):

- **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

GK420 Healthcare Models:

- **Emissions:** FCC Part 15, Subpart B (Class B), ICES 003
- **Emissions and Susceptibility:** EN55022 (Class B), EN55024, EN61000-3-2, EN61000-3-3
- **Safety:** CB Scheme IEC 60950-1, TUV NRTL

Physical Specifications

(no options installed)

	GK420d	GK420t
Height	6.0" (152 mm)	7.5" (191 mm)
Width:	6.75" (171 mm)	7.6" (193 mm)
Depth:	8.25" (210 mm)	10.0" (254 mm)
Weight:	3.0 lbs (1.4 kg)	4.6 lbs (2.1 kg)

Environmental Specifications

- Operating Temperature: 40° to 105°F (4.4° 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.

Healthcare Features

(Healthcare models only)

- Disinfectant-ready plastics
- Approved cleaning agent ingredients (see separate "Guide to Disinfecting and Cleaning Zebra Healthcare Printers" for more details):
 - Isopropyl and Ethyl alcohol (including wipes)
 - Ammonium
 - Hydrogen peroxide
 - Phosphoric acid
 - Bleach/sodium hypochlorite
 - Mild dish soap
- Medical-grade power supply certified to IEC 60601-1 standards to protect patient and staff safety by reducing the risk of electrical shock
- Enable production of labels that meet the Clinical and Laboratory Standards Institute® (CLSI) harmonization standard
- Certified and recommended by all of the leading Electronic Health Records (EHR) providers



SEE MORE. DO MORE.



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 are cleaned with 70% isopropyl alcohol (IPA) or blown air to remove any particles. (For Healthcare models see separate "Guide to Disinfecting and Cleaning Zebra Healthcare Printers")



Corporate Headquarters
+1 800 423 0442
inquiry4@zebra.com

Asia-Pacific Headquarters
+65 6858 0722
apacchannelmarketing@zebra.com

EMEA Headquarters
+44 (0)1628 556000
mseurope@zebra.com

Latin America Headquarters
+1 847 955 2283
inquiry4@zebra.com

Other Locations / **USA:** California, Georgia, Illinois, Rhode Island, Texas, Wisconsin **Europe:** France, Germany, Italy, the Netherlands, Poland, Spain, Sweden, Turkey, United Kingdom **Asia Pacific:** Australia, China, Hong Kong, India, Indonesia, Japan, Malaysia, Philippines, Singapore, South Korea, Taiwan, Thailand, Vietnam **Latin America:** Argentina, Brazil, Colombia, Florida (LA Headquarters in USA), Mexico **Africa/Middle East:** Dubai, South Africa

SPECIFICATIONS ARE SUBJECT TO CHANGE WITHOUT NOTICE

©2014 ZIH Corp. Zebra, the Zebra head graphic, ZPL and ZPL II are trademarks of ZIH Corp, registered in many jurisdictions worldwide. GK420d, GK420t and all product names and numbers are Zebra trademarks. All rights reserved. All other trademarks are the property of their respective owners.

(7/14)