Zebra® QLn™ Series

SEE MORE. DO MORE.

Zebra's popular QL™ family of direct-thermal mobile label printers has built a highly satisfied following based upon its proven drop-resistant durability; user-friendly, productivity-boosting features; and easy integration. As Zebra's third generation of QL printers, the QLn series extends these QL-platform benefits – whether you choose the QLn320™ model for 72mm-wide printing or the QLn220™ model for print widths up to 48mm.

The printers' over-molding and tempered-glass display – coupled with their seamless, one-piece design – make them more durable than ever before. These printers can boost your operation's productivity through their larger, sharper, easier-to-navigate display; faster, higher-quality printing; a variety of proactive alerts that help keep working printers in employees' hands; and many convenient charging accessories. And, your IT department will find the QLn printers more intuitive to integrate into existing platforms thanks to Zebra's Link-OS® environment. Other features such as Zebra Global Printing and improved network performance – including 802.11n wireless LAN capability for more robust and reliable connectivity and throughput – also make integration easier.

With Zebra's Link-OS environment – an innovative operating system combining a powerful Multiplatform Software Development Kit (SDK) and software applications – the QLn printers are easy to integrate, manage and maintain from any location around the globe. Enabled with Print Touch™, these Link-OS printers offer web page launching features using Near Field Communication (NFC), making it easy to access Zebra's extensive knowledge base of how-to videos and product support.

Ideal for these applications:

Retail: shelf-edge labels, mark-down labels, price labels and tags, sell-by labels, transfer and return labels

Healthcare: bedside specimen labels, pharmacy labels

Transportation & Logistics: shipping/receiving labels, pallet/case labels, cross-docking labels, warehouse management labels

Link-OS®

Made for iPod iPhone iPad

Windows 8 Compatible

Wi Fi CERTIFIED

CISCO

EASIER AND MORE EFFICIENT TO USE

Multiple enhancements deliver significant operational advantages over the previous-generation QL and QL Plus™ series mobile printers.

Easier to use

The QLn family of printers were designed to optimise business processes through easy operation and mobility – reducing training requirements and increasing worker productivity.

- Meet the increasing demand for mobile printing across different operating systems. QLn printers are "Made for iPod®/iPhone®/iPad®" certified and also support Android and Windows devices via Multiplatform SDK apps.
- Easily operate the printer using simple-to-navigate controls and a user-friendly interface, which includes a help menu and alert messages.
- Quickly access Zebra's extensive knowledge base of how-to videos and product support with Print Touch-enabled Web page launching features.
- Conveniently carry and store the printer thanks to a smaller design.
- Achieve faster, higher-quality printing with lower power use through Power Smart Print Technology™.
- Experience higher performance:
  - Faster processing and throughput.
  - Increased memory that handles printer's advanced functions and future firmware improvements, and stores more complex fonts, graphics and images.
- Increase user and operational efficiencies with convenient charging accessories.

Longer printer uptime

Improve operational productivity and reduce costs associated with downtime through fewer printing interruptions.

- Monitor and manage the printer remotely using the Windows PC-based AirWatch Connector.
- Prevent employees from being stuck with no printer in the middle of their work. The printer enables proactive maintenance by displaying printer alert messages, smart battery charge and health status, and printhead-cleaning how-to messages
- Avoid the downtime and costs of unnecessarily sending the printer away for servicing. Many issues can be remotely diagnosed and resolved (including firmware updates, configuration changes, and adding new fonts or graphics) over an Ethernet connection

EASIER TO INTEGRATE, MANAGE AND MAINTAIN

New features make it easier to integrate the QLn printer into your existing network and manage it from anywhere in the world – saving you IT time and costs.

Easier to integrate

- Move your business forward without the cost or stress of upgrades. Backwards compatibility with QL and QL Plus™ models lets you upgrade to the QLn printer without changing media or label formats. The inclusion of the legacy CPCL programming language also allows mixed networks of QL/QL Plus and QLn products.
- Be assured of full compatibility with many other Zebra printers thanks to Zebra's ZPL® programming language. And with ZBI 2.x™, directly connect your printers with legacy host systems and peripheral devices, such as scanners and scales.
- Maintain robust and reliable connectivity, even for your largest data transfers, with Wi-Fi®-certified connectivity. Zebra's 802.11n solution has dual-band support (5 GHz and 2.4 GHZ) and is fully compatible with 802.11a and 802.11b/g standards, so you can easily move business operations to the less-crowded 5 GHz band.
- The Link-OS tools include:
  - **Software Development Kit** – create printing applications for Windows®, Apple®, Android™, Windows® CE, Windows® Mobile and BlackBerry® platforms.
  - **Cloud Connect** – connect to the Cloud directly and securely, forwarding data from any port.
  - **Virtual Devices** – support multiple programming languages on one printer and integrate Zebra Link-OS printers into existing legacy systems.
  - **Print Touch** – simplify Bluetooth® pairing and launch Web-based help pages with NearField Communication-enabled devices.
- Quickly configure single printers with the Zebra Setup Utility and enable global printer management with ZebraNet™ Bridge Enterprises.
- Efficiently print and optimize your labels with ZebraDesigner™ Pro for label design and ZebraDesigner drivers for Windows. Print multiple languages on a single label using Zebra's Unicode™ UTF-16-compliant Global Printing Solution.
- Work with the confidence that comes with industry-leading solutions. The QLn420 features improved communication with leading handheld terminals that have been tested and verified for maximum interoperability when using the printer with validated terminals. Zebra Independent Software Vendor (ISV) Partners create industry-leading software solutions to solve business problems, and Zebra works closely with these ISVs to integrate printing and other capabilities of Zebra products. Zebra-validated applications can be found at **zebra.com/validation**.

Easier to manage

- Manage all aspects of your networked Link-OS printers from just one screen with Profile Manager. There's no need to switch between applications to get the job done, and you can manage the simple admin console remotely on your PC, tablet or smartphone.
- Keep printers in service longer by managing specific, local printer and battery issues remotely over a wired IP network, including Serial and Bluetooth, via a Zebra Ethernet cradle. And with AirWatch™ Connector, you can quickly connect your printer with the AirWatch device-management system via WLAN and Ethernet.
- Automatically update printer firmware and configuration from a file server over 802.11 or Ethernet interfaces with the mirror function.
- Manage QLn printers using most of the popular third-party management software solutions. The printers also fully support Simple Network Management Protocol (SNMP).

Easier to Maintain

- Reduce wasted time and lost productivity with the smart battery, which indicates the power and health of a printer's battery.
- Effortlessly manage your printers and firmware by connecting your devices to your wired Ethernet network and/or cradle.

MOBILE A TO Z

FROM ACCESSORIES, TO SUPPLIES, TO ZEBRACARE™ PLANS

Lithium-ion charging accessories

Ethernet Cradle
Connect QLn printers to your wired Ethernet network via the QLn Ethernet Cradle to enable easy remote management by your IT or operations staff – helping to ensure each printer is operating optimally and is ready for use. The Ethernet Cradle can communicate over 10Mbps or 100Mbps networks using auto-sense.

The single-bay QLn Ethernet Cradle also charges the battery whilst it is in the printer, while the four-bay version (with optional wall-mount kit) charges four printers at a time. The four-bay version includes an internal Ethernet switch and second Ethernet port, so you can link and manage 4 four-bay QLn Ethernet Cradles (a total of 16 printers) from one port.

The printer remains fully functional so you can print whilst it is docked in either cradle. The cradle's LED lights indicate DC power and Ethernet-link status.

Remote printer management over your Ethernet allows:

- Battery management – monitor battery health to simplify central management of your spare battery pool
- Firmware management – update printer firmware, eliminating the need for IT staff to travel to the local user site, or for the printer to be despatched to an off-site service centre
- Print management – update templates, fonts and graphics in order to print new label formats
- Device management – update startup (such as config.sys), WML (front panel), or HTML (browser) files to enhance or change configuration and status collection
- Network management – update encryption keys or certificate files to maintain the highest level of security
- Problem resolution – troubleshoot local printer issues that may otherwise require the printer to be sent away for repair
- Ability to manage Bluetooth printers, which traditionally have been off-network.

Single-bay QLn Ethernet Cradle

Four-bay QLn Ethernet Cradle

What comes with the Ethernet cradles?

Cradle, AC adapter, power cord and document CD including cradle user manual and installation guide.

AC adapter

Connect the AC adapter to your QLn printer and mains socket to charge the printer's smart battery whilst in the printer. The printer can print labels and perform other functions during charging.

Shown with printer for reference purposes; printer is not included

Smart charger

The smart charger will fully charge a single standalone QLn smart battery in less than four hours. In addition to indicating battery charge status, it indicates battery health, allowing you to more accurately manage your spare battery pool. Specifically, LEDs show whether the battery is "good," has a "diminished capacity," is "past useful life," or is "unusable" and should be replaced. The smart charger comes with a charging base and power cable.

Shown with printer for reference purposes; printer is not included

Extended-capacity lithium-ion smart battery

The extended-capacity Li-ion smart battery provides twice the battery capacity of the standard smart battery, providing double the power for increased uptime. There's no need to upgrade your existing QLn printer – you can purchase this as a standalone accessory to use with your current QLn220 or QLn320 model. Alternatively, you can order it as a configurable printer option so your printer ships ready to go with this powerful accessory – the choice is yours.

Quad battery charger

The quad battery charger is designed to simultaneously charge up to four QLn smart batteries in about three hours. Lights on the charger indicate when individual batteries are 80 per cent charged and when fully charged. Note that the quad battery charger does not indicate battery health (unlike the smart charger). It comes with the charging unit, a power supply, and power cable.

Carrying straps/cases

Hand strap
Allows the printer to be carried by hand.

Shoulder strap
Allows the printer to be carried over the shoulder.

Soft case
Add an extra layer of protection for harsh environments with a soft case. While in the case, the printer is IP54-rated for resistance to windblown water and dust. The case provides openings for changing the media and batteries, and all connectors are accessible. Includes shoulder strap.

Genuine Zebra supplies

Ensure consistent print quality, reduce downtime and increase productivity in your printing process with genuine Zebra supplies. We manufacture each supplies product with exactly the same materials every time so you always get crisp, readable and scannable output without needing to adjust the printer darkness setting between rolls.

ZebraCare Services

Increase printer uptime (and reduce lost productivity and unbudgeted repair costs) by selecting a ZebraCare Services agreement. A cost-effective means of planning and budgeting your annual maintenance expenditures, your agreement ensures that trained Zebra technicians will bring your printer back to factory specifications. Zebra offers a variety of plans to fit your budget and business needs.

SPECIFICATIONS AT A GLANCE*

Printer name

QLn220
QLn320
For information about other printers in the QLn family, please visit our web site.

Standard features

- Apple® iOS, Android, Windows Mobile and Blackberry® connectivity
- Direct-thermal printing of barcodes, text and graphics
- CPCL, EPL and ZPL programming languages
- 256MB flash supports downloadable programs, receipt formats, fonts and graphics
- 2,450mAh (nominal) 18.1Wh removable Li-ion smart battery
- Built-in battery charger
- Black mark and gap media sensing using fixed centre-position sensors
- Easy-to-use peel-and-present mode
- Label-present sensor for issuing labels one at a time
- Tear bar for easy receipt dispensing
- Belt clip for unobtrusive and convenient printing (not compatible with extended-capacity battery)
- Centre-loading media locking for variable roll widths
- Clamshell design for easy media loading
- Management: Mirror, SNMP, Web server (with customisable HTML pages), Wavelink Avalanche®
- Large easy-to-read LCD control panel (240 x 128 pixels)
- LCD can be customised using WML (text and icons)
- Five-way navigation buttons, two software-defined keys
- Printer alerts on the display, help menus
- Tolerance of multiple drops from 1.52m/5' to concrete
- IP43 dust- and water-resistance rating (IP54 with soft case)
- 400 MHz 32-bit ARM processor
- XML support
- Supports vertical and horizontal printing
- Printers can be used in any orientation
- QR barcode links to web-based help pages
- Zebra Print Touch simplifies Bluetooth pairing and launches web-based help pages with Near Field Communication (NFC) enabled devices
- Label odometer
- Real-time clock

Printer specifications

Resolution

- 8 dots per mm/203dpi

Memory

128MB RAM; 256MB flash (standard)

Print width

- QLn220: 48mm/1.9"
- QLn320: 72mm/2.9"

Print length

- Minimum: 12.7mm/0.5"
- Maximum: 813mm/32"

Print speed

- Up to 100mm/4" per second

Media sensors

- Black mark and gap media sensing using fixed centre-position sensors; label-present sensor for issuing labels one at a time

Operating characteristics

Environment

- Operating temperature: -20°C/-4°F to 50°C/122°F
- Storage/Transport environment: -25°C/-13°F to 65°C/158°F
- Operating humidity: 10% to 90% non-condensing
- Storage humidity: 10% to 90% non-condensing

Agency approvals

- Emissions: FCC Part 15, Subpart B, EN 55022 Class-B, EN 60950, EN 55024 and VCCI class B
- Susceptibility: EN 55024, EN61000-4-2, EN 61000-4-3, EN 61000-4-4, and EN 61000-4-5
- Safety: CE, UL, TÜV, CSA

Media characteristics

Media width

- QLn220: 16mm/0.63" to 55.4mm/2.18"
- QLn320: 25mm/1.0" to 79mm/3.125"

Media length

- QLn220: 12.7mm/0.5" to 813mm/32"
- QLn320: 12.7mm/0.5" to 813mm/32" or continuous

Maximum media roll size

- QLn220: 55.9mm/2.2" O.D. on a 19mm/0.75" or 34.9mm/1.375" I.D. core
- QLn320: 66mm/2.6" O.D. on a 19mm/0.75" or 34.9mm/1.375" I.D. core

Media thickness

- 2.3 mil to 6.5 mil (label) or 5.5 mil (tag stock)

Media types

- Die-cut, roll-fed, receipt, linerless, black bar, black mark

Physical characteristics

	QLn220	QLn320
Width:	89mm/3.5"	117mm/4.6"
Height:	70mm/2.75"	84mm/3.3"
Depth:	165mm/6.5"	173mm/6.8"
Weight:	0.57kg/1.35lb with battery	0.72kg/1.6lb with battery

Note: The extended-capacity Li-ion smart-battery option adds 0.09kg/0.20lb to the weight and 16mm/0.6" to the height of either QLn series printer.

Link-OS SolutionsSoftware Tools

- Document Design: Quickly design a customized print solution using your business data and Zebra's intuitive, plug-and-print design tools.
- Device Integration: Zebra offers apps and products designed to help you integrate Zebra devices into your existing systems.
- Device Management: Manage your print operations locally and globally with Zebra's suite of device management tools.
- Developer Tools: Provides you the tools you need to create your own apps, including documentation, source code, programming languages, templates and more.

Firmware

- ZPL II™
- CPCL, EPL
- Zebra Unicode Solution
- ZBI 2.0™ (optional)

Fonts/Graphics/Symbologies

Fonts and character sets

- Five resident scalable, rotatable fonts available from 12–48pt
- Downloadable soft fonts
- Optional international character sets

Barcode symbologies

- Barcode ratios: 1.5:1, 2:1, 2.5:1, 3:1, 3.5:1
- Linear barcodes: Codabar (NW-7), Code 39, Code 93, Code 128, EAN-8, EAN-13 (2 and 5 digit extensions), Interleaved 2-of-5, UCC/EAN-128, UPC-A, UPC-E (2 and 5 digit extensions) MSI/Plessey, FIM/Postnet
- Two-dimensional: Aztec Code, Data Matrix, GS1 DataBar™ (RSS), MaxiCode, MicroPDF417, PDF417, QR Code, TLC 39

Communication and interface capabilities

- ZebraNet® 802.11n option – provides 802.11a/b/g/n WLAN support with:
  - WEP (PSK only), TKIP and AES encryption
  - WPA and WPA2
  - 802.1x (with WPA or WPA2 only) EAP-FAST, EAP-TTLS, EAP-TLS, PEAP, LEAP
  - 802.11d and 802.11i
  - Simultaneous dual radio with Bluetooth 3.0
  - Wi-Fi® Certification
  - Fast roaming using PMK caching, CCKM or Fast Session resumption
- Bluetooth 3.0 radio
  - Security modes 1 – 4
  - Made for iPod®/iPhone®/iPad®" certified
  - Key Bonding
- 10/100 Ethernet support (via docking cradle)

Cabled communications specifications

- USB 2.0 full-speed interface (12Mbps)
- Mini-B connector with optional strain relief
- Serial interface: 14-pin RS-232C port for communication to terminal or other host up to 115.2Kbps

Options and accessories

Charging options

- Charge the battery inside the printer using: AC adapter; Single cradle; Quad cradle
- Charge the battery outside the printer using: Smart charger; Quad charger

Optional features and accessories

- Linerless printing (with silicone platen roller only)
- ZBI 2.x
- Spare batteries
- 4300mAh (nominal) 31.0Wh removable extended-capacity Li-ion smart battery
- AC adapter
- SC2 smart battery single charger
- Quad battery charger
- QLn-EC – single-bay Ethernet and charging cradle (not compatible with extended-capacity battery)
- QLn-EC4 – quad-bay Ethernet and charging cradle, with internal switch and stacking port (not compatible with extended-capacity battery)
- Shoulder strap
- Hand strap
- Soft case (IP54 rating when used) – not compatible with extended-capacity battery
- Serial and USB cables with strain relief
- Vehicle Charger (8-18V) with Cigarette Lighter Adapter

Zebra Technologies – EMEA Headquarters & Sales Office
Zebra Technologies Europe Limited, Dukes Meadow, Millboard Road, Bourne End, Buckinghamshire, SL8 5XF, United Kingdom
Telephone: +44 (0)1628 556000 **Fax:** +44 (0)1628 556001 **Email:** mseurope@zebra.com **Web:** www.zebra.com

Other EMEA Locations
Europe: France, Germany, Italy, the Netherlands, Poland, Russia, Spain, Sweden, Turkey
Middle East & Africa: Dubai, South Africa

*Specifications subject to change without notice.

©2013 ZIH Corp. Zebra, representation of Zebra Head, Power Smart Print Technology, QL, QL Plus, ZebraCare, ZebraDesigner, ZebraNet, ZPL, and all product names and numbers are Zebra trademarks, and may be registered trademarks of ZIH Corp in certain jurisdictions. All rights reserved. Unicode is a trademark of Unicode, Inc. Windows is either a registered trademark or trademark of Microsoft Corporation in the United States and/or other countries. Bluetooth is a registered trademark of Bluetooth SIG, Inc. Wavelink Avalanche is a registered trademark of Wavelink Corporation. GS1 DataBar is a trademark of GS1 US, Inc. All other trademarks are the property of their respective owners. AirWatch is a registered trademark of AirWatch, LLC. Linux is a trademark of Linus Torvalds. Android is a trademark of Google Inc. Apple is a trademark of Apple Inc.

Please recycle after use 12533L_Rev 7. (04/14)