Zebra® QLn420™ Mobile Printer

ZEBRA TECHNOLOGIES

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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 to the 'nth' power.

The QLn420's over-molding and tempered-glass display – coupled with its seamless, one-piece design – make it more durable than ever before. The QLn printer can boost your operation's productivity through a 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. Your IT department will find the QLn printer easier to integrate into existing environments with such features as Zebra Global Printing, improved network performance – including 802.11n wireless LAN capability for more robust and reliable connectivity and throughput – also make intergration easier.

With Zebra's Link-OS environment – an innovative operating system combining a powerful Multiplatform Software Development Kit (SDK) and software applications – the QLn family of printers is 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

Manufacturing

- Labels for shipping and receiving
- Pick-pack-apply (inventory control, work-in-process, parts tracking)
- Asset management
- Shelf/bin/box/pallet (pick tickets)

Transportation & Logistics

- Labels for shipping, receiving, cross-docking
- Pick-pack-apply
- Shipping dock (asset/fleet management, pick tickets, parcel/logistics receipts)

Retail

- Distribution centres (as for Transport & Logistics)
- In-store shelf labels, markdowns

Link-OS® Made for iPod iPhone iPad Windows 8 Compatible Wi Fi CERTIFIED CISCO

EASIER AND MORE EFFICIENT TO USE





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

Easier to use

The QLn420 was 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 associates from being stuck printerless 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's.
- 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.



Easy-to-read display with larger, higher-resolution screen



Intuitive peeler operation

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 set up

- 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. 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

Charging and Ethernet cradle
The QLn420 charging and Ethernet cradle charges the battery – a neat and orderly solution to keep batteries in the printer.

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 that each printer is operating optimally and ready for use. The Ethernet cradle can communicate over 10Mbps or 100Mbps networks using auto-sense.

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

Remote printer management over your Ethernet allows:

- Battery management for monitoring battery health. Knowing each battery's lifespan stage simplifies central management of your spare-battery pool
- Firmware management for updating printer firmware, eliminating the need for IT staff to travel to the local user site, or for the printer to be sent back to a central location for updating
- Print management for updating templates, fonts and graphics in order to print new label formats
- Device management for updating startup (e.g. config.sys), WML (front panel), or HTML (browser) files to enhance or change configuration and status collection
- Network management for updating encryption keys or certificate files to maintain the highest level of security
- Problem resolution: troubleshooting local printer issues that may otherwise require the printer to be sent in for repair
- Ability to manage Bluetooth printers, which traditionally have been off-network



QLn420 charging and Ethernet cradle

What comes with the cradle?

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 wall outlet to charge the printer's smart battery while 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 leverages the battery's smart design to indicate 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 cord.

Forklift mounts

RAM forklift mount
Plate and RAM mount arm (pictured) permits compact and fixed mounting to a forklift.



Heavy-duty forklift mount
A heavy-duty forklift mount that has been tested to high levels of shock and vibration. Also includes a bin to hold a large amount of fanfold media to reduce the frequency of reloading media.

Vehicle cradle

By allowing users to place a cradle in their forklift or truck, the QLn420 vehicle cradle and optional mount provide convenient storage and charging for the QLn420 printer. The cradle facilitates easy detachment of the printer for truly mobile applications. Forklift operators can now print product identification, bin and shipping labels at the point of application to provide quicker turnaround. Printed barcode labels can be applied as deliveries are received to record product arrival and aid tracking applications.

Battery Eliminator

The Battery Eliminator is a powerful accessory designed for use in Manufacturing and Warehouse/Distribution Centre applications in which the QLn420 printer is mounted on a forklift or similar vehicle. It has a DC transfer pack that plugs into the battery compartment of the printer, replacing the battery and enabling the printer to draw power from the forklift power source.

End users should use the QLn420 Battery Eliminator accessory for fixed forklift mount applications where the printer battery is not needed. The Battery Eliminator accepts a voltage range of 12 VDC to 48 VDC to meet all the major forklift battery voltages.

Quad battery charger



The quad battery charger is designed to simultaneously charge up to four QLn smart batteries (removed from the printer) in about three hours. Lights on the charger indicate when individual batteries are 80% charged and when fully charged. Note the quad battery charger does not indicate battery health (as provided with the smart charger). Comes with the charging unit, a power supply and power cord.

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. Case provides openings for changing the media and batteries and all connectors are accessible. Includes shoulder strap.

Hard case
Increases the printer's drop specification and made to protect the printer in extra-harsh environments such as constant abrasion.

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 Depot service agreement. A cost-effective means of planning and budgeting for 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

QLn420
For information about other printers in the QLn family, please visit our website.

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
- 5.0Ahr 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 dispensing
- Belt clip for unobtrusive and convenient printing
- Centre-loading media locking for variable roll widths
- Clamshell design for easy media loading
- Management: Mirror, SNMP, Web server (with customised 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 1829mm/6' to concrete
- IP43 dust- and water-resistance rating (IP54 with soft case)
- Label odometer
- Real-time clock
- Print Touch via NFC

Printer Specifications

Resolution

8 dots per mm/203dpi

Memory

128MB RAM; 256MB flash (standard)

Print width

104mm/4.1"

Print length

Min. 12.7mm/0.5"
Max. 813mm/32"

Print speed

Up to 102mm/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, EN55022 Class B, EN60950, EN55024 and VCCI Class B
- Susceptibility: EN55024, EN61000-4-2, EN61000-4-3, EN61000-4-4, and EN61000-4-5
- Safety: CE, UL, TÜV, CSA

Media Characteristics

Media width

QLn420: 51mm (2.0")/ 112mm (4.4")

Media length

QLn420: 12.7mm/0.5" to 813mm/32" or continuous

Maximum media roll size

QLn420: 66mm/2.6" O.D. on a 19mm/0.75" or 34.9mm/1.375" I.D. core

Media thickness

QLn420: 0.0813mm to 0.1905mm (3.2 mil to 7.5 mil)

Media types

Die-cut, roll-fed, fan-fold, receipt, linerless

Physical Characteristics

Width:	165mm (6.5")
Height:	187mm (7.35") with beltclip
Depth:	82.5mm (3.25")
Weight:	1.1kg (2.45lb) with battery

Link-OS Solutions

Software 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 12–48 pt.
- 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 barcode: Codabar (NW-7), Code 39, Code 93, Code 128, EAN-8, EAN-13, 2 and 5 digit add-on, Interleaved 2-of-5, UCC/EAN-128, UPC-A, UPC-E, 2 and 5 digit add-on
- Two-Dimensional: Aztec Code, Data Matrix, GS1 DataBar™ (RSS) family, MaxiCode, MicroPDF417, PDF417, QR Code, TLC39

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
  - DC adapters for Forklift and road vehicles
  - Charging and Ethernet cradle
  - Vehicle cradle (DC power)
- 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
- AC adapter
- SC2 smart battery single charger
- Quad battery charger
- QLn4-EC charging and Ethernet cradle
- QLn4-VC vehicle cradle for use with a QLn420 printer on a forklift for easy removal. Compatible with RAM arm (not included)
- QLn420 RAM mount for fixed mounting of QLn420 to a forklift. Includes plate and RAM arm
- Heavy-duty forklift mount. Includes bin for fanfold media
- Mounting plate kits to enable old QL RAM Mount and Heavy-duty Forklift mounts to be adapted for use with QLn420
- Shoulder strap
- Hand strap
- Soft case (IP54 rating when used)
- Serial and USB cables with strain relief
- Forklift battery eliminator

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*Specifications subject to change without notice.

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