QLn420 Mobile Printer

Zebra's popular QL™ family of direct thermal mobile label and receipt 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™ printers extend 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. And, your IT department will find the QLn printer 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 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.

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.

For more information about the QLn420 Mobile Printer, visit www.zebra.com/qln420 or access our global contact directory at www.zebra.com/contact

Efficiently print and optimize your labels and receipts with ZebraDesigner™ Pro for label and receipt design and ZebraDesigner drivers for Windows. Print multiple languages on a single label or receipt 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 www.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 PowerPrecision+ 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.

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 QLn420 was designed to optimize 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, battery charge and health status.

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.

Mobile A to Z

From Accessories, to Supplies, to Zebra OneCare Service

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 each printer is operating optimally and ready for use. The Ethernet cradle can communicate over 10 Mbps or 100 Mbps 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 and 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.

What comes with the cradle?
Unit with AC Adapter: Cradle, AC adapter, power cord and document CD including cradle user manual and installation guide.

Cradle Unit: Cradle and document CD including cradle user manual and installation guide (AC adapter can be purchased separately).

AC Adapter

Connect the AC adapter to your QLn and wall outlet to charge the printer's PowerPrecision+ 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.

Charger

The charger will fully charge a single standalone QLn PowerPrecision+ battery in less than four hours. In addition to indicating battery-charge status, it leverages the battery's PowerPrecision 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 charger comes with charging base and power cord. Shown with printer for reference purposes; printer is not included.

Removable Forklift Cradle

By allowing users to place a cradle in their forklift or truck, the QLn420 forklift cradle and mount provide convenient storage and charging for the QLn420 printer while on the move. 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.

Forklift Mounts

RAM Forklift Mount: Plate and RAM mount arm permits compact and fixed mounting to a forklift.

Heavy-Duty Forklift Mount: The heavy duty forklift mount 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.

Quad Battery Charger

The quad battery charger is designed to simultaneously charge up to four QLn PowerPrecision+ batteries (removed from the printer) in about three hours. Lights on the charger indicate when individual batteries are 80 percent charged and when fully charged. Note the quad battery charger does not indicate battery health (as provided with the 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: 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 the exact same materials every time so you always get crisp, readable and scannable output without needing to adjust the printer darkness setting between rolls.

Zebra OneCare Service

Increase printer uptime and reduce lost productivity and unbudgeted repair costs by selecting a Zebra OneCare service 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.

QLn420 Specifications

PRINTER NAME

QLn420

STANDARD FEATURES

- Apple iOS, Android, Windows Mobile and BlackBerry connectivity
- Direct thermal printing of barcodes, text and graphics
- CPCL, EPL™ and ZPL® programming languages
- 256 MB Flash memory supports downloadable programs, receipt formats, fonts and graphics (64 MB available for user storage)
- PowerPrecision+ 4900 mAh Li-Ion rechargeable battery
- Built-in battery charger
- Serial and USB ports (both support strain relief)
- Belt clip for unobtrusive and convenient printing
- Black mark and gap media sensing using fixed center-position sensors
- Easy-to-use peel and present mode
- Label present sensor for issuing labels one at a time
- Tear bar for easy dispensing
- Center-loading media locking for variable roll widths
- "Clamshell" design for easy media loading
- Management: Mirror, SNMP, Web server, Profile Manager, AirWatch and Wavelink Avalanche®
- Large, easy-to-read LCD control panel (240 x 128 pixels)
- LCD can be customized using WML (text and icons)
- Printer alerts on the display, help menus
- Tolerance of multiple drops from 6' / 1.8 m 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 NFC-enabled devices
- Label odometer
- NTP (Network Time Protocol) support via WiFi or Ethernet

PRINTER SPECIFICATIONS

Resolution	203 dpi/8 dots per mm
Memory	128 MB RAM, 256 MB Flash (standard)
Maximum Print Width	4.1"/104 mm
Maximum Print Speed	Up to 4"/102 mm per second
Media Sensors	Black mark and gap media sensing using fixed center-position sensors; label present sensor for issuing labels one at a time
Print Length	Minimum: 0.5"/12.7 mm, Maximum: 32"/813 mm
Power	PowerPrecision+ 4900 mAh Li-Ion rechargeable battery

MEDIA CHARACTERISTICS

Maximum Label and Liner Length	0.5"/12.7 mm to 32"/813 mm or continuous
Maximum Media Width	2.0"/51 mm to 4.4"/112 mm
Maximum Media Roll Size	2.6"/66 mm O.D. on a 0.75"/19 mm or 1.375"/34.9 mm I.D. core

MEDIA CHARACTERISTICS (continued)

Thickness	3.2 mil to 7.5 mil
Media Types	Die-cut labels and tags, linerless labels, receipt paper, black bar and gap sensing

OPERATING CHARACTERISTICS

Environmental	Operating Temperature: -4°F to 122°F/-20°C to 50°C Operating Humidity: 10% to 90% non-condensing Storage Temperature: -13°F to 158°F/-25°C to 65° C 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, TUV, CSA

PHYSICAL CHARACTERISTICS

Length	3.25"/82.5 mm
Width	6.5"/165 mm
Height	7.35"/187 mm
Weight	2.45 lbs/1.1 kg with battery

COMMUNICATION AND INTERFACE CAPABILITIES

ZebraNet 802.11a/b/g/n radio with support for:
- WEP, TKIP and AES encryption
- WPA and WPA2
- 802.1x (with WEP, WPA or WPA2)
  − EAP-FAST, EAP-TTLS, EAP-TLS, PEAP, LEAP
- 802.11d and 802.11i
- Simultaneous Bluetooth 3.0 dual radio
- Wi-Fi Certification
- Fast roaming using Pairwise Master Key (PMK) caching, Opportunistic Key Caching (OKC), or EAP Fast Session resumption
- Support for Ad Hoc mode

Bluetooth 3.0 radio
- Security modes 1 − 4
- "Made for iPod/iPhone/iPad" certified
- Key Bonding

10/100 Ethernet support (via charging cradle)

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

SOFTWARE TOOLS

Link-OS Solutions

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

CPCL, EPL and ZPL programming languages

ZBI 2.x™ — powerful programming language that lets printers run standalone applications, connect to peripherals, and much more

Ideal for These Applications

Manufacturing
- Raw materials
- Finished goods

Transportation and Logistics
- Receiving, put-away, reverse logistics
- Inventory management, cycle count
- Cross-docking
- Picking, staging, packing, shipping

Retail
- Inventory / price display compliance
- Click and collect
- Inventory management, cycle count
- Receiving, put-away, reverse logistics
- Picking, staging, packing, shipping

QLn420 Specifications

BARCODE SYMBOLOGIES

Barcode Ratios: 1.5:1, 2:1, 2.5:1, 3:1, 3.5:1

Linear Barcodes: Code 39, Code 93, UCC/EAN128, Code 128, Codabar (NW-7), Interleaved 2-of-5, UPC-A, UPC-E, 2 and 5 digit add-on, EAN-8, EAN-13, 2 and 5 digit add-on

2D Barcodes: PDF417, MicroPDF417, MaxiCode, QR Code, GS1/DataBar™ (RSS) family, Aztec, MSI/Plessey, FIM Postnet, Data Matrix, TLC39

FONTS AND GRAPHICS

Standard Fonts: 25 bitmapped, 1 smooth, scalable (CG Triumvirate Bold Condensed*)

Optional Fonts: downloadable bitmapped / scalable fonts

International Character Sets (optional): Chinese 16 x 16 (traditional), 16 x 16 (simplified); Japanese 16 x 16, 24 x 24; Korean Mincho

*Contains UFST® from Agfa Monotype Corporation.

OPTIONS AND ACCESSORIES

Charging Options — Inside the Printer
• AC adapter
• Single cradle: QLn-EC — single bay Ethernet and charging cradle (not compatible with extended capacity battery)
• Quad cradle: QLn-EC4 — quad bay Ethernet and charging cradle, with internal switch and stacking port (not compatible with extended capacity battery)

Charging Options — Outside the Printer
• SC2 single battery charger
• Quad battery charger

8-18VDC power supply with cigarette lighter adapter

Spare batteries

OPTIONS AND ACCESSORIES (continued)

Carrying Options
• Shoulder strap
• Hand strap
• Soft case (IP54 rating when used) — not compatible with extended capacity battery

Linerless printing (with silicone platen roller only)

ZBI 2.x

Serial and USB cables with strain relief

Forklift mount accessories
• Heavy-duty mount with fanfold tray
• Plate for RAM-arm mounting
• Cradle for easy attach / detach
• DC converters for powering and charging from forklift batteries

Forklift battery eliminator

PRODUCT WARRANTY

The QLn420 is warranted against defects in workmanship and materials for a period of 1 (one) year from the date of shipment. For the complete warranty statement, please visit: www.zebra.com/warranty.

RECOMMENDED SERVICES

The Zebra OneCare Service portfolio of Essential, Select and Premier maximizes the availability and productivity of your devices. Key features include 24/7 technical support, comprehensive coverage, advance replacement and software updates. Optional Visibility Services are available. For more information go to www.zebra.com/zebraonecare.

For optimum print quality and printer performance, use genuine Zebra supplies.

Specifications subject to change without notice.

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