



# POWERPRECISION AND BATTERY MANAGEMENT

## AN INTELLIGENT APPROACH TO BATTERY SELECTION

When it comes to the reliability of your mobile computers, scanners and printers, battery performance is more critical than most companies realize. Here's what you need to know. Without detailed information on the batteries in your devices, your workers can find themselves with a fully discharged battery, unable to work and forced to go in search of a replacement — impacting productivity and customer service quality. Now, Zebra addresses these issues with PowerPrecision Batteries, PowerPrecision+ Batteries and the on-device, Battery Management application. These intelligent batteries have integrated technology that collects detailed real-time battery metrics needed to maximize useful battery life and ensure every battery in the battery pool is healthy. Zebra's on-device Battery Management application completes the package, providing an on-device window into the state of the device battery. The application will automatically alert users when a battery needs to be replaced or retired. PowerPrecision and Battery Management — the easy way to provide every worker with full-shift battery power.

### Better Battery Intelligence

The PowerPrecision battery family provides precise information about the percentage of battery power remaining in a specific cycle. Our technology inside the batteries tracks and maintains the metrics that provide real-time visibility into meaningful battery statistics, such as its health to determine when it should be replaced.

PowerPrecision+ Batteries deliver the ultimate in battery data. Electronically query battery asset information, plus a wealth of battery health-related information, including impedance tracking and battery status at the time of query. Use our State-of-Health meter to perform real-time modeling of the electrical characteristics of the battery pack to compare current performance with that of a new battery.

### Battery Management

The on-device Battery Management application revolutionizes battery management. Now, users and backroom managers can see the metrics of all PowerPrecision and PowerPrecision+ batteries in all mobile devices in a single centralized location, using a mobile device management (MDM) solution. With visibility into the real-time state of health and state of charge, you can automatically display to users a customized message when the batteries need to be changed, complete with specific information, such as where to take the device or who to contact to get a replacement. The result? Every user can start every shift with a healthy, fully-charged battery that will last a full shift — no more time spent hunting down charged batteries, time that could be much better spent on tasks. And aging batteries are easily identified and removed from the battery pool, ensuring

that every battery in service is healthy and capable of holding a full charge, protecting user productivity.

Integrate the battery health data into your existing management software or create your own. It's simple with our software development kit that provides the source code and support.

### Better Battery Design

While batteries may look alike, quality and performance can vary dramatically. Zebra Solutions' PowerPrecision Batteries are designed and manufactured to meet the rigorous standards required to deliver superior performance and reliability. We start with premium high-grade cells that have a higher capacity, providing longer life cycles than the typical competitive battery. The strong robust housing increases durability, while a design that helps prevent overcharging and electrical shock improves safety.

**POWERPRECISION BATTERIES – THE PRECISE INFORMATION YOU NEED TO MAXIMIZE YOUR MOBILE DEVICES' POWER**

For more information about PowerPrecision Batteries, visit [www.zebra.com/batteries](http://www.zebra.com/batteries) or access our global contact directory at [www.zebra.com/contact](http://www.zebra.com/contact).

**FACT SHEET**

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BASELINE FEATURES	POWER PRECISION BATTERY	POWERPRECISION+ BATTERY
<b>1. BATTERY ASSET INFORMATION</b>		
1.1 Manufacture Date: date when the battery was manufactured.	SUPPORTED	SUPPORTED
1.2 Serial Number: the Zebra battery's unique serial number.	SUPPORTED	SUPPORTED
1.3 Model Number: the Zebra battery part number.	SUPPORTED	SUPPORTED
1.4 Designed Capacity: the rated battery capacity available at 23°C from a fully charged, new battery.	SUPPORTED	SUPPORTED
<b>2. CHARGE CYCLES CONSUMED</b>		
2.1 Equivalent number of full charge cycles consumed; calculated by the sum of ALL the current to ever go into battery for charging divided by the new battery rated capacity.	SUPPORTED	SUPPORTED
<b>3. BATTERY STATUS</b>		
3.1 State of Charge: remaining battery capacity expressed as a percentage of Full Charge Capacity, with a range of 0% to 100%.	SUPPORTED	SUPPORTED
3.2 Full Charge Capacity: predicted battery capacity when fully charged.	NA	SUPPORTED
3.3 Remaining Capacity: the remaining battery capacity available based on present temperature and recent discharge history.	NA	SUPPORTED
3.4 Charging Status: indicates if the battery is being charged at the time of query.	NA	SUPPORTED
3.5 Battery Voltage: battery voltage as measured at the time of query.	NA	SUPPORTED
3.6 Battery Current: average current into or out of the battery over the last second, measured in mAh.	NA	SUPPORTED
<b>4. STATE OF HEALTH METER</b>		
4.1 The SOH Meter performs real-time modeling of the electrical characteristics of the battery pack to determine its performance versus that of a new battery.	NA	SUPPORTED*
<b>5. OPTIONAL FEATURES</b>		
5.1 Faster Time to Charge: charging enhancements for Zebra batteries	PRODUCT SPECIFIC	PRODUCT SPECIFIC
5.2 Battery Temperature: present, highest or lowest temperature of the battery experienced or as measured at time of query.	PRODUCT SPECIFIC	PRODUCT SPECIFIC
5.3 Remaining Time to Complete Charging: estimated time at the time of the query to finish charging the battery.	PRODUCT SPECIFIC	PRODUCT SPECIFIC
5.4 Remaining Time to Empty Battery: estimated time left until shutdown based on recent discharge activity and conditions.	PRODUCT SPECIFIC	PRODUCT SPECIFIC
5.5 Time Since First Use: Elapsed time since battery was activated in Zebra charger/cradle.	PRODUCT SPECIFIC	PRODUCT SPECIFIC

\*Not supported by Mobile Printer batteries



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