



Mobile Printers & Smartphones:

*How to Improve Field Service Profits
with Converged Devices*

WHITE PAPER

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EXECUTIVE SUMMARY

Thanks to improvements in wide area wireless networks and the emergence of smartphones and other converged mobile devices, field service organizations can find more mobile solution options and lower costs than ever before.

Smartphones offer the combined functionality of cell phones and handheld computers or PDAs, significantly reducing hardware, integration, training, and ongoing service and maintenance costs.

Convergence also appears in mobile printing. In addition to producing high-quality documentation and receipts in the field, new multi-function mobile printers can serve as a platform for processing payments on site and tracking assets or inventory usage in real time. These printers offer built-in magnetic-stripe or smart-card readers and an ample power source for operating other peripherals, such as signature capture pads and barcode or RFID scanners.

This white paper:

- 1) Describes the trends that have led to more affordable mobile field service solutions.
- 2) Examines how mobile field service solutions can provide significant and fast returns on investment (ROI) through improved productivity, reduced costs, increased service revenues, and improved customer satisfaction.
- 3) Provides tips for selecting mobile printers and other peripheral devices for deployment with smartphones.

INTRODUCTION

In coming years, more field service organizations than ever will deploy mobile business solutions. The leaders in this movement will be small and medium-sized businesses, even though many once considered mobile solutions beyond their limited capital budgets and IT resources.

Why the change?

First, the gains made by early adopters of mobile field service technology have become hard to ignore. Many have become market leaders in their respective industries, building a competitive edge upon their improved ability to satisfy customers while increasing productivity and reducing costs.

For example, companies with mobile field service experience reported average increases of 27% in worker productivity, 13% in service revenues, 19% in customer retention, and 17% in overall profits, according to a 2005 study by AberdeenGroup, a Boston-based independent technology and market research firm.

The benefits most frequently cited by these organizations were:

- Increased number of daily work orders completed by field technicians.
- Increased overall productivity.
- Increased productivity of customers' assets.
- Increased daily "wrench time"; technicians were able to spend more time working at customer sites.
- Reduced "windshield time," or less travel time per work order.

Second, increased competition and recent advancements in wireless data technology have driven down the costs of mobile solutions while pushing hardware, software, and wireless service providers to deliver more value for those lower costs. The result: greater opportunities for more significant and faster returns on investment (ROI).

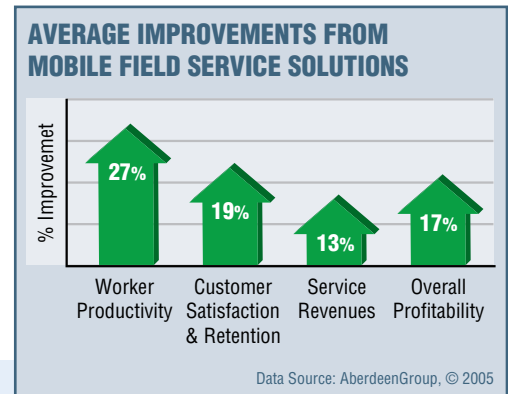
THE DRIVE TOWARD AFFORDABLE MOBILITY

Several key trends in wireless technology have come together to bring more cost-effective mobile solutions to a wider range of field service organizations.

- **Emergence of smartphones and other multi-function mobile devices.**

In the past, field service technicians may have carried numerous mobile devices in addition to their tools, parts, and supplies. A cell phone to

Mobile solutions increase productivity, reduce costs, and improve customer satisfaction, giving field service organizations that deploy the technology a competitive advantage.



Competition and improved technology have resulted in greater value for each dollar invested in a mobile solution.

Two Devices Multiple Functions



Smart phones come in a variety of form factors, but all offer the combined voice and data capabilities of a cell phone and PDA or handheld computer.

- Phone/Two-Way Radio
- E-mail/Messaging
- Real-Time Data Access
- Transaction Processing
- Document Printing
- Mobile Enterprise Applications
- Geographic & Location-Based Systems (GPS, GIS, LBS)
- Automatic Identification & Data Collection (AIDC)

Depending upon application, some functions are best performed by a multi-function **mobile printer**, which serves as a platform for card readers, signature capture pads, and RFID or barcode scanners.



communicate with the office and field co-workers. A pager or two-way radio to receive job alerts from dispatchers. A GPS-enabled location tracker to help with routing. A barcode scanner to track inventories. A signature capture pad to record customer sign-offs. A card reader to process credit card payments in the field. A mobile printer to provide customer receipts.

Now, nearly all of those functions can be accomplished on two mobile devices: a smartphone (data-enabled cell phone or voice-enabled handheld computer) with GPS capabilities and a multi-function mobile printer. (See "The FieldPro from PrintekMobile" later in this white paper.)

Not only are these multi-function mobile devices easier to carry and use, they eliminate the integration, maintenance, and service costs associated with separate single-function devices. And their initial cost is lower. A smartphone capable of running field workforce and asset management applications, as well as location based services (LBS), can be purchased for less than \$200—or, in some cases, free—with the purchase of a wireless voice-data access plan.

Wireless carriers have begun to offer lower cost voice-data packages that cater to field service organizations.

- **Lower data delivery costs over wide area wireless networks.**

Not so long ago, transmitting data across a wide area cellular network cost as much as \$0.10 per kilobyte, which could quickly add \$100 or more to the monthly phone bill. Now, most carriers offer unlimited data plans for less than \$50 per user.

- **Improved wireless network access and services**

Increasing competition has driven wireless carriers, such as Sprint Nextel, Verizon, Cingular, and T-Mobile, to expand network coverage areas, improve reliability and transmission speeds, and offer more products and services that cater to field service organizations. Most wireless carriers are working with device and application providers to offer hardware/software bundles that provide real-time data connectivity, text messaging, push-to-talk, GPS, and data and resource management services in addition to traditional voice plans.

Monthly pricing and software/service bundles make mobile solutions affordable, even for small field service organizations with limited IT resources.

- **Improved mobile application pricing, integration, and support**

Providers of mobile field service applications have begun to offer software/service bundles and monthly pricing plans that make software, integration, IT infrastructure, and ongoing support more affordable for a wider range of field service organizations.

For example, Minneapolis-based Gearworks offers its popular location-based field service automation software as a hosted wireless solution for a monthly fee that appears on their customers' cell phone bill. The monthly fee pays for the software license, integration with the customers' chosen mobile devices and back-office tools, hosting of the application and data on Gearworks' secure servers, and ongoing support and upgrades, said Rob Juncker, Gearworks co-founder and CTO.

"We enable the mom and pop shops to play with the big boys," Juncker said, noting that customers also can do their dispatching and payroll through Gearworks.

"Once they've identified the right phones or PDAs, there's really not much to it. We have the software and servers to host it all. We already work with QuickBooks®, Master Builder, Peachtree Accounting™, and other similar back-office tools used by 70% of small and medium-sized businesses," Juncker said. "If you are one of the 70% running a package that we have in place, we can have the whole solution up and running in 24 hours."

THE ROI FOR MOBILE FIELD SERVICE SOLUTIONS

Field service operations are prime candidates for improvement through mobile solutions. Their typical business processes involve capturing data and managing logistics, both processes that offer high probability for a quick and significant return on investment when handled digitally.

"I know it seems counter-intuitive when someone talks to you about spending money to save money, but you just have to look at the numbers" said Carl Tebell, Sprint Nextel's product manager for Bluetooth® peripherals.

With a GPS-enabled smartphone, a barcode scanner, and a mobile printer with built-in magnetic card reader, a field service technician can eliminate much of the costly downtime and errors that crop up during a typical day.

GPS allows dispatchers working with LBS applications, such as Gearworks' etrace®, to tell exactly where field technicians are, how long they were on the job, and how close they are to the day's remaining jobs. The application makes job assignments, routing, and job tracking easier and faster. Field technicians use their smartphones to receive daily work orders; look up customer and asset history; report job status and completion; and obtain directions to the next job assignment automatically, all without calling the office and waiting on hold for an available dispatcher.

A multi-function mobile printer allows field technicians to scan a credit card, obtain automated approval, and print an accurate, legible receipt, again without calling in numbers and waiting on hold. With a barcode scanner, field technicians also can scan parts or supplies and automati-

Field technicians can eliminate downtime and errors with real-time access to customer and job information, location-based services, and automated payment processing and inventory tracking.

cally report what was used or delivered so that inventories are kept at optimum levels.

“Let’s say that just doing the write-up stuff at the end of the job takes 15 minutes, and the technician completes eight jobs per day,” Tebell said. “By the eighth job, that’s two hours that he has saved each day. If the field technician makes \$20 to \$40 an hour, it just doesn’t take that many days to make up the costs. In one month, you’ve already paid for the printer.”

The current crop of converged mobile devices and LBS applications offer other benefits that are often overlooked by field service organizations investigating a mobile solution, said Juncker of Gearworks. Those benefits include reduced travel and overtime costs and fewer job call-backs.

“Customers tend to call up and say the field technician wasn’t there,” Juncker said. “Because of the tracking aspect, you can say ‘I was there Monday at 8:35 a.m.’ or, if you’re a dispatcher, you can say ‘The technician is out there right now.’ The ability to have a professional, printed invoice that provides that job-logging aspect of the process also reduces the number of times you are called back to a job.”

Other field service benefits from converged mobile devices and LBS applications include reduced travel and overtime costs and fewer job call-backs.

Best processes to examine for a fast ROI

Mobile business solutions deliver a positive return on investment in a variety of ways. Some are easy to quantify, such as lower hardware and maintenance costs, reduced overhead costs, less downtime, less time to complete a job, fewer errors in job documentation and customer billings. Others are harder to quantify because they result from a variety of factors, but they still positively affect the bottom line. For example, improved customer satisfaction reduces the cost of sales; satisfied customers are more likely to remain customers and recommend your services to others. Improved job satisfaction among employees and field workers reduces recruitment and training costs.

When evaluating the type of mobile solution to deploy, field service organizations should focus on business processes that present the highest probability for producing a fast, significant ROI through both quantitative and qualitative improvements. These include:

- 1) Reducing the amount of data captured and shared manually.
- 2) Reducing the amount of time between jobs.
- 3) Reducing the time and costs associated with payment.

Reducing manual data processes

Reducing or eliminating manual data processes is one of the surest paths to a substantial ROI. Handwritten forms are an expensive way to collect and communicate information. Not only do pre-printed forms cost money, they are slow to complete and prone to error.

Time is wasted manually recording duplicate customer and job data on multiple paper forms, such as work orders, asset and inventory reports, customer receipts, and invoices. Handwritten forms also present numer-

The error rate for entering data from paper-based forms can be as high as 15 to 20 percent.

ous opportunities for introducing error through miscommunication, illegible handwriting, incomplete information, and data entry. Meta Group analyst Jack Gold has estimated that the error rate for entering data from paper-based forms can be as high as 15% to 20%. Following up on those errors increases overhead; non-billable hours must be spent tracking down correct information or responding to job call-backs.

When Gencor, a farmer-directed cooperative in Ontario, Canada, began looking for ways to streamline operations, it discovered that its dispatchers and field technicians spent as much as three to four hours each day on redundant paperwork.

Gencor used smartphones and mobile printers to eliminate 17,000 hours of redundant manual data entry and handwritten documentation per year.

On average, Gencor dispatchers received about 1,000 calls a day from member dairy farmers and cattle breeders requesting delivery of the cooperative's farm products or artificial insemination services. Field service technicians would call dispatchers in the morning to receive their handwritten work orders—a process that could take as long as two hours. Then, the field technicians would visit the farms, complete the work, and provide farmers with handwritten receipts and invoices that duplicated information contained on the work orders. At the end of their shifts, field technicians used a web-based system to key the day's work and breeding information into Gencor's database.

Errors introduced via handwritten forms and duplicate data entry required additional time to correct. Handwritten breeding receipts were not always legible, which was a problem for cattle breeders who used the receipts to register calves. Gencor technicians artificially inseminate about 223,000 cows per year, therefore even a modest 5% error rate could require verifying pedigree information for as many as 11,150 calves annually.

Gencor deployed a custom field force automation solution that included smartphones and Bluetooth-enabled MtP300LP mobile direct thermal printers from PrintekMobile. The solution automated dispatching, order taking, payment, and the recording of breeding service data. Now, dispatchers simply click a button to dispatch work orders directly to the field technicians' smartphones. The phones transmit the data that technicians need to automatically complete and print receipts, as well as update job and breeding information in Gencor's database.

The solution saved more than 17,000 hours per year in duplicate manual documentation and data entry. By eliminating three levels of handwritten forms per job, Gencor also significantly reduced 3,000 opportunities for error each day. The printed receipts eliminated legibility errors and allowed Gencor to supply more complete information to customers and the national breed associations that register cattle. The solution also improved customer satisfaction and future business. Gencor now has more accurate data for predicting breeding patterns, which is used to recognize and qualify bulls capable of improving the herds of the cooperative's members.

For more details about Gencor's mobile field service solution, visit www.printekmobile.com and download the Gencor case study.

Reducing time between jobs

Field service revenue and profits are directly tied to the number of jobs that can be completed each day, whether that job is inspecting a construction site, fixing a broken furnace, or maintaining customer assets covered by service level agreements.

'If your drain is overflowing you're not interested in waiting until tomorrow when we can more efficiently route the job.'

- Stephen Poppe, Roto Rooter

To some field service organizations, completing more jobs per day means hiring and training more field workers. To Stephen Poppe, it means finding ways that technology can reduce the amount of time between jobs. Poppe is the chief information officer for Roto Rooter, one of the largest plumbing and drain cleaning service providers in North America, with 110 locations and more than 1,500 field technicians and plumbers across the United States.

"If your drain is overflowing, you're not interested in waiting until tomorrow when we can more efficiently route the job. Customers don't wait until tomorrow for today's jobs," Poppe said. "The problem becomes the time in between the service jobs. How do we get someone with the correct skills to your house in the least amount of time, and how do we get them to the next job in the least amount of time?"

The answer for Roto Rooter lay in a series of mobile solutions that has evolved over the years from two-way radios, to pagers and cell phones with push-to-talk capabilities, to rugged GPS-enabled smartphones, which provide access to the company's CRM data and etrace, the LBS field service application developed by Gearworks.

Through etrace, Roto Rooter dispatchers track the location of field technicians on digital fleet maps and assign jobs to the nearest available technician with the correct job skills. When the technician receives a new job on his phone, he can obtain driving directions with the touch of a key and view customer details, such as name, address, and the nature and exact location of the problem. At the end of the job, the technician transmits the job closure ticket and alerts dispatchers that he is ready for a new job.

At each stage of the mobile evolution, Roto Rooter realized benefits that justified the costs, Poppe said. The smartphones reduced hardware and maintenance costs, eliminating the need for pagers. The smartphones and LBS application together provided more efficient dispatching. The company was able to consolidate call-center activities, redirecting employees to jobs that generate additional revenue. Field technicians and plumbers also no longer have to call in for their next job assignment, sometimes waiting 15 to 20 minutes on hold for a dispatcher.

"You wouldn't believe how much that effects the field techs. When you tell them that you don't have to call into a dispatcher anymore, their eyes get big and round," Poppe said. "All of our techs work on commission, so they make more money when they get more jobs. And we want to give our techs the opportunity to make more money and make the job more satisfactory. Then more people will want to work for Roto Rooter."

To further reduce time between jobs, Roto Rooter has embarked on the next phase of its mobile evolution: adding mobile printers with built-in card readers so that field technicians can process credit card payments on-site and leave more accurate, professional-looking receipts.

"Filling out an 8 1/2" x 11" sheet of paper takes time," Poppe said. "But with a handheld and the printer, they just have to punch in the job codes and we can produce a piece of paper that is a professional image of what the invoice really is."

In the first week of mobile printer deployment, Roto Rooter saw a 20% increase in productivity.

In the first week of mobile printer deployment, Roto Rooter saw a 20% increase in productivity.

“It really shortens the time from completion to finish out,” Poppe said, adding that field technicians no longer have to wait on hold for someone to verify a called-in credit card number. “They saved about 10 to 20 minutes per job, which meant we could get another job in each day.”

Reducing time and costs associated with payment

By adding multi-function mobile printers to a field service solution, companies can:

Multi-function mobile printers can improve cash flow and reduce transaction costs by enabling field technicians to process payments at the time of service.

- 1) Improve cash flow by shortening the time between job completion and payment. Mobile printers with built-in card readers allow service providers to accept payment in the field. Mobile printers also produce detailed receipts and invoices that more accurately reflect the work that was performed, reducing the number of billing disputes that can lengthen time to payment.
- 2) Reduce billing costs by eliminating some of the transaction fees involved in processing credit card payments. Banks typically reduce transaction fees by ½ to ¾ percent when a credit card is swiped through a card reader. Fees are reduced even more if the card owner’s signature is obtained at the time of the transaction, which can be done with optional signature capture devices on the printer or smartphone.

The addition of multi-function mobile printers should allow Roto Rooter to reduce credit card transaction fees by as much as \$500,000 per year. Being able to process credit cards with greater security also should appeal to customers, Poppe said.

“We’re a COD business, with most of it in checks, but an increasing amount in credit orders,” Poppe said. “Privacy issues have become a real concern with credit cards. Customers don’t like their card numbers being called into some person in a dispatch office, and they want to keep the card in their sight. If you’re living in Manhattan on the 50th floor of a penthouse, and I tell you I’m just going to take your credit card down to the truck, you’re not going to let me out the door.”

DEPLOYING MOBILE PRINTERS WITH SMARTPHONES

In many ways, convergence greatly simplifies mobile deployments for field service organizations. Accomplishing multiple functions with one or two mobile devices reduces integration, maintenance, and training costs, and it makes it easier for field technicians to do their jobs.

“From the beginning, I didn’t want our field techs looking like Robocop walking into the customer’s place with all this equipment dangling off of them,” Roto Rooter’s Poppe said. “You don’t want to have to carry all of this stuff along with the toolbox and parts.”

But convergence also means that organizations should carefully examine work processes to determine what functions should be performed by which multi-function mobile device. For example, smartphones with built-in card readers or barcode scanners are available. But there are several reasons why a field service organization may want those functions available on a separate device or as part of a mobile printer.

“With a barcode scanner drawing power from the handset, you drain

Depending on form factor and application, some functions are better performed by a mobile printer instead of a smartphone. (See “The FieldPro Mobile Printer from PrintekMobile” on the next page.)

Consider device life and durability, power demands, and typical workflow when determining which functions should be performed through the smartphone or through the mobile printer.

the battery that much faster. That goes for any peripheral running off the handset power,” said Tebell of Sprint Nextel. “And we know that many people replace their phones every 24 months on average, as new technology becomes available. If the peripherals are connector-based with the phones, you’re going to be stuck with the same handset for a lot longer than that.”

Rugged mobile printers have a longer lifespan, typically five to six years. And their ample battery power can be used to operate additional peripherals, such as magnetic-stripe (MCR) or smart card (SCR) readers, barcode or RFID scanners, and signature capture pads.

Device durability and the timing of the function in the job process also should be considered, Poppe said. The smartphones go everywhere with the Roto Rooter field technicians, hanging on their hips as they dig holes, crawl around and under houses, and work on backed up drains and clogged or broken pipes.

“If you have to carry the phone with an added card swipe, it’s heavier and it’s exposed to dirt and water—in many cases not very pleasant water,” Poppe said. “Putting the swipe on the printer makes more sense. You don’t need the swipe until the end of the job. By putting the swipe on the printer, you’re able to use it at the time you print an invoice.”

Selecting the best mobile printer for the job

Not all mobile printers can live up to the demands of field service. For different reasons, both Gencor and Roto Rooter found it necessary to abandon the printers they initially chose for their mobile solutions.

The FieldPro from PrintekMobile

MULTI-FUNCTION MOBILE PRINTER FOR FIELD SERVICE



PrintekMobile designed the FieldPro direct thermal printer with field service workers in mind. Not only is the FieldPro 10% smaller and 40% lighter than comparable rugged mobile receipt printers, it serves as a central platform for powering and integrating other devices with the field application.

Field technicians can process credit card payments with the FieldPro’s optional built-in card reader and signature capture pad. They can report real-time inventory usage with the optional barcode scanner. And they can perform these functions without draining the smartphone battery or carrying spare batteries for separate Bluetooth peripherals that perform the same functions. The optional devices use the FieldPro’s ample battery power for operation and transmit data to the smartphone via the FieldPro’s communication link.

The FieldPro uses the same reliable printing architecture and superior power management found in PrintekMobile’s MtP series printers. Like the MtP series, the FieldPro can emulate all popular mobile printer languages for fast, easy integration. The compact, flexible FieldPro is optimized for printing variable text and complex graphics on 3-inch- or 4-inch-wide receipt media.

Mobile printers should be easy to use, easy to integrate, and reliable—both inside and outside the case.

Gencor switched to PrintekMobile's MtP300LP rugged direct thermal printer after struggling with slow data transfer and print speeds on the initial mobile printer it deployed. The MtP300LP printers offered Bluetooth connectivity and a more robust processing architecture, which greatly increased print speed and reduced the amount of data transferred between the phone and printer. The 3-inch receipt and label printer also delivered more than two full shifts of battery life and offered a larger media roll capacity, which reduced maintenance downtime for Gencor field technicians, who each print about 80 receipts a day.

Roto Rooter abandoned its initial choice because the mobile printers weren't reliable, working in the field only about 80% of the time, Poppe said. Then Roto Rooter began testing their smartphone application with PrintekMobile's MtP400 rugged direct thermal printer.

"The PrintekMobile printer has been much sturdier," Poppe said.

"The ruggedness of the case wasn't as much an issue as the software inside. The other printer just didn't have enough intelligence and processor. We had problems with data corruption and unexpected errors," Poppe said. "The PrintekMobile printer is more rugged inside. It's all under the covers, but you really learn to appreciate it."

As Poppe and others attest, the new multi-function mobile printers are no longer just printers. By offering the additional functionality of reading credit cards, scanning bar codes, or capturing signatures, they have become independent computing systems that must have a robust processing architecture to be considered reliable. Because of their transactional capabilities, they also must provide a level of data security not found in most mobile printers with Bluetooth connectivity.

Gearworks, which has deployed a number of mobile printer brands with its field service applications, found PrintekMobile printers one of the easiest to integrate and secure.

"Because of the way that PrintekMobile enabled Bluetooth on their printers, we were able to write a security layer on top of our integration package that allows a field worker to print only to printers that should be associated with his phone," Juncker said. "I can tell the phone to give me the Bluetooth printer that I used before, or I can tell the phone to display all of the friendly printers within range in case that printer isn't available."

Bluetooth transmission ranges are limited to about 30 feet, which provides some level of data security. But the ability to lock out unfriendly devices and encrypt the data transmitted between smartphones and PrintekMobile printers ensures that transactional and company information remains secure.

"PrintekMobile thought about the field people, not just the field printers," Juncker said. "Their printers demonstrate an understanding of how a field technician works."

For example, Juncker said, PrintekMobile designed ways for a field worker to easily tell when the printer is on and working, whether Bluetooth is actually connected, whether the printer is receiving data, or when battery power is low. When rechargeable batteries die, field technicians typically remove the batteries and send them back to the office for

'PrintekMobile thought about the field people not just the field printers. Their printers demonstrate an understanding of how a field technician works.'

- Rob Juncker, Gearworks

replacement. A PrintekMobile printer will work without a battery when it is plugged into a wall outlet or vehicle adapter; other mobile printers won't, Juncker said.

In designing the printer architecture, PrintekMobile also thought about what data must be transmitted and what data can be stored in the printer, reducing the demand on phone memory while increasing transmission and print speed, he said.

"These smartphones are limited to the extent that a big logo stored on the phone would overwhelm its memory," Juncker explained. "With PrintekMobile printers, we can send a 3-character code from the phone to the printer instead of a 70,000-character description that tells the printer what that logo should look like."

The ability to store variable graphics, text, and forms in the printer also appeals to Poppe. Roto Rooter frequently uses coupons to promote its services. For example, a plumber who completes a drain cleaning job may leave a coupon for sewer cleaning. PrintekMobile printers offer the ability to print variable coupons or promotional messages at the end of invoices and receipts.

"The nice thing is that you can have 10 to 15 coupons in there, and print them based on the job where you are," Poppe said.

For more details about achieving the best mobile printing value and ROI, visit www.printekmobile.com and download the PrintekMobile white paper: "Five Tips for Selecting the Best Mobile Printer."

**Superior
Customer Support
+ Quality Products
= Unsurpassed
Value**

THE PRINTEKMOBILE DIFFERENCE

PrintekMobile's mission is to deliver unsurpassed value to customers and partners through quality products and superior support from first contact to last. This philosophy is rooted in Printek's more than 25 years experience designing and supplying innovative printing solutions to organizations of all sizes.

The PrintekMobile group has a proven record of delivering compatible, cost-effective, on-the-go printing solutions across a wide variety of mobile environments, industries, and applications, including: field service, warehousing, route accounting, transportation, manufacturing, distribution, retail, public safety, and hospitality.

PrintekMobile's line of rugged, direct thermal printers are designed to provide reliability and a low total cost of ownership. In addition to long battery life and support for cabled or wireless communication (Wi-Fi, Bluetooth, or IrDA), the printers offer many features aimed at making integration, setup, and operation fast, flexible and simple:

- **EASI Suite™ development, integration, and setup tools.** Use this comprehensive set of tools to load fonts, graphics and updates; set up multiple printers; and develop a printing application. The suite includes drivers, sample source code (C/C++, C#, .NET, JAVA, eVB), and demonstration programs for computers, PDAs, smartphones, and other mobile computing devices. EASI Suite tools support integration with all popular smartphone platforms, including Symbian OS, Windows Mobile®, Blackberry® and Palm®.
- **Emulation of all popular mobile printer languages.** Use the printers as a "drop in" solution for many mobile applications and legacy systems, including those with output formats and application code developed around ZPL®, CPCL, OPDL and Ex.PL printer languages.
- **Easy remote or on-board configuration.** Set network, communication, and security parameters using the printer control panel or the bidirectional remote setup utility, which has an easy-to-use Windows interface. Set all critical Wi-Fi parameters with or without an established network connection.
- **Advanced Bluetooth wireless features.** Configure the Bluetooth role policy for printer operation as master or slave to prevent compatibility problems with some handheld computers. Prevent unauthorized access to data, quickly pair specific printers with a specific Bluetooth host, and lock out detection by other Bluetooth devices after the host has discovered the printer and stored communication parameters.
- **Flexible, simple content management.** Store up to five different printer configurations (i.e. receipt, invoice, label) for recall automatically or at the touch of a button. Create and automatically print variable custom graphics or promotional messages, such as coupons or new product/service advertisements, at the end of each document.

PrintekMobile printers also come with unparalleled customer support—before and after purchase. The technical sales and support staff work directly with system integrators, software developers, mobile hardware manufacturers, VARs, and wireless service providers to develop cost-effective, innovative mobile solutions using the latest technologies.



Printek, Inc.
1517 Townline Road
Benton Harbor, MI 49022-9928

Phone: 1.888.211.3400
Fax: 269.925.8539
E-mail: info@printekmobile.com
Web: www.printekmobile.com