

# THE ENTERPRISE BENEFITS OF THE INDUSTRY'S FIRST REMOTE MANAGEMENT SOLUTION FOR HANDHELD SCANNERS

WHITE PAPER

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The need for centralized remote management solutions for wired networks became evident early on in the development of computer networks, giving birth to the ability to manage network servers, switches and more, all from a centralized location. Yet until today, the millions of handheld scanning devices in use in retailers of all types and sizes, warehouses, manufacturing plants and more still required manual management. Imagine the cost in time and effort involved in managing thousands of scanners in stores or warehouses all over the world. This paper examines the issues and costs associated with managing handheld scanners, the capabilities of the first centralized remote management solution designed specifically for handheld scanners and the benefits this solution provides to the enterprise.

## BACKGROUND

The benefits of remote management technology are long recognized, first through solutions that enabled management of the wired computer environment. These powerful solutions automated the provisioning and configuration of servers, operating systems, switches and more, dramatically minimizing the time and costs associated with the daunting task of managing geographically dispersed computer network equipment.

The productivity gains from automating and enhancing business processes through bar code scanning and other applications resulted in significant improvements in customer service and often, general profitability. But management of scanning devices can be a time-consuming task with many hidden costs — users are typically required to physically send devices to IT for troubleshooting, resulting in down time and loss of productivity, with IT spending a great deal of time on management, as well as logistics, tracking, repairing and returning devices to users. Symbol, recognizing these issues, applied best practices from the computing world to develop a remote scanner management solution based on industry standard mechanisms to enable rapid and easy integration into your existing IT infrastructure.

As a worldwide leader in handheld bar code scanning solutions, Symbol took a look at the many major retailers around the world using handheld scanning devices. Whether handheld bar code scanners were in use in grocery stores, building suppliers, department stores or warehouses, enterprises faced the same issues found in general network management: initial provisioning, upgrading, day-to-day troubleshooting and asset management were time intensive and costly manual tasks. To address these issues, Symbol developed the first centralized remote management solution for handheld scanners, designed to not only eliminate the visible

and hidden costs associated with the day-to-day management of this key piece of retail technology, but also to integrate quickly and seamlessly into your existing network and computing environments.

## SOLUTION REQUIREMENTS

Based on industry standards, this Remote Scanner Management (RSM) solution is designed for Windows®-based POS terminals, allowing the transmission of bar code data between an RSM-ready scanner and an OPOS-compliant POS application. With the addition of a remote management agent plug-in from Microsoft® (WMI), the RSM-ready scanners are easily managed from a single centralized location. And the remote scanner management solution is extensible, providing support for off-the-shelf third party management solutions.

This unique solution requires very little in the way of capital expense. Two of the three required components are free, and if your existing management solution is compatible, all three elements are virtually free.

The key pieces of Symbol's remote scanner management solution are:

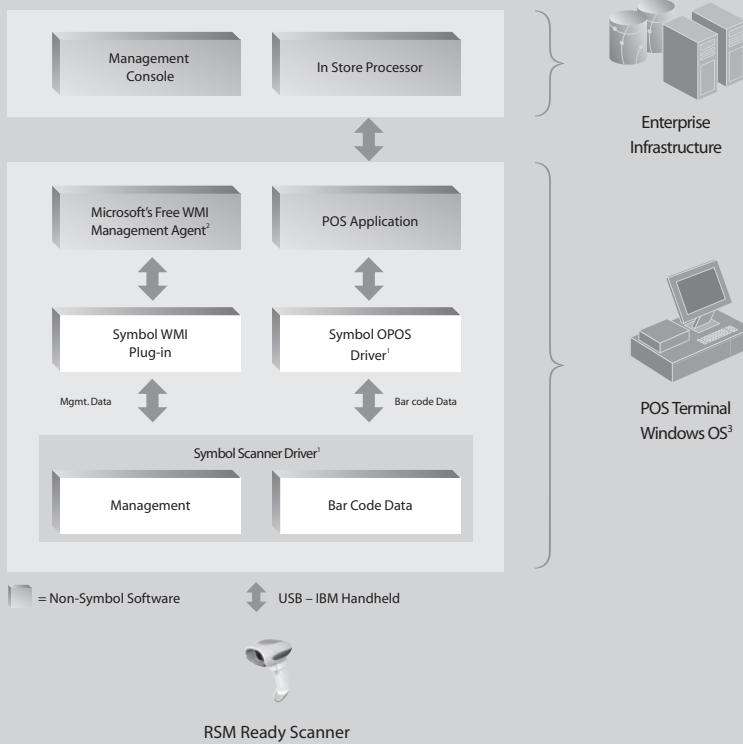
- **An RSM Ready scanner.** Symbol's RSM-Ready scanners are designed to enable management over a network. This feature is being built in to Symbol's bar code scanner line and includes hardware modifications that enable firmware upgrades via a network and software that provides support for network calls to the scanner.

- **Software components to be loaded on the POS terminal.** A Symbol scanner driver, Symbol OPOS driver and Symbol WMI plug-in must be resident on the cash registers. These drivers are available free from Symbol.
- **Enterprise management console.** Symbol designed maximum flexibility into its remote scanner management solution, providing companies with the choice of using standard network management tools or the ability to develop a customized management console to meet specific needs. Companies using some of the industry's foremost standard remote management solutions, IBM® Tivoli® or Symbol's MSP, can easily integrate management of handheld scanners into the existing console. For companies who prefer to create a customized management console, Symbol provides a free Software Developers Toolkit (SDK).

## HOW IT WORKS

Via the management interface of your choice (IBM Tivoli, Symbol MSP or your customized interface), managers in your Network Operating Center (NOC) quickly and easily execute a variety of tasks. From this central single remote location, calls are sent to discover, initially provision a scanner, update settings, upgrade firmware and more. Symbol designed maximum flexibility into the communication options between the management interface and the scanner driver, enabling communications either directly with the scanner through Microsoft's WMI interface or through an application resident on the register. The result is an open solution that can be integrated easily into your POS environment.

**Figure 1: OPOS Driver Implementation with RSM Enabler**



**With RSM, enterprises can quickly and easily upgrade from bar code data transmission to enterprise management, enabling the discovery, asset tracking, provisioning and firmware upgrading of all handheld scanners from a remote centralized location.**

### Notes

1. Remote Scanner Management suite of components available from Symbol Technologies
2. Windows Management Instrumentation (WMI) is the Microsoft implementation of Web-Based Enterprise Management (WBEM), which is an industry initiative to develop a standard technology for accessing management information in an enterprise environment.
3. Windows XP or 2000

## KEY FUNCTIONALITY AND BENEFITS

The ability to remotely manage handheld scanners on an enterprise network from a central location eliminates the manual, time-consuming and costly tasks of asset tracking, device provisioning and upgrading firmware. In addition, the remote visibility into device metrics can enable instant resolution of device problems, eliminating the need to return the device to the manufacturer for service.

Capabilities of Symbol's remote management solution for handheld scanners include:

### OUT-OF-THE-BOX AUTOMATED PROVISIONING

#### Before

Traditionally, new scanners must be manually staged (for example, setting the communication mode and scanning parameters) before the scanner is connected to the POS terminal. This is performed either by your vendor prior to shipping of the devices or by one of your store associates on-site at your store.

#### After

Remote management enables a scanner connected to a POS terminal to be automatically provisioned, right out of the box at the time of store side installation.

#### Benefit

The time and expense associated with manual provisioning is completely eliminated. In addition, provisioning is performed correctly, the first time, eliminating errors and insuring reliable scanner operation. The need to purchase and stock more expensive custom configured devices is also eliminated, since the standard off-the-shelf scanner can now be automatically configured to your custom settings.

### REMOTE FIRMWARE UPGRADE

#### Before

Until now, firmware upgrades to install software patches or new features were performed manually. Either an IT specialist was sent to the store to physically update or fix each scanner, or personnel were required to pack, ship and track scanners sent to a Symbol repair facility. After upgrading, the scanner then required reconfiguration to restore the scanner to the proper settings for your environment — either at the repair facility or by your store personnel.

#### After

Now, the firmware on all scanners can be upgraded from a central remote location and then reconfigured to your settings — instantly and automatically, without being unplugged from the register.

#### Benefit

Scanners no longer need to be taken off line and sent to a repair facility to install patches or new functionality. The time and expense associated with the manual upgrading of firmware — from shipping the scanner to tracking its return to reconfiguring and installing — is completely eliminated. The latest firmware upgrades can be installed as soon as they are available, and new features (such as support for a new symbology) are availability immediately — enabling your scanners to remain productive while delivering the best possible performance and maximum reliability.

### REMOTE DEVICE RE-CONFIGURATION

#### Before

Whenever your scanner's settings require updating, whether due to a change in POS terminal hardware or software, or the need to restore original settings to a scanner that is malfunctioning due to settings that were changed by an employee, the process requires someone in your organization to manually perform the update.

#### After

The configuration on all your scanners can be updated simultaneously or the original settings on one specific scanner restored – remotely and instantly.

#### Benefit

Restoring original configuration and upgrading settings to accommodate new equipment and applications takes literally seconds — a nearly 'zero cost' task. The time and cost associated with your employees physically accessing devices for configuration updates is eliminated.

## ASSET MANAGEMENT

### Before

To date, asset management of your scanners, if performed, has been a completely manual process, requiring time and effort by store personnel to collect the information, as well as maintain a database of the collected information.

### After

Remote management enables the instant and automatic discovery of all scanners attached to your POS devices, including static information such as model number, serial number and date of manufacture, as well as dynamic information such as the current firmware version installed on the device.

### Benefit

Remote management enables an always-accurate, no-cost inventory of your scanners at any time. This real-time view provides:

- The information needed to determine if a device is in or out of warranty, ensuring the right level of service is received at the right cost.
- Access to the scanner's firmware version to support troubleshooting malfunctioning devices.
- A complete up-to-the-minute device inventory for tax purposes.

## SUMMARY

By leveraging its wealth of industry knowledge and expertise, Symbol has created another first, a remote management solution for handheld scanners. Through Symbol's thought leadership in device management, retailers everywhere can:

- Eliminate the time and cost associated with a wide variety of tasks, from initial provisioning and updating of configurations to firmware upgrades and asset management.
- Improve scanner performance and reliability through instant installation of software updates and new capabilities.
- Improve the quality of the management process through automation, which eliminates operator error and the resulting malfunction of scanners.

- Future proof existing investment in handheld scanners through the ability to immediately and cost-effectively install support for new features.

With this solution, retailers can put the power to save significant time and money at the literal fingertips of IT staff. Hundreds of handheld scanners in new stores can be configured and activated at the press of a button. And if an update to the register's application drives a change in the scanner's configuration, handheld scanners anywhere in the world can be instantly updated with the single click of a mouse.

For more information on how your enterprise can benefit from remote management of your handheld scanners, contact us at +1.800.722.6234 or +1.631.738.2400.



## About Symbol Technologies

Symbol Technologies, Inc., The Enterprise Mobility Company™, is a recognized worldwide leader in enterprise mobility, delivering products and solutions that capture, move and manage information in real time to and from the point of business activity. Symbol enterprise mobility solutions integrate advanced data capture products, radio frequency identification technology, mobile computing platforms, wireless infrastructure, mobility software and world-class services programs. Symbol enterprise mobility products and solutions are proven to increase workforce productivity, reduce operating costs, drive operational efficiencies and realize competitive advantages for the world's leading companies. More information is available at [www.symbol.com](http://www.symbol.com)



*Corporate Headquarters*  
**Symbol Technologies, Inc.**  
One Symbol Plaza  
Holtsville, NY 11742-1300  
TEL: +1.800.722.6234  
+1.631.738.2400  
FAX: +1.631.738.5990

*For Asia Pacific Area*  
**Symbol Technologies Asia, Inc.**  
(Singapore Branch)  
Asia Pacific Division  
230 Victoria Street #12-06/10  
Bugis Junction Office Tower  
Singapore 188024  
TEL: +65.6796.9600  
FAX: +65.6796.7199

*For Europe, Middle East and Africa*  
**Symbol Technologies**  
EMEA Division  
Symbol Place, Winnersh Triangle  
Berkshire, England RG41 5TP  
TEL: +44.118.9457000  
FAX: +44.118.9457500

*For North America, Latin America and Canada*  
**Symbol Technologies**  
The Americas  
One Symbol Plaza  
Holtsville, NY 11742-1300  
TEL: +1.800.722.6234  
+1.631.738.2400  
FAX: +1.631.738.5990

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