



Expand the value of Motorola MC90XX Mobile Computers — and your mobility solution — with the MC90XX Forklift Cradle



The challenge: extending the benefits of mobile computing to the demanding environment of the forklift

You have deployed or are planning to deploy Motorola's flagship MC90XX-G/K Series rugged mobile computers to improve productivity and error-proofing in your manufacturing plant, distribution center or warehouse operations through real-time data capture and access. You have the MC9000 and would like to extend mobile computing to your forklift operators as well, but the MC9000 Series Mobile Computers (MC9060G/K and MC9090G/K) are handheld devices, designed primarily for workers who travel through your facility on foot — not for the constant pounding and vibration in the harsh environment of the forklift. Your forklifts and other material handling equipment (MHE) are space constrained. In addition, your workers need the flexibility to remove the installed mobile computer for use inside and outside the forklift — for example, operators may need to remove the mobile computer to scan an item in an aisle that is too narrow for a forklift. Lastly, you need a solution that can utilize the forklift as a constant source of charging to eliminate the need for workers to change batteries during a shift. How can you expand your mobility solution to also provide your MHE operators with real-time data capture and access to streamline and error-proof processes?

The solution: The Motorola MC90XX Forklift Cradle

The Motorola MC90XX Forklift Cradle allows you to easily extend your mobility solution to MHE operators by providing a powered rugged mounting solution for Motorola's MC9000 Series Mobile Computers. Designed to withstand the constant shaking and pounding on forklifts and other material handling equipment, the cradle itself enriches the ruggedness of the MC9000 Series by providing the military grade vibration and shock specifications required for reliable operation in these ultra-harsh environments. With the MC9000 Series devices securely mounted onboard your material handling equipment (MHE), forklift operators have the tools they need to streamline and reduce the errors in day-to-day processes — from automated data capture to the ability to access and transmit information in real time.

Designed for Motorola's MC90XX rugged mobile computers, the MC90XX Forklift Cradle brings a new level of flexibility to data capture on forklifts. The cradle allows workers to securely dock the MC90XX for use on material handling equipment, while the quick release enables the removal of the handheld as needed to perform tasks. Workers enjoy the safety of a fixed mount solution — and the convenience of a handheld device.

About Motorola's Enterprise Mobility Solutions

When it comes to enterprise mobility, Motorola delivers, providing the dependable real-time connection you need to streamline your warehouse, distribution center and manufacturing plant operations. As an industry leader, we offer the proven expertise and technology you need to achieve maximum value and a fast return on investment. Our true end-to-end mobility solutions include: a comprehensive portfolio of mobile devices with extensive wireless communications capabilities — designed for enterprise use; a portfolio of wireless private wide area and local area network infrastructure; a partner channel delivering best-in class applications; and a complete range of pre-and post-deployment services to help get and keep your enterprise mobility solution up and running at peak performance every day of the year.

A new level of flexibility for vehicle mount solutions

The cradle is designed to enable easy one-handed removal of the MC9000 Series Mobile Computers as needed, providing equipment operators with a very flexible hybrid solution — a single device that can be utilized as both a vehicle mounted and handheld mobile computer. In addition, enterprises can opt to utilize integrated bar code scanning functionality or tether a Motorola bar code scanner directly to the cradle.

When the job calls for occasional bar code scanning, the ability to remove the MC9000 mobile computer from the cradle and use the integrated scanner eliminates the need to purchase, maintain and manage a separate bar code scanner. For scan-intensive tasks, enterprises have the option to utilize the USB or RS232 port in the cradle to enable the easy addition of a corded Motorola bar code scanner. Since MC9000 Series Mobile Computers offer support for Bluetooth®, enterprises also have the option to provide workers with the convenience of cordless scanning.

An optional power converter enables the forklift to provide power to the cradle, which provides a constant charge for MC9000 Series mobile devices as well as the power to both USB and RS232 ports for any peripherals (such as bar code scanners and printers) that are tethered to the cradle. As a result, a fully charged MC9000 Series Mobile Computer is always available; the need for extra batteries and battery chargers for the MC9000 Series is eliminated; and providing power for peripheral devices is not an issue.

Regardless of whether you utilize the integrated bar code scanning functionality of the MC9000 Series or tether a separate bar code scanner to the cradle, Motorola allows you to choose the scanning functionality that best meets enterprise needs. Options include scan engines that read 1D codes, imagers that read 1D and 2D codes, the ability to read direct part marks, extended range engines that allow scanning from as far as 45 feet/13.71 m, omnidirectional scanning to eliminate the need to align scanner and bar code, and scan engines with fuzzy logic for accurate reading of damaged, dirty or poorly printed bar codes.

The result: streamlining of warehouse processes

The MC90XX Forklift Cradle provides the automated data capture and access required to improve the productivity of your material handling equipment operators — regardless of the warehouse processes they perform:

Receiving and put-away

Workers can either scan the bar code or enter an identifying number via the keypad on the MC9000 Series Mobile Computer to automatically verify shipments against the purchase order and return detailed put-away instructions — all in just seconds. Inaccurate shipments can be cross-docked for immediate return, minimizing processing time in the warehouse. The exact put-away location and the fastest route to that location can be provided for materials bound for the warehouse shelves. Once operators arrive at the put-away location, the shelf tag can be scanned to verify the location is correct prior to placing the materials on the shelf, either by removing the MC9000 Series Mobile Computer from the cradle and using the computer's integrated scanner or a scanner tethered to the MC90XX Series Forklift Cradle. And with a mobile printer tethered to the cradle, operators can even print on-the-spot replacements for any damaged bar code labels.

As a result, incoming inventory is processed rapidly, accurately and cost-effectively — the right materials reach the right destination with minimal steps. Inventory is visible in real time, thus:

- Eliminating delays in order processing or incomplete order fulfillment due to out-of-stocks
- Reducing the opportunity for unplanned and costly production line shutdowns for materials that have arrived but can't be located

Picking

All day long, workers in forklifts are involved in picking product off the shelves to fulfill orders. With the MC90XX Forklift Cradle, operators can use the MC9000 Series integrated scanner or a tethered scanner to ensure they are selecting the right item. A Motorola long-range scanner can allow an operator



When a Motorola MC9000 Series Mobile Computer is placed in the MC90XX Forklift Cradle, the cradle itself enriches the ruggedness of the MC9000 Series, providing the military grade vibration and shock specifications required for reliable operation in the ultra-harsh environments common to material handling equipment. The cradle gives operators of forklifts and other heavy equipment instant access to the tools needed to streamline and reduce errors in day-to-day processes — including put-away, picking, replenishment and shipping. Since the device can be quickly and easily removed from the cradle as needed, the MC9000 Series can be deployed throughout warehouse and manufacturing operations as either a handheld, vehicle mount or hybrid combination vehicle mount/handheld. And the ability to deploy and re-deploy the same device for different types of workers provides the maximum device flexibility that allows enterprises to achieve maximum value from their mobile computer investments.

to scan a large item at a distance (such as a stove, television or refrigerator) before picking — even if the item is on the top shelf — time spent selecting and returning erroneous items from the shelves is eliminated.

Since the cradle allows access to the audio jack on the MC9000 Series, enterprises can also enable voice picking for added productivity gains and error-proofing by adding a headset. And if a mobile printer is connected to the cradle, the completed pick order can be printed and delivered with the items to the packing and shipping area, providing a list to serve as a valuable cross-check for order accuracy in packing — and even a packing slip.

Replenishment

When inventory on the lower shelves is depleted, a replenishment order can be issued to the MC9000 Series on the forklift, complete with the fastest route to the right shelf. Prior to moving the inventory from the upper shelves to the lower shelves, a quick scan of the bar code on the product as well as the slot label on the destination shelf (again, either directly with the MC9000 Series Mobile Computer or a bar code scanner tethered to the MC90XX Forklift Cradle) ensures that not only is the right item selected, but also that it is placed in the right location.

Shipping

Before loading a shipment onto a truck for delivery, forklift operators can scan the bar code on the shipment to serve as a final cross-check that the order is complete, contains the right items and is slated for delivery to the right address. Again, a mobile printer tethered to the cradle can print all the required shipping-related paperwork with the push of a button. Throughput on the dock is improved and shipping errors — and the high cost of re-shipping — are reduced.

Benefits

The MC90XX Forklift Cradle delivers strategic and financial benefits:

Strategic benefits

Improve productivity and reduce errors

Regardless of what tasks your MHE operators are performing, the ability to leverage the information in your business systems combines with the ability to automatically capture data to enable the same number of workers to execute more tasks per shift with greater accuracy.

Improve customer service

As throughput improves, orders are fulfilled faster and more accurately, and customers receive shipments as promised — the right items at the right time. The result is improved customer service — and higher levels of customer retention.

Financial benefits

Better control over staffing costs

The productivity increase leads to better utilization of staff. The enterprise is more agile and able to handle peaks in demand without necessarily requiring additional workers.

Standardize on a single device to simplify mobility solutions

This accessory allows enterprises to purchase a single device to deliver mobile communications for workers on foot as well as forklift and other equipment operators. The ability to

standardize on one device in the warehouse and manufacturing plant translates into fewer device types to support, helping to simplify and reduce the cost of mobility deployments.

Extend the value of existing MC9000 Series Mobile Computers

For enterprises that have already deployed MC90XX Mobile Computers in the warehouse, manufacturing plant or distribution center, the Forklift Cradle extends the usability of MC9000 Series devices for additional applications — improving the utilization and the rate of return on your existing technology investments.

Summary

The MC90XX Forklift Cradle allows enterprises to maximize the flexibility and value of Motorola's MC9000 Series rugged mobile computers. The MC90XX can now be deployed either as a handheld device for workers moving on foot, as well as a vehicle mount or hybrid combination vehicle mount/handheld for operators on material handling equipment.

The innovative cradle enables the secure installation of the MC9000 Series Mobile Computer onboard your forklifts and more, providing a flexible mounting system that not only enables operation in mounted or handheld mode, but also allows the addition of a wide range of peripherals, including: corded and cordless bar code scanners; headsets for voice picking, and wireless printers for on-the-spot printing of damaged bar code labels, packing slips and more. Whether you are expanding the utilization of an existing pool of MC9000 Series Mobile Computers or are purchasing new MC9000 Series devices, you'll enjoy an outstanding return on investment (ROI) as well as the ability to improve the productivity of the operators on your material handling equipment — and reduce errors throughout your operational processes.

Regardless of the process that is being performed, with the MC90XX Forklift Cradle and the MC9000 Series Mobile Computer, you can ensure that the operators on your forklifts and other MHE select the right item at the right time. As a result:

- Inventory is always in the right place at the right time, available when needed to fill orders and replenish the production line on a timely basis — and instantly visible in your business system.
- The right items are selected for the right orders, and shipped to the right address.
- Costly production line downtime is reduced.
- Throughput in the warehouse and on the docks is increased.
- Costly mis-ships are reduced.
- Orders are fulfilled faster — and with more accuracy.
- Customer service is improved.

For more information

To find out how the Motorola MC90XX Forklift Cradle can improve your warehouse operations and help you get more out of Motorola's MC9000 Series Mobile Computers, please visit us on the web at www.motorola.com/forkliftsolution or access our global contact directory at www.motorola.com/enterprisemobility/contactus



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