WS50

Android Wearable
Mobile Computer

SELLING GUIDE

February 18, 2022

Contents

The Opportunity

The business challenge

Businesses need to connect traditionally disconnected task workers

- Disconnected workers erode operational efficiency, making it harder to compete in today's on-demand economy
- Disconnected workers are forced to take more steps and need more time to complete a task
  - How do workers know what their next task is?
  - How do workers communicate with each other or managers?
  - How do managers assign tasks to an employee?
  - How does a supervisor manage task status?

MARKETS

Warehousing   Manufacturing   Transportation & Logistics   Retail   Hospitality

Introducing

The WS50 Android Wearable Computer

Connecting disconnected task workers is easy with Zebra's WS50…the world's smallest Android enterprise-class wearable mobile computer with multiple mounting options

The Opportunity

The WS50's game-changing, all-in-one platform addresses the key barriers that prevent companies from equipping their task workers with a mobile computer

Traditional Barrier	WS50 Benefit
$ **Cost**	All-in-one solution reduces capital costs: there's no need to purchase a separate ring scanner and mobile computer Large screen mobile computers can be overkill for task-based applications; the WS50 is right-sized for task management, communications and scan-intensive workflows
Management Complexity	All-in-one solution reduces the management burden and operational costs… • Fewer devices • Fewer batteries • Fewer service contracts
Worker Training	The WS50's right-sized screen size and Android platform are ideal for simplified task-based applications and communication

Positioning

What sets the **WS50** apart from the rest?

All-in-one ring scanner and mobile computer

Maximum flexibility with three modular mounting options

Smallest Android enterprise-class wearable computer

Industry standard Android OS

Task management, PTT voice and enterprise-class data capture

Best-in-class 2-inch super bright AMOLED touch display

Easy centralized management with leading EMMs

Powerful Zebra-only Mobility DNA tools

In a class of its own

The WS50 introduces a new product category and shouldn't
be compared to other products on the market today

It's not a smart watch

The WS50 wrist mount model is worn on the wrist in a similar manner as a consumer smartwatch. But the similarities end there. The WS50 offers Android 11 (not Android Wear), enterprise-class rugged specs, enterprise manageability and accessories and enterprise productivity tools like a camera, built-in voice/PTT and modular wearing options

It's not a ring scanner

The WS50 is not a peripheral ring scanner, even though it can be worn on the fingers for aggressive data capture. Unlike peripheral ring scanners, the WS50 does not require a host mobile computer, reducing the number of devices a worker carries to tackle their daily tasks

It's not a traditional mobile computer

The WS50 has a 2-inch display intended for simplified task-based workflows and communications

Bottom Line…

There's no other enterprise grade device in the market that resembles the WS50. The WS50 is a standalone device that runs Android applications and communicates directly with a backend server over Wi-Fi. It's purposely designed to tackle enterprise workflows with a high-performance imager scanner or camera, speaker and microphone.

Positioning the WS50 and large-screen mobile computer

Not sure if your customer needs the WS50 or a large-screen device like the TC5X or TC2X Series? Understanding the key differences will help you position the right solution for the sale.

What is the WS50 intended for?	What are the limitations of the WS50?
• **Scan-intensive workflows with limited user interface (UI)** – Converged Scan models are ideal for loading trucks, sorting boxes and item put-away, where workers scan frequently and only need limited on-screen instructions	• **UI intensive applications** – Unlike large-screen handhelds (e.g. TC5X, TC2X), the WS50 has a 2-inch display that limits the amount of content and user interaction
• **Task management and communication** – With the Wrist Core model, supervisors can communicate with workers via PTT or push messages and tasks. Users interact with a simple, menu-driven UI optimized for the 2-inch display	• **Data intensive apps** – The WS50 has only 1GB of RAM, of which about 400MB will be available to users. Workflows that require switching between 4 or 5 apps will likely overload the system
• **Rugged industrial use cases** – The WS50 supports -10º C to +50º C operation (not freezer) and is designed to survive in aggressive warehouse and manufacturing environments	• **VoIP** – WS50 supports half-duplex PTT, but not full-duplex VoIP

Target Markets and Applications

Target Markets and Applications

Warehousing	Manufacturing	Transportation & Logistics	Retail	Hospitality

Models

Converged (Two-finger or back-of-hand mount)	**Wrist Core, Converged** (Wrist, two-finger or back-of-hand mount)	**Converged** (Two-finger or back-of-hand mount)	**Wrist Core, Converged** (Wrist, two-finger or back-of-hand mount)	**Wrist Core, Converged** (Wrist, two-finger or back-of-hand mount)

Applications

Sorting **Put away** **Picking** **Loading/unloading** **Task management**	**Sorting** **Put away** **Picking** **Loading/unloading** **Task management** **Equipment maintenance**	**Sorting** **Loading/unloading**	**Pricing/markdowns** **Back of store operations** **Task management**	**Food service: restaurant servers; room service** **Housekeeping** **Janitorial service**

Customer Engagement Questions

- What's the impact of disconnected task workers on your operations?

  - How do these workers know what their next task is?

  - How do these workers get assistance or communicate with other team members?

  - How do supervisors manage task status?

  - How do supervisors distribute tasks, especially urgent ones?

- Could your operations achieve a higher level of productivity and efficiency by connecting your disconnected staff?

- What has prevented you from providing disconnected worker with a mobile computer?

  - Cost? (Focus on WS50's low total cost of ownership)

  - High user training requirements (Focus on WS50's simple 2-inch display and applications that are optimized to provide quick information for specific task)

  - High management and support requirements for a multi-device solution (Focus on the WS50's all-in-one solution; reduces devices, batteries, service contracts)

- What type(s) of workers are you trying to connect with a mobile device? If workers require frequent barcode scanning, position the converged ring mount or back-of-hand. If workers just need communication and task management, position the wrist core.

- Would you like to deploy a wearable scanning solution but are concerned about the number of devices to manage?

- Do devices need to support back-to-back shifts? Would you like a user-swappable battery, so that devices never need to be taken out of service to charge in between shifts?

- Would you like a solution that will grow with your business needs? Focus on the WS50's industry standard Android platform and its ability to support future technologies and features

- Would workers benefit from voice/push-to-talk applications?

- Are you currently using an Enterprise Mobility Management (EMM) system; would you like to be able to manage your wearable solution with a single pane of glass?

Competitive Analysis

Fight Sheets

Pro Glove MARK Display

Key weaknesses

- "Dumb" Bluetooth ring scanner: requires a separate host computer (more devices to purchase, wear and manage)
- Inferior 1.5 inch display: smaller, lower resolution, monochrome
- Non-touch display; one-way interaction, less intuitive user experience
- Limited mounting options: worn on the back of the hand only
- Battery is NOT removable: device must be taken out of service to charge
- No voice support: worker must carry a separate device for PTT/voice applications
- No camera option
- Lower IP54 sealing: not dust-proof and can't withstand jetting water (e.g. hose down)

Key strengths

- None identified

Honeywell 8680i

Key weaknesses

- Large and heavy with inferior ergonomics (battery is top mounted, resulting in a high center of gravity)
- Inferior 1 inch display: smaller, lower resolution
- Non-touch display; one-way interaction, less intuitive user experience
- Limited mounting options: worn on the back of the hand or fingers only
- No onboard voice support
- No camera option
- Lower IP54 sealing: not dust-proof and can't withstand jetting water (e.g. hose down)
- Lacks platform approach: proprietary computing platform (not future proof); not compatible with Honeywell's Mobility Edge platform

Key strengths

- None identified

Unitech BD100 Smart Badge

Key weaknesses

- Task management device only
- No enterprise barcode scanning – any barcode scanning is performed via 5 MP camera
- Less powerful Windows computing platform (slower, less efficient processor)
- Inferior 1.5 inch display: smaller, lower resolution
- Limited mounting options: worn on the wrist or lanyard only
- Smaller battery and NOT removable: device must be taken out of service to charge
- No voice support; worker must carry a separate device for PTT/voice applications
- Lower resolution camera
- Lacks drop and tumble specifications
- Lacks software ecosystem

Key strengths

- None identified

Feature to Feature Comparisons

Competitive Comparison

In the following chart, where appropriate, yellow shading indicates the best specification available for a feature. Competitive information is based on publicly available information.

Feature	Zebra WS50	Pro Glove MARK Display	Honeywell 8680i	Unitech BD100 Smart Badge	Why it matters
Overview					
Overview	All-in-one wearable solution: Converged Android mobile computer and ring scanner	Back of hand "dumb" Bluetooth scanner (requires host mobile computer)	Converged proprietary mobile computer and scanner	Smart watch for task management; no enterprise data capture options	The WS50's one-piece solution eliminates the need to procure and manage separate mobile terminals and ring scanners. Workers only need to wear one device. And for IT, there are fewer devices, batteries, chargers and service contracts to manage.
Form Factor	Modular Computing core with three wearing styles: wrist, two-finger and back-of-hand mount	Back-of-hand only	Two-finger or back-of-hand mount	Watch, lanyard or belt clip	With three different wearing styles, the adaptable WS50 is ideal for virtually any task worker in practically any industry. The WS50 can be worn on a wrist, two fingers or the back of the hand.

Competitive Comparison

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Feature	Zebra WS50	Pro Glove MARK Display	Honeywell 8680i	Unitech BD100 Smart Badge	Why it matters
Overview					
Size	Wrist (device): 62 mm x 59 mm x 18 mm Wrist (with mount):74 mm x 64 mm x 19 mm Converged: 64 mm x 62 mm x 28 mm	50 mm x 45 mm x 18 mm	Slim battery: 81 mm x 56 mm x 31.3 mm Extended battery: 81 mm x 56 mm x 35 mm	50 mm x 51.7 mm x 14.3 mm (with supporting band)	When comparing device size and weight, it's important to consider the overall solution to ensure you're comparing apples to apples. For example, Pro Glove MARK Display may have a smaller size and weight, but it requires a second device (host mobile computer) that will be worn or carried by the user. BD100 Smart Badge is also smaller, but lacks any enterprise data capture capability. Honeywell 8680i is large and heavy, with a top mounted battery, resulting in a high center of gravity. The WS50 is smaller and lighter, with a bottom mounted battery, resulting in a lower center of gravity and improved ergonomics when mounted on the fingers or back of hand.
Weight	Wrist (device): 2.4 oz./70 g Wrist (with mount): 3.95 oz./112 g Converged: 4.73 oz./134 g	1.7 oz./48 g	Slim battery: 5.3 oz./151 g Ext. battery: 5.9 oz./168 g	1.9 oz./55 g	

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Feature	Zebra WS50	Pro Glove MARK Display	Honeywell 8680i	Unitech BD100 Smart Badge	Why it matters
Computing Platform					
Operating System	Android 11 AOSP	N/A (Pro Glove MARK Display is a tethered Bluetooth ring scanner and requires a host mobile computer)	Proprietary	Windows 10 IoT	The WS50 is the only solution built on Android, giving customers the simplicity of a familiar and consistent OS deployed throughout their operations. And unlike Honeywell's proprietary solution, the WS50's industry-standard platform provides more flexibility to build the apps that workers need, as well as enables future support of new technologies.
Processor	Qualcomm® Snapdragon Wear W4100+ Platform/SDA429w, quad-core, 2.0 GHz		Not specified	Qualcomm® APQ8009 1.3 GHz quad-core	The Snapdragon Wear 4100+ platform is purpose built to deliver super-fast performance and connectivity, a smarter always-on experience, and extended battery life for connected smartwatches.
Memory	1 GB RAM/8 GB Flash		Not specified	1 GB RAM/8 GB Flash (16 GB Flash optional)	The WS50 offers sufficient memory for its intended use cases of task management, verification and communication. If users will need to run 4-5 applications simultaneously, position a full-size mobile computer (e.g. TC2X, TC52X, WT6300).

Competitive Comparison

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Feature	Zebra WS50	Pro Glove MARK Display	Honeywell 8680i	Unitech BD100 Smart Badge	Why it matters
Display					
Display (viewing)	2 in. AMOLED 460 x 460 color display; optically bonded to touch panel	1.5 in. e-paper display; monochrome; 200 x 200	1 in. color display; resolution not specified (but lower than WS50)	1.54 in. 320 x 320	The WS50 has the largest, brightest and highest resolution display in its class. Its AMOLED display offers exceptional enterprise performance. It offers better viewing angles for superior readability from different positions. Screens refresh quickly for a better user experience and app responsiveness. And low power consumption extends battery run time.
Display (touch)	Capacitive touch panel; fingertip and glove support; Corning® Gorilla® Glass	No	No	Capacitive touch panel; Corning® Gorilla® Glass	Pro Glove and Honeywell do not have a touch display. WS50's touch screen enables two-way interaction for a more intuitive and modern user experience.

Competitive Comparison

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Feature	Zebra WS50	Pro Glove MARK Display	Honeywell 8680i	Unitech BD100 Smart Badge	Why it matters
Data Capture					
Barcode scanning	SE4770 Resolution: 1280 x 960 pixels (Converged two-finger, back-of-hand)	Zebra SE4750	2D Standard range Resolution: 844 x 640 pixels	No (limited scanning available via 5 MP camera)	The WS50 offers Zebra's premium SE4770 scan engine for the fastest possible scanning performance. Zebra PRZM Intelligent technology and its high-resolution sensor ensure workers can scan barcodes in virtually any condition — even dirty or damaged.
Camera	13 MP (Wrist only)	No	No	5 MP	The WS50 wrist core offers the option for a camera to support proof of condition, proof of service and more.

Competitive Comparison

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Feature	Zebra WS50	Pro Glove MARK Display	Honeywell 8680i	Unitech BD100 Smart Badge	Why it matters
Voice/Messaging					
PTT support	PTT ready	No	No onboard support, but can pair with a VoCollect device	No	The WS50 is PTT ready, improving collaboration by enabling every end user to communicate across the warehouse, manufacturing floor, retail store and more. With other devices, users must carry a separate device for voice applications.
Integrated microphone/ speaker	Yes	No	No microphone; requires wireless headset	No	The WS0 gives users the flexibility to use either a Bluetooth headset or the onboard microphone/speaker for voice applications.
PTT Button	Yes (via programmable button)	No	No	No	With two programmable buttons on the WS50 converged models and four programmable buttons on the wrist core models, users can dedicate a button for instant access to PTT.

27

Competitive Comparison

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Feature	Zebra WS50	Pro Glove MARK Display	Honeywell 8680i	Unitech BD100 Smart Badge	Why it matters
Environmental					
Sealing	IP65	IP54	IP54	IP67	The WS50 offers higher sealing than both Pro Glove and Honeywell; it is totally dustproof and can be hosed down with high-pressure water jets.
Operating temperature range	-10°C to +50°C	-10°C to +45°C	-10°C to +50°C	Not specified	The WS50 is designed to operate across a wide temperature range in warehouse and manufacturing environments.
Drop specification	Wrist: 4 ft./1.2 m to concrete across operating temperature. Converged: 6 ft./1.8 m to tile cover concrete across operating temperature	50 6.5 ft./2 m drops to concrete (temperature not specified)	30 5 ft./1.5 m drops to concrete (temperature not specified)	Not specified	The WS50 is the only device in this group to publish a drop specification over the entire operating temperature range — crucial to ensure durability in the event of a drop in the cold or heat.
Tumble specification	Wrist: 1,000 at 1.6 ft./0.5 m. Converged: 2,000 at 1.6 ft./0.5 m	500 at 3.2 ft./1 m	2,000 at 1.6 ft./0.5 m	Not specified	WS50 converged models are designed to survive 2,000 tumbles at 1.6 ft./0.5 m — which simulates the frequent impacts that a wearable device will experience during real use.

Competitive Comparison

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Competitive information is based on publicly available information.

Feature	Zebra WS50	Pro Glove MARK Display	Honeywell 8680i	Unitech BD100 Smart Badge	Why it matters
Power					
Battery	Standard (wrist): 800 mAh High Capacity (converged): 1300 mAh	670 mAh	Slim: 1200 mAh Extended: 2160 mAh	430 mAh	Honeywell 8680i has a larger battery, but at the cost of a larger size and weight. The WS50's battery delivers more than enough power for a busy shift and with hot swappable batteries, workers can just swap batteries and keep on working.
Swap Capability	Hot Swap (2 minutes, memory persistent)	NOT removable	Removable, no hot swap	NOT removable	With hot swap support, WS50 batteries can be easily removed and replaced when needed, enabling workers to swap batteries and still stay connected and logged in. Pro Glove and BD100 do not have a removable battery; these devices must be taken out of service to charge and cannot support back-to-back shifts.

Competitive Comparison

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Feature	Zebra WS50	Pro Glove MARK Display	Honeywell 8680i	Unitech BD100 Smart Badge	Why it matters
Wireless Communications					
WLAN	802.11 a/b/g/n/ac/d/h/i/r; Wi-Fi™ certified; IPv4, IPv6, 1x1 SISO	No	802.11 a/b/g/n/ac	802.11 a/b/g/n	With 802.11ac Wi-Fi, the WS50 offers a solid connection to warehouse management systems and other backend applications. WS50 supports additional protocols that reduce interference and improve security and roaming performance. And Zebra Mobility DNA Wireless Fusion provides a dependable and superior Wi-Fi experience with Zebra-only features that keep workers connected and productive while roaming the facility.
WPAN	BT 4.2, BLE	BT 5.0, BLE	BT 4.1, BLE	BT 4.0, BLE	WS50 supports Bluetooth 4.2 for pairing with wireless headsets, printers and other peripherals.
NFC	Yes	No	Yes	Yes	NFC makes it easy to pair with Bluetooth peripherals to reduce support calls and downtime due to pairing problems.

30

Sales Tools and Resources

Sales Enablement Tools

Internal Zebra Tools	Partner Tools	External Tools
Product beauty/application photography	Product beauty/application photography	Spec Sheet
Selling guide presentation	Selling guide presentation	Customer presentation
Battlecard	Battlecard	Product page on Zebra.com
Product descriptions	Product descriptions	Customer top 5 reasons to buy
Partner top 5 reasons to sell	Partner top 5 reasons to sell	Infographic
ISV top 5 reasons to develop	ISV top 5 reasons to develop	
Infographic	Infographic	
The Source product page	Partner Gateway Microsite	
LMS training modules	LMS training modules	
Solution Center updates		

WS50 Resources

Marketing Reference Material

The Source (for internal Zebra only): https://zebra.showpad.biz/

Partner Gateway: https://partnerportal.zebra.com

WS50 Product Home: www.zebra.com/ws50

Services: www.zebra.com/zebraonecare

Learning Portal: https://partnerportal.zebra.com/PartnerPortal/resources/education/portfolio_training.aspx

Solutions Pathway: https://solutionspathway.zebra.com

Developer Tools: https://developer.zebra.com

Mobility DNA: www.zebra.com/mobilitydna

Support: www.zebra.com/support

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Thank You!

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