8690i

Wearable RFID Mini Mobile Computer

The 8690i is a compact, high-performance, hands-free mini mobile computer to help businesses improve workflow efficiency.

The 8690i drives streamlined workflows via a single device for many applications, replacing an RFID reader, scanner and mobile computer. The customizable user-facing display communicates workflow instructions, while the two-button interface enables users to navigate menus and confirm selections. The 8690i wearable mini mobile computer connects directly to the network application through Wi-Fi and the SDK, even enabling offline functionality via TotalFreedom™ plugin development.

Merging common applications, such as picking, packing and sorting, onto a single device offers improved ergonomics with reduced acquisition and operating costs when compared to wearable scanner plus mobile computer solutions. Rapid RFID product and location identification can enable up to a 66% reduction in steps per transaction vs. handheld barcode scanning applications in high frequency workflows, increasing productivity and operational throughput.

Configuration options help tailor the 8690i device the end-use application. It is available (and quickly field-reconfigurable) as a two-finger ring or a back-of-hand glove mount, enabling the device to suit ergonomic and workflow requirements. Available 4 or 12 bay chargers for devices or batteries ensure simplicity to support high volume consolidated settings or widely distributed workflows. With advanced performance to drive highly efficient workflows and durability to survive tough operating environments, the 8690i wearable mini mobile computer can add efficiency and effectiveness to even the most common tasks.



The ergonomic 8690i Wearable RFID Mini Mobile Computer delivers essential workflow information directly to the worker's line of sight and enables input to support common workflows with a single device. Eliminating wasted motion with always-at-hand, ergonomic RFID reading and scanning drives efficiency in high frequency workflows.

FEATURES AND BENEFITS

Industry-standard EPC Global Class 1 Gen 2, RFID reader ensures that the 8690i can read all common supply chain RFID tags.

Reduce acquisition and operations costs with the customizable line-of-sight color display, WiFi, and SDK for application development, enabling the 8690i device to support streamlined workflows as a standalone device, replacing scanner, reader, and mobile computer alternatives.

Customize to fit multiple applications with field-reconfigurable accessories that enable ring or glove mounts. Chargers are available for devices and batteries in 4 or 12 bay options for distributed or large scale consolidated deployments.

Engineered for 2,000 0.5 meter (1.6 feet) tumbles, the 8690i wearable mini mobile is built to endure rugged work environments and real-world use.

Honeywell Operational Intelligence workflow analytics to manage battery population lifecycle, ensuring uninterrupted full-shift operation; simple deployment of setting and firmware updates.

© 2020 Honeywell International Inc. All rights reserved.

Honeywell

8690i Technical Specifications

RFID

Standards: EPC Global Class 1 Gen 2/ISO 18000-6C

Antenna:

Triggered ring:

Field: Directed from top of device

Polarization: Linear polarized

Glove:

Field: Directed from inside of wrist

Polarization: Linear polarized

Frequency Ranges:

EU: 865-868 MHz

US: 902-928 MHz

Nominal Read Range:

Internal antenna: 0.6m (2 ft)

Glove auxiliary antenna: 1m (3.3 ft)

Nominal Write Range:

Internal antenna: 0.3m (1 ft)

Glove auxiliary antenna: 0.5m (1.6 ft)

Output Power: Internal/external max 30dBm

MECHANICAL

Dimensions (L x W x H): 95.7 mm x 56 mm x 39.4 mm (3.8 in x 2.2 in x 1.6 in)

Weight (Triggered Ring): 211g (7.4 oz)

Scan Performance:

Scan Pattern: Omni-directional area imager

Motion Tolerance: Up to 584 cm (230 in)/second

Symbol Contrast: 20% minimum reflectance

Pitch: ±45°

Skew: ±60°

Warranty: Two-year factory warranty (Note: Battery warranty is one year.)

ENVIRONMENTAL

Operating Temperature: -20°C to 50°C (-4°F to 122°F)

Storage Temperature: -20°C to 60°C (-4°F to 140°F)

Humidity: 0% to 95% relative humidity (non- condensing)

Drop: 36 1.5 m (4.9 ft) drops to concrete

Tumble: 2,000 0.5 meter (1.6 ft) tumbles

Environmental Sealing: IP54

Light Levels: 0 to 100,000 lux

ESD: ±20 kV air discharge, ±10 kV contact discharge

WIRELESS

Radio Range:

Bluetooth: 2.4 GHz to 2.5 GHz (ISM Band) Adaptive Frequency Hopping Bluetooth® v. 5.0: Class 1; 100 m (330ft) line of sight; NFC communications to simplify pairing with host device

Wi-Fi: Bluetooth above plus Wi-Fi 802.11 a/b/g/n/ac/ax, Wi-Fi-r fast roaming, 2.4 and 5GHz

Security Standards: WPA, WPA2, WEP, WPA2 EAP (TLS, TTLS, PEAP GTC and PEAP MSCHAPv2)

Connection: Connection, Auto-reconnect, Intra Profile connection (roaming), Hidden and Broadcast SSIDs

Soft Roaming: Simple and learned, across bands (all combinations of 2.4 GHz and 5 GHz), DFS Channels and 802.11 modes

Opportunistic Key Caching (OKC)

Battery: 3.6 V, 3400 mAh

Hours of operation: Minimum 6 hour active shift with continuous RFID reading and optical scanning every 4 seconds

Hot Swap Capability: Under typical conditions, device will remain operational for 100 seconds while replacing battery

Expected Charge Time:

Battery charger: 3 hours

Device charger: 3.5 hours

** Note: charge times may vary based on high system loads and/or ambient temperatures

GLOVE CHARACTERISTICS

Strap glove securely locates 8690i on back of hand for optimum dexterity, ergonomics, and user comfort. Secondary RFID antenna optimizes performance reading items during handling process.

Highly durable design for long lifespan, reduced consumable costs; trigger rated for 2.5MM activations.

Hygienic, non-absorbent material construction.

TYPICAL PERFORMANCE*

SYMBOLOGY/ X-DIM	TYPICAL RANGE*
5 mil Code 39	63 mm to 294 mm (2.5 in to 11.6 in)
10 mil Code 39	33 mm to 510 mm (1.3 in to 20.1 in)
20 mil Code 39	37 mm to 793 mm (1.5 in to 31.2 in)
100% UPC	37 mm to 566 cm (1.5 in to 22.3 in)
15 mil C128	35 mm to 643 mm (1.4 in to 25.3 in)
10 mil DataMatrix	65 mm to 290 mm (2.6 in to 11.4 in)
6.7 mil PDF417	77 mm to 237 mm (3 in to 9.3 in)
15 mil QR Code	32 mm to 407 mm (1.3 in to 16 in)

*Performance may be impacted by barcode quality and environmental conditions.

Compatible with bare hand or conventional glove for comfort and user safety.

One size; highly adjustable at index finger, palm, and wrist.

Left and right hand versions available.

WARNINGS

Extreme caution should be used around moving machinery.

For a complete listing of all compliance approvals and certifications, please visit www.honeywellaidc.com/compliance.

For a complete listing of all supported barcode symbologies, please visit www.honeywellaidc.com/symbologies.

Bluetooth is a registered trademark of Bluetooth SIG, Inc.

For more information

automation.honeywell.com

Honeywell Industrial Automation

855 S Mint St

Charlotte, NC 28202

800-582-4263

www.honeywell.com

8690i Wearable RFID Mini Mobile Computer Datasheet | Rev B | 0824

© 2024 Honeywell International Inc. All rights reserved.

THE FUTURE IS WHAT WE MAKE IT

Honeywell