



MOTOROLA MC3190-Z

BUSINESS-CLASS HANDHELD RFID READER

BRING THE BENEFITS OF RFID TO THE CARPETED SPACE

The MC3190-Z represents another RFID first from Motorola — the first business-class handheld RFID reader designed specifically to extend RFID beyond industrial spaces and into customer facing and business environments. This highly versatile device is at home in the retail storefront, the carpeted business office and hospitals as well as the warehouse and manufacturing production line. The MC3190-Z starts with the same signature rugged design and high performance found in all Motorola industrial handheld RFID products, and adds the ergonomics required for all day comfort and ease of use. At just half the weight of its industrial counterparts, the MC3190-Z is the lightest UHF RFID rugged handheld reader on the market — period. Its well-balanced, gun-style grip brings comfort to the most read-intensive applications. And the advanced, high efficiency Motorola RFID reader engine increases workforce productivity with faster read rates that increase throughput.

MOTOROLA MAX RFID ANTENNA FOR MAXIMUM RFID PERFORMANCE

Until now, enterprises have been forced to choose between two types of antennas: linear polarization for a longer read range or circular polarization for wider coverage. The MC3190-Z antenna combines the advantages of these two technologies into a patented

omnidirectional antenna that offers the best of both worlds — a superior read range and superior coverage area. The orientation insensitive antenna delivers extraordinary reliability and there's no need to precisely align the reader with the tag. As a result, workers can accurately and rapidly capture RFID tags on even the most challenging items — from a pile of clothing in a retail store or a box of files in the office to a shelf full of data tapes in the data center.

GET SUPERIOR VALUE — MOTOROLA'S SIGNATURE RUGGED DESIGN AND DUAL DATA CAPTURE FUNCTIONALITY

The MC3190-Z offers the best of form and function with Motorola MAX *Rugged* and Motorola MAX *Data Capture*. While the MC3190-Z is designed for the carpeted space, Motorola MAX *Rugged* provides Motorola's flagship rugged specifications to ensure dependable operation and a maximum lifecycle in any environment. The reader passes one of the industry's most stringent impact tests, able to survive a 4 ft./1.2 m drop to concrete across the entire operating temperature range. In our unique endurance test, the MC3190-Z performs reliably after 1,000 1.64 ft./0.5m hits in our tumble drum. And with IP54 sealing, the device can withstand dust, spills and the routine wipedowns required in healthcare and other challenging environments.

FEATURES

Business-class RFID handheld for global deployments

Supports regions based on European RFID frequencies (ETSI EN 302-208) and US RFID frequencies

Motorola RFID reader engine

Delivers advanced, high efficiency read performance for faster read rates and higher throughput

Motorola's patented omnidirectional MAX RFID Antenna

Orientation insensitive design eliminates the need to align reader and tag for faster and more accurate reads

Pinpoint locating technology

A unique combination of intuitive audible and visual cues easily guides workers to a specific item

Proven platform

Built on the proven, widely adopted MC3100 platform

Easy-to-use Application Programming Interfaces (APIs)

Rapid and cost-effective
application development

Wi-Fi 802.11a/b/g wireless connectivity

Connects to virtually any
wireless LAN for easy
integration; enables
real-time wireless data
capture anywhere in your
environment

Motorola MAX *Rugged*: meets and exceeds MIL- STD 810F standards for drop, tumble and sealing

Built for all day enterprise
use; provides dependable
operation despite the
inevitable drops and spills;
provides extended lifecycle;
withstands wipe downs

Motorola MAX Data Capture

Offers exceptional RFID
and bar code scanning
functionality in a single
device; eliminates the need
to purchase two devices,
reducing capital and
operational costs

Motorola MAX *Data Capture* puts two best-in-class
advanced data capture technologies in one device —
the ability to read RFID tags and scan bar codes. This
versatility translates into fewer devices to purchase
and manage. And just because the MC3190-Z offers
advanced RFID technology does not mean you need to
sacrifice bar code performance. The device accurately
captures even damaged and poor quality 1D bar codes.

EASY-TO-USE ROBUST LOCATING CAPABILITY

Until now, RFID handheld readers identified the general
proximity of an item — for example, a shelf. The
MC3190-Z offers a unique combination of intuitive audible
and visual cues to quickly guide a worker to the location of
any desired item. As the device moves closer to a specific
item, a tone beeps louder and faster, while a sliding
graphical bar increases in size. The result? Employees can
rapidly locate any individual item, regardless of where it
may be, faster and easier than ever before.

THE MOTOROLA END-TO-END ADVANTAGE

When you choose the Motorola MC3190-Z, you enjoy
the advantages of a world-class partner channel,
world-class management solutions and world-class
services. Our award-winning partner ecosystem offers
a best-in-class, broad set of ready-to-go and custom
applications for the MC3190-Z, minimizing deployment
time and cost. Compatibility with Motorola's Mobility
Services Platform (MSP) and the Motorola Mobility
Suite offers extraordinary centralized control over all
your Motorola devices, including the ability to remotely
stage, provision, monitor, troubleshoot, secure data on
the devices and much more. And since your employees
will count on the MC3190-Z every day, our Service from
the Start with Comprehensive Coverage will help keep
your devices up and running at peak performance. This
unique service includes normal wear and tear, as well as
coverage for internal and external components damaged
through accidental breakage at no additional charge —
significantly reducing your unforeseen repair expenses.

For more information on how you can bring the benefits of RFID into new areas of your
business, please visit us on the web at www.motorola.com/mc3190z or access our global
contact directory at www.motorola.com/enterprisemobility/contactus

MC3190-Z APPLICATIONS

As the first business-class handheld RFID reader, the MC3190-Z enables the extension of RFID beyond
industrial spaces and into customer facing and business environments. Industries and applications include:

INDUSTRY	APPLICATION
Retail Sales Floor; POS; backroom	• Inventory/cycle counting • Automatic replenishment • Receiving/shrink control • Item finding
Enterprise Business offices/carpeted spaces	• Asset/IT management • File and document tracking • Item finding
Healthcare Hospitals; clinics	• Asset management (for high value critical assets) • Patient tracking • Item finding
Manufacturing/Warehousing (environmentally controlled) Production line; warehouse aisles and loading docks	• Work in Process (WIP) • Receiving/shipping

SPECIFICATIONS CHART

PHYSICAL CHARACTERISTICS

Dimensions 7.6 in. H x 4.7 in. W x 6.4 in. D
19.34 cm H x 11.94 cm W x 16.26 cm

Weight 22.93 oz./650 g (including battery, stylus, narrow keypad & strap)

Display 3 in. QVGA color display (320 x 320) touchscreen with backlight

Battery Li-Ion 4,400 mAh @ 3.7Vdc (2X Battery only)

Network Connections RS232; USB (host and client)

Keypad 48-key Alpha-Numeric

Data Capture Options RFID, 1D laser scanner and 2D imager

PERFORMANCE CHARACTERISTICS

CPU Marvell PXA320 @ 624 MHz

Operating System Microsoft® Windows Embedded Handheld 6.5.3

Memory 256MB RAM/1GB Flash as shipped, user expandable

USER ENVIRONMENT

Drop Spec 4 ft./1.2 m drop to concrete across the operating temperature range; meets and exceeds MIL-STD 810F

Tumble Spec 500 1.64 ft./5 m tumbles (1,000 drops) at room temperature; meets and exceeds MIL-STD 810F

Operating Temp 14° F to 122° F/-10° C to 50° C

Storage Temp -22°F to 160° F/-30°C to 70°C

Sealing IP54; Meets and exceeds MIL-STD 810F

Humidity 5-95% non-condensing

Electrostatic Discharge (ESD) +/-15kv VDC air discharge, +/-8kv VDC direct discharge, +/-8kv indirect discharge

RFID

RFID Power Output EU: 1/2 watt ERP for Europe
US: 1 watt EIRP

RFID Antenna Type Integrated Orientation Insensitive

Frequency Range EU: 865-868 MHz; US: 902-928 MHz

Standards Supported EPC Gen 2 DRM (DRM compliant up to 0.5W)

WIRELESS LAN VOICE AND DATA COMMUNICATIONS

Radio Tri-mode IEEE® 802.11a/b/g

Data Rates Supported 802.11a: up to 54 Mbps, 802.11b: up to 11 Mbps, 802.11g: up to 54 Mbps

VoIP-Ready Optional (region dependent)

WIRELESS PAN DATA AND VOICE COMMUNICATIONS

Bluetooth® Region dependent

PERIPHERALS AND ACCESSORIES

Cradles Single-slot USB/RS232 charging cradle with spare battery well

Chargers Four-slot battery charger; adaptor for universal battery charger

Printers Supports Motorola approved printers

Other Accessories Charging cables, magnetic stripe reader

REGULATORY

EMI/EMC FCC Part 15 Class B, ICES 003 Class B, IEC 60601-1-2, EN 301 489-1, EN 301 489-17, EN 301 489-3

Electrical Safety UL 60950-1, CSA C22.2 No. 60950-1, IEC 60950-1

RF Exposure
EU: EN 50360; EN 50364
USA: FCC Part 2, FCC OET Bulletin 65 Supplement C
Canada: RSS-102
Japan: ARIB STD T56
Australia: Radiocommunications Standard 2003

WLAN, Bluetooth and RFID
EU: EN 300 328, EN 301 893 : EN 302 208
US: FCC Part 15.247, 15.407
Canada: RSS-210
Australia: AS/NZS 4268

Laser Safety A21CFR1040.10, IEC/EN 60825-1

Model Numbers for Regulatory Certifications: MC319ZUS, MC319ZEU

GEOGRAPHIC AVAILABILITY

Supported regions based on European RFID frequencies (ETSI EN 302-208) and US RFID frequencies

WARRANTY

The MC3190-Z is warranted against defects in workmanship and materials for a period of 12 months from date of shipment, provided that the product remains unmodified and is operated under normal and proper conditions.

RECOMMENDED SERVICES

Customer Services: Service from the Start with Comprehensive Coverage



MAX Rugged

101100

MAX Data Capture



MAX RFID Antenna



FEATURING MOTOROLA MOBILITY ARCHITECTURE EXTENSIONS (MAX)

Motorola Mobility Architecture eXtensions (MAX) allows Motorola mobile computers to deliver extraordinary value — a truly unprecedented return on investment (ROI) and total cost of ownership (TCO). This unique set of Motorola features turbo charges Motorola mobile computers, driving ease-of-use, ease-of-management, flexibility, modularity, lifecycle and overall system performance to new heights. Features in the MC3190-Z include...



MAX Rugged

With MAX Rugged, you can count on a device built for the most demanding business environments. A minimum of three specifications — industry leading mechanical stress and endurance tests plus environmental sealing — insures dependable performance and maximum lifecycle.



MAX Data Capture

Integrate best-in-class advanced data capture functionality, including: 1D, 2D and DPM bar code scanning; signature capture; high resolution image and document capture; RFID and more.



MAX RFID Antenna

Maximize the performance of your RFID solutions with this patented orientation insensitive antenna. The unique combination of linear and circular polarization maximizes read range and coverage area, delivering the extraordinary reliability required to capture tags — even on the most challenging items.