



MC 75Ax^{ex} HF-NI
for ATEX/IECEX Zone 2 and 22

Features

- RFID/HF 13.56 MHz
- With WWAN-GSM-HSDPA
- GPS
- WLAN radio standard IEEE 802.11 a/b/g Tri-mode radio standard
- Comprehensive voice-over IP support
- With a 3.2 megapixels camera
- Easy battery changing
- Expanded storage capacity due to replaceable Micro SD card
- Compatibility with the MC75A HF from Motorola

Description

The MC 75Ax^{ex} HF-NI Mobile Computer is a 3.5-G Worldwide Enterprise Digital Assistant (EDA) device with an integrated RFID/HF reader. We have modified the device specially for use in hazardous (potentially explosive) areas in ATEX Zone 2 and 22. This means that the extensive communication options which are already standard in other areas are available to the user in hazardous areas also.

Its ergonomic design and easy operation make it an ideal support in attaining fast data availability in enterprise processes. A keypad is available for manual data capture.

The integrated RFID/HF reader and the integrated 1D/2D scan engine for capturing bar codes and a 3.2-megapixel camera are available as further means of data acquisition.

The ergonomically mounted scan triggers on the MC 75Ax^{ex} HF-NI allow data to be captured easily in one-hand operation. Several technologies are available for data communication with other systems and company divisions.

- Wireless WAN (WWAN)
- Wireless LAN (WLAN)
- Wireless PAN (WPAN) (Bluetooth)
- IrDA connection

These modules, which are integrated in the device, allow a seamless transmission of voice and data and are easy to integrate into the company's network.

Further advantages when using it are its robust construction, easy-to-read 3.5" VGA colour display with touch technology and a high-performance lithium ion battery.

In the MC 75Ax^{ex} HF-NI, the PXA320 processor with 806 MHz ensures fast process execution and the Microsoft® Windows Mobile® 6.5 operating system in conjunction with the Enterprise Mobility Developer Kit (EMDK) from Motorola facilitates an easy development of applications.

256 MB RAM integrated in the device and 1 GB flash memory are available for storing user-defined applications and data. For larger applications and volumes of data, we offer micro SD memory cards.

Market	Applications	Users
Automobile industry Automobile industry (suppliers of paintwork, for paint shops, etc.)	Material flow monitoring Production control Supplier chain management	Dispatch, receiving and stock management departments Personnel who have been instructed on the handling of potentially explosive substances
Food and beverages Suppliers of aromatic substances, etc.	Incoming/outgoing goods, inventory management Safety tests	Maintenance and repair Personnel who have been instructed on work in potentially explosive substances.
Petrochemicals from production through further processing to delivery	Spare parts tracking Maintenance/repair work	Production area Personnel who have been instructed on the handling of potentially explosive substances.
Pharmaceuticals (suppliers of the individual components required for the production of e. g. medication)	Workshop communication Conformity verification Task allocation	



The MC 75Ax^{ex} HF-NI Mobile Computer recognises the following bar codes with the 1D/2D Imager Engine:

1D codes:

Code 11	Interleaved 2 of 5
Code 39	MSI
Code 93	UPC-A
Code 128	UPC-E
Codabar	UPC/EAN supplementals
Coupon Code	Trioptic 39
Chinese 2 of 5	RSS-14
Discrete 2 of 5	RSS Expanded
EAN-8	RSS Limited
EAN-13	Web code

2D codes:

Aztec	(Macro) Micro PDF-417
Australian 4-state	Micro PDF-417
Canadian 4-state	Micro QR
Composite AB	Maxi Code
Composite C	QR Code
Chinese 2 of 5	TLC39
Data Matrix	UK 4-state
Dutch Kix	US Planet
Japanese 4-state	US Postnet
Macro PDF-417	USPS 4-state (US4CB)

Explosion protection

Ex protection type

ATEX

- II 3G Ex ic IIC T6 Gc
- II 3D Ex ic IIIC T80 °C Dc

Certification

EPS 12 ATEX 1481 X

IECEx

- Ex ic IIC T6 Gc
- Ex ic IIID T80 °C Dc

Certification

IECEx EPS 12.0029 X

Technical data

Physical features

Dimensions (length x width x depth)

WWAN: 7 inch x 3.3 inch x 1.9 inch
178 mm x 84 mm x 48 mm

Weight (including 2.5 x battery)

WWAN version:
approx. 467 g (approx. 16.5 oz.)

Display

transflective colour 3.5" VGA display
(640 x 480 pixels)

Touchscreen

glass analog-resistive touchscreen

Display backlighting

LED technology

Battery (2.5 x)

(3.7 V, 4800 mAh, smart battery management)

Backup battery

NiMH battery (rechargeable),
15 mAh, 2.4 V (not accessible from outside)

Extension slot

Micro SD slot with SDHC support
(up to 32 GB)

Network connections

Ethernet (via charging station);
Full-speed USB, host or client

Signalling

Vibrator and LED

Keypad options

Numeric

Audio

VoWWAN; VoWLAN;
TEAM express-compatible; Support for
wired and wireless (Bluetooth) headsets;
Headset, handset and speaker modes

Interactive Sensor Technology

Three-axis accelerometer for motion-sensing
applications for dynamic screen orientation,
power monitoring and free-fall detection.

Performance characteristics

CPU

PXA320 processor at 806 MHz

Operating system

Microsoft® Windows Mobile® 6.5
(Classic and Professional)

Memory

256 MB RAM; 1 GB Flash
option of expansion with micro SD card:
1 GB up to 8 GB

Interface

RS232, USB 1.1

User environment

Operating temperature

-10 °C to +50 °C (-14 °F to +122 °F)

Storage temperature

-40 °C to +70 °C (without battery)
-40 °F to +158 °F

Air humidity

95 %, non-condensing

Protection class

IP 54

IrDA

Infrared port for connection
to printers and other devices



Light immunity (readability)

Incandescent lamps	4,844 lux
Sunlight	86,111 lux
Fluorescent lamps	4,844 lux

■ **Battery performance**

Standby time

150 hours

Talk time

5 hours

■ **Voice and data communication over wireless WAN**

WWAN wireless modul GPS

with GSM-HSDPA

Integrated stand-alone or assisted GPS (A-GPS) through SUPL; SiRFstarIII GSC3f/L chip set

■ **Voice and data communication over wireless LAN**

WLAN wireless module

Tri-mode IEEE® 802.11a/b/g

Supported data transmission rates

1, 2, 5.5, 6, 9, 11, 12, 18, 24, 36, 48 and 54 Mbps

Operating channels

Channels 8 - 165	(5040 - 5825 MHz)
Channels 1 - 13	(2412 - 2472 MHz)
Channel 14	(2484 MHz) Japan only

The actual operating channels and frequencies depend on the applicable rules and certification authorities.

Security

WPA2, WEP (40 or 128 bits), TKIP, TLS, TTLS (MS-CHAP), TTLS (MS-CHAP Ver. 2), TTLS (CHAP), TTLS-MD5, TTLS-PAP, PEAP-TLS, PEAP (MS-CHAPv2), AES LEAP, CCXv4 certification, FIPS-140-2 certification

Antenna

internal for LAN, external for WAN

Voice communication

Voice-over IP integrated and ready (P2P, PBX, PTT), WLAN to IEEE 802.11a/b/g with Wi-Fi™ certification and DSSS

■ **Voice and data communication over wireless PAN**

Bluetooth

Class II, Version 2.1 with EDR (Enhanced Data Rate); integrated antenna

■ **Data capture options**

Scanning

1D/2D Imager; autofocus flash-enabled colour camera (3.2-megapixels) and decoding software for bar codes

■ **Colour camera**

Resolution

3.2 megapixels

Illumination

Flash (user-controllable)

Lens

Autofocus

■ **1D/2D Imager (SE4500SR)**

Focal distance

From the centre of the scan window: SR - 19 cm

Sensor resolution

752 x 480 pixels

Field of view

Horizontal 40°
Vertical 25°

Skew tolerance

± 60°

Pitch tolerance

± 60°

Roll tolerance

360°

Ambient light immunity

96,900 lux

Aiming LED (VLD)

655 ± 10 nm laser

Illumination element (LED)

625 ± 5 Nm LEDs (2 x)

■ **RFID HF Specifications**

Frequency

13.56 MHz

Reading range

0 to 5 cm
0 to 1.96 inch

Supported Standards

ISO 14443-A: MIFARE™ (Classic, Ultra Light, DESFire)

ISO 14443-B Calypso® (GTML, GTML2, CD21, CD Light, CDS3, CD97, CD97BX, TanGO, Celego-Citi, CT2000)

ASK CT256 and CTS512, STMicroelectronics SRI FeliCa®

ISO 15693: NXP I. Code SLI, TI Tag-it

➔ **Order no.**
B7-A273-64CS/WRRAAR00
MC 75Ax^{ex} HF-NI
with GSM HSDPA (WWAN)
incl. lithium ion battery 2.5 x (1 battery).