



# MOBILE COMPUTER C9 BLACK

## APPLICATIONS

- Logistics Applications
- Access Control
- Asset Tracking
- Maintenance

## FEATURES

- UHF, HF, NFC or LF
- Optional: 1D or 2D Barcode
- 4.800 mAh Li-Ion Battery
- Android™ 10 "Q"
- 4G LTE | Bluetooth | WiFi
- 5.5" Gorilla Glass Touchscreen
- 13 MP Rear | 5 MP Front Camera
- Autofocus with LED Flash
- IP65 Protection Class
- Android Studio or Eclipse
- SDK Included

## RFID OPTIONS

- UHF (EPC C1 GEN2 | ISO 18000-6C)
- HF (ISO 14443A, ISO 15693)
- NFC (NFC-IP1, NFC-IP2)
- LF (ISO 11784/11785)

## PRODUCT DESCRIPTION

The powerful C9 Black is a true revolution in rugged handheld computing. The 5.5 inch handheld help drive efficiency and productivity in ways that were never previously possible. It was especially designed for Industry 4.0 and IoT Applications in demanding environments.

Capable of capture, extract, and analyze data in extrem and remote environments with its IP65 housing and a operating time of up to 8 hours, the iDTRONIC handheld computer is perfectly suitable for field applications such as aviation, public safety, construction, field sales and the maintenance sector.

The Android™ 10 - powered C9 Black operates on a high performance Quad 73 2.0 GHz octa-core processor with 2 GB RAM / 16 GB ROM memory. The device is only 27 mm thick and weights just 430 grams including battery.

A variety of handheld configurations with different Barcode modules are available. The C9 Black is available with UHF: 865 – 868 MHz / 902 – 928 MHz, HF | NFC: 13.56 MHz, only NFC (13.56 MHz) or LF: 125 or 134.2 kHz. It can be combined with an 1D or 2D Barcode imager which allows easy inventory control and reporting. Thanks to the built-in 13 megapixel rear camera with Auto-focus lens + LED flash and a 5 megapixel front camera, damage reporting in the maintenance area never have be easier.

The C9 Black from iDTRONIC offers connectivity wherever you need it. It features the latest network communication technology including, Wi-Fi, WCD-MA, GSM/GPRS/Edge, Bluetooth and embedded A-GPS.

Beside the hardware, the C9 product family offers an extensive range of documentation, accessories and warranty extensions that support your business applications in the best way.



## TECHNICAL DATA

### PHYSICAL CHARACTERISTICS

Dimensions	166 × 79 × 27 mm ±2 mm
Weight	430 g
Display	Gorilla Glass 3 9H 5.5 in. TFT-LCD (720 × 1440) Touch screen with backlight
Keypads	4 TP keys, 4 function keys
Expansions	1 SIM, 1 TF, 2 PSAM
Battery	Rechargeable li-ion Polymer 3.8 V, 4.800 mAh
Interface	USB-C (Quick Charging Mode)
Camera	Rear: 13.0 Megapixel   Front: 5.0 Megapixel Autofocus with LED Flash
Fingerprint Reader	Integrated

### PERFORMANCE CHARACTERISTICS

CPU	Cortex A73 2.0 GHz octa-core
RAM   ROM	2 GB RAM   16 GB ROM or 4 GB RAM   64 GB ROM
Memory	MicroSD (max. 256 GB expansion)

### USER ENVIRONMENT

Operating Temperature	-20 °C to +50 °C
Storage Temperature	-20 °C to +70 °C
Humidity	5% RH to 95% RH (non-condensing)
Drop Specifications	1.5 m drop to concrete across the operating temperature range
Protection Class	IP65, IEC compliance
ESD	±15 kv air discharge, ±8 kv direct discharge

### PROGRAMMING ENVIRONMENT

Operating System	Android™ 10 "Q"
SDK	Software Development Kit
Language	Javascript
Environment	Android Studio or Eclipse

### COMMUNICATION

WLAN	2.4 GHz/5.0 GHz Dual Frequency, IEEE 802.11 a/b/g/n/ac
WWAN	<p>► <b>3G</b> WCDMA B1/2100;B2/1900;B5/850;B8/900; CDMA2000/EVDO 3G:TD/SCDMA</p> <p>► <b>4G LTE</b> FDD-LTE: B1/2100;B3/1800;B7/2600;B20/800; TDD-LTE: B38/B39/B40/B41</p> <p>► <b>GSM</b> B5/850;B8/900;B3/1800;B2/1900</p>
WPAN	Bluetooth Class v2.1+EDR, Bluetooth v3.0+HS, Bluetooth v4.1 Bluetooth v4.2
GPS	GPS (accuracy up to 5 m)

### 1D | 2D BARCODE IMAGERS

	1D Laser Engine	2D CMOS Imager
	Zebra SE965	Zebra SE4710/ Mindeo ME5600/Others
Symbologies	All major 1D barcodes	PDF417, MicroPDF417, Compo- site, RSS, TLC-39, Datamatrix, QR code, Micro QR code, Az- tec, MaxiCode, Postal Codes, US PostNet, US Planet, UK Postal, Australian Postal, Japan Postal, Dutch Postal. etc.

### RFID READERS

	UHF	HF	NFC	LF
Frequency	865 – 868 MHz   902 – 928 MHz	13.56 MHz		125 kHz 134.2 kHz (FDX-B/ HDX)
Protocol	EPC C1 GEN2 / ISO 18000-6C	ISO 14443A, ISO 15693, NFC-IP1, NFC-IP2		ISO 11784 ISO 11785
Reading Ranges	up to 1.5 m*	up to 6 cm*		2 to 10 cm*

### SUPPORTED STANDARDS | TAGS

ISO 18000-6C	Standard ISO 18000-6C (EPC Class 1 Generation 2) E.g.: Alien Higgs 2/3/4, Impinj Monza, NXP UCODE, etc.
ISO 14443 A and compatible	<p>Read/write: MIFARE® DESFire®EV1 2K / 4K / 8K, MIFARE® Classic Mini / 1K /4K, MIFARE Ultralight®, MIFARE Ultralight® C, MIFARE® Plus S / X, MIFARE® Pro X, NTAG 21x</p> <p>Read UID only: Read UID only of all other ISO14443A RFID tags</p>
ISO 15693 and compatible	EM4135, EM4043, EM4x33, EM4x35, I-Code SLI / SLIX, M24LR16/64, T1 Tag-it HF-I, SRF55Vxx (my-d vicinity)
ISO 111784 ISO 11785	Read only: EM4100 and EM4200

\*READING DISTANCE DEPENDS ON TAG, ANTENNA AND ENVIRONMENTAL CONDITIONS.

## APPLICATION EXAMPLES

### ACCESS CONTROL

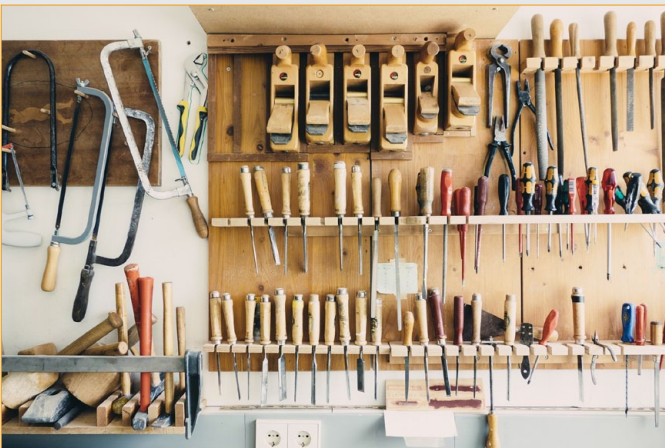


Access controls are widespread nowadays. Public organizers, sports events or trade fairs use this technology.

The identification of trade fair visitors and exhibitors on the basis of the trade fair pass can be easily determined by the powerful RFID scanner.

Especially with weather-related outdoor use in front of exhibition halls, the device withstands no problems thanks to its IP65 protection class. Temperature fluctuations do not affect the C9 Black from -20 to +50 ° C.

### ASSET TRACKING



The tracking and assignment of assets within industrial applications is important. In automatic processes the right asset has to be identified fast for a specific procedure. Also it has to be available.

The C9 Black identifies the assets availability with its RFID scanner immediately. The data like usage time and lifecycle will get automatically transferred to the external data server for statistics.

This increases the workflow and the efficiency of the respective process. The assets are always available and ready for use.

### MAINTENANCE



Maintenance processes within workshops have to be organized conscientious. Customer inquiries for workshop appointments have increased in the last years.

The tracking of the parts, accessories, etc have to be on the right place at the right time. Availability must be guaranteed.

The C9 Black identifies with the serial number of the device the right part or accessory and thus ensures a smooth maintenance process.

The customer satisfaction will be increasing.

## PRODUCT PICTURES



## ORDER CODES

VERSIONS	ORDER CODES
C9 Black (UHF)	R-HH-C9B-UHF
C9 Black (HF)	R-HH-C9B-HF
C9 Black (NFC)	R-HH-C9B-NFC
C9 Black (LF: 125 kHz)	R-HH-C9B-LF
C9 Black (LF: 134.2 kHz)	R-HH-C9B-134

BARCODE OPTIONS	ORDER CODES
1D Barcode Scanner	R-HH-C9B-1D
2D Barcode Scanner	R-HH-C9B-2D

ACCESSORIES	ORDER CODES
Desktop Cradle	R-HH-C9B-DTC
Carrying Case	R-HH-C9B-CC

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