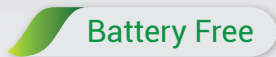# FUZZYSCAN F898BT
Ultra-Rugged Linear Cordless Imager

Battery Free

Optimized for demanding and industrial applications

The F898BT is constructed in an extremely robust build to deliver ultimate reliability in the most adverse environments. Powered by Cino's exclusive FuzzyScan imaging technology, the F898BT boasts unrivaled reading performance and motion tolerance across various challenging and problematic barcodes. Its broad Bluetooth connectivity, wireless charging capability, and battery-free solution contribute to reduced total ownership costs, allowing F898BT an ideal option for enterprises seeking to fulfill expansions and projects in various demanding industries.

- Industry-leading durability with IP68 sealing
- Withstand 3m drops to concrete and over 8,000 tumbles
- Wide operating temperature from -30˚C to 60˚C
- Functional after ±30KV air discharge
- Up to 100m of communication coverage via Cino Smart Cradle
- Wireless charging supported
- UltraCap™ Battery-Free solution supported
- Read most challenging and problematic barcodes
- Tailor-made carbon cover available upon request
- Built-in vibration function for tactile confirmations
- Mounting kit-free smart cradle for wall installation
- Inherit Cino's powerful FuzzyScan DNA

Unprecedented Reliability

Reliability is of our top concern when developing the F898BT. Optimized to overcome harsh environments, the F898BT is tailored with a full spectrum of reliable features for long-lasting performance.

Extreme Shock Resistance

Designed to support front-line workers in demanding job functions and work environments, the F898BT withstands **3-meter** drops and over **8,000** tumbles.

IP68 Sealing Protection

With **IP68** sealing, the F898BT provides exceptional protection against dust and water.

Exceptional Charging Reliability

Thanks to the wireless charging mechanism, the downtime caused by charging failure will be significantly reduced.

Enhanced ESD Protection

The F898BT withstands up to **±30KV** of ESD surge.

Seamless Wireless Connectivity

Comprehensive connectivity and one-step pairing change the way you work by providing more agility, flexibility, and productivity.

Instant Cordless Migration

To pair your F898BT imager with the smart cradle without Bluetooth connectivity, Cino's instant "Plug-and-Play" cordless migration provides you with a working range of up to 100 meters.

**Tailor-Made
Carbon Cover**

Broad Connectivity

Through the HID or SPP profile, Cino cordless imagers can connect to the most popular Bluetooth-enabled Windows, MAC, and Linux hosts as well as Android and iOS mobile devices.

One-Step & Hassle-Free Pairing

Instantly pair your F898BT to its smart cradle by scanning the "Quick Pair Barcode" at base of the cradle. To pair the F898BT with your remote host, simply scan the "Quick Pair Barcode" generated by Cino ConnectWizard™.

Scan All Your Needs

Powered by Cino's exclusive FuzzyScan Imaging technology, the F898BT not only reads a vast array of challenging and problematic barcodes, but also those displayed on digital screens, wrinkled, dirty, soiled, or watermarked surfaces.

Cutting Edge Imaging Technology

Embedded with AI technology and deep learning, the F898BT delivers unrivaled readability and snappiness, as well as accuracy across most real-world barcodes.

Unsurpassed Reading Performance

The F898BT brings exceptional reading performance and motion tolerance on both regular and difficult-to-read barcodes. The snappiness also dramatically improves user's experience. The first-time, every-time scanning makes F898BT ideal for a wide range of applications.

Wireless Charging Solution

By leveraging Qi technology, Cino's wireless charging solution highlights the advantages of reliability and cost-effectiveness.

Lower Total Cost of Ownership

Cino's wireless charging solution eliminates the need for physical charging contacts. This means significantly less field service and maintenance efforts. Furthermore, reduced downtime also minimizes productivity losses.

Reliable Wireless Charging

Straightforward, foolproof, and user-friendly, the F898BT fits perfectly with its wireless charging cradle, providing stable charging and ESD protection.

UltraCap™ Battery-Free Solution

The Cino Battery-Free solution is powered by the UltraCap™ Capacitor. This alternative power source is purpose-built on the concerns of cost saving and environmental sustainability.

Swappable & Interchangeable

The UltraCap™ features a swappable design. It is not only interchangeable with Cino's standard Li-ion battery, but also compatible with all FuzzyScan cordless handheld imagers.

FUZZYSCAN DNA

Lower Total Cost of Ownership

In an UltraCap™'s lifespan, you would otherwise use more than **25 standard Li-ion batteries**. This battery-free solution not only lowers your replacement costs of battery, but also your potential productivity losses caused by dead batteries.

Extended Working Time

The UltraCap™ provides the longest working time by far compared to its competition. With a capacity of **750 Farads**, the largest in its class, each full charge is able to support more than **17,500** scans in an hour.

Quick Get-Up-And-Go

Out of power? No worries. Every 1-minute quick charge is able to support 700 scans.

Eco-Friendly for a Healthier Planet

Thanks to the long lifespan of UltraCap™, it helps to reduce e-waste while exemplifying ESG consciousness and environmental sustainability.

Value Beyond Measure

FuzzyScan DNA is a collection of useful features with added-values available for every Cino imager at no additional cost. These exclusive features not only elevate your user experience, but also help you overcome various technical limitations beyond barcode scanning.

DataWizard

A powerful feature that allows advanced formatting on GS1 and UDI data. By using data scripts, it is able to perform sophisticated data validation and complex data processing, such as US driver's license parsing or medical data parsing.

iCode

A useful macro command barcode for enabling configuration with a single scan

Multilingual Edge

A comprehensive function for converting data output into your desired languages

Smart Scene

A series of preset configurations for easy adaptation to specific scenarios

Security Plus

A programmable security script for preventing unauthorized access

FuzzyScan Enabling Solution

A suite of software utilities and SDK that enables easy integration, management, and deployment of scanners

SPECIFICATIONS

Performance Characteristics

Optical System	High performance linear imaging engine
Print Contrast	10% minimum reflective difference
Light Source	630 nm red LED
Minimum Resolution	3 mil (Code 39, PCS 0.9)
Reading Range [*1]	13 mil (0.33mm) UPC/EAN up to 24" 20 mil (0.5mm) Code 39 up to 34"
Scan Rate	Dynamic scanning rate up to 800 scans per second
Roll, Pitch, Skew	Roll: 360˚; Pitch: ± 75˚; Skew: ± 65˚
Motion Tolerance	Up to 90 cm/s (35.43 in/s)
User Interfaces	3 LEDs for power, good read and status indications Programmable beeper Built-in vibration function
Configuration Setup	FuzzyScan Barcode commands FuzzyScan iCode FuzzyScan PowerTool FuzzyScan Serial Command
Data Processing	DataWizard

Electrical Characteristics

Operating Voltage	5 VDC ± 10%
Operating Current	Scanner with Smart Cradle Charging: Maximum 1.3A Standby: Maximum 130 mA

Power

Li-Ion Battery	2,550mAh capacity 3-4 hour charge time over PSU 9-10 hour charge time over Scanner USB Scan-ready at 30% power: 3 hr charge over Scanner USB
UltraCap™ Capacitor	750 Farads Less than 50 minute charge time over PSU Less than 60 minute charge time over Scanner USB Over 5 hours of use per full charge Over 17,500 scans per full charge Over 700 scans after one minute charge

Communication Characteristics

RF Standard	Bluetooth Version 4.x
RF Frequency Band	2.402~2.4830 GHz unlicensed ISM band
Radio Link Modes	PAIR, PICO, SPP, HID
Communication Range	Up to 100 meters in open space when working with Smart Cradle, line of sight
Supported Profiles	HID (Keyboard), SPP (Serial Port)

Physical Characteristics

Dimensions	126 mm (L) x 77.4 mm (W) x 176.8 mm (D) 4.96 in. (L) x 3.05 in. (W) x 6.96 in. (D)
Weight	335g(with Li-Ion Battery) 306g(with UltraCap™)
Color	Tiffany Blue

Supported Symbologies

1D Linear Codes	Code 39, Code 39 Full ASCII, Code 32, Code 128, GS1-128, Codabar, Code 11, Code 93, GS1 DataBar, Standard & Industrial 2 of 5, Interleaved & Matrix 2 of 5, IATA, UPC/EAN/JAN, UPC/EAN/JAN with Addendum, Telepen, MSI/Plessey & UK/Plessey, GS1 DataBar (formerly RSS) Linear & Linear Stacked
Linear-stacked[*2]	PDF417, Micro PDF417, Composite Codes, Codablock F, Code 16K, Code 49, Linear-stacked
Postal Barcodes	Australian Post, US Planet, US POSTNET, Japan Post, Posi LAPA 4 State Code, German Post, British Post, Intelligent Mail, Korean Post, Dutch KIX Post, China Post

User Environment

Drop Specifications	Withstands multiple drops at 3.0m (9.8ft) to concrete
Tumble	8,000 (3.3ft)/1.0m tumbles
Environmental Sealing	IP68
Operating Temperature	-30˚C to 60˚C (22˚F to 140˚F)
Storage Temperature	-40˚C to 70˚C (-40˚F to 158˚F)
Humidity	5% to 95% relative humidity, non-condensing
Ambient Light Immunity	0 ~ 108,000 lux
ESD Protection	Functional after ±30KV air discharge and ±12KV contact discharge

Safety & Regulatory

EMC & Radio	CE, UKCA, FCC, BSMI, RCM, KC, NCC, VCCI, MIC, SRRC
Safety [*3]	LED IEC 62471/EN 62471, Exempt Group
Environmental	Compliant with RoHS 2.0 and REACH

Accessories

Smart Cradle RF Standard Host Interfaces	HB8133 Smart Cradle Bluetooth Version 4.x USB HID (USB Keyboard) USB VCOM (USB COM port emulation) USB OEM POS Standard RS232
Cables	RS232 Serial Cable USB-A Cable USB-C Cable
Others	UC2210 UltraCap™ (750 Farads) BT2100 Battery Pack (2,550mAh) Power Supply Unit (5VDC, 2A outlet)

1. The Reading Range is measured under manufacturing preset test environmental condition.
2. Codablock F, Code 16K, Code 49, and Chinese Sensible (Han Xin) Code are available upon request.
3. Don't stare into the LED or laser beam.