

# FUZZYSCAN FA480

## 2D Fixed Mount Scanner



### Compact 2D fixed mount scanner for general purpose and embedded applications

Optimized by Cino's exclusive FuzzyScan imaging technology and advanced optical design, the FA480 is built to deliver unparalleled scanning performance within a small form factor. This fixed mount scanner not only captures most barcodes in a flash, but also reads a great number of challenging and problematic barcodes, such as distorted or damaged barcode labels, on-screen barcodes with poor lighting.

The FA480 is ideal for various embedded applications, such as ATM, payment kiosk, ticket validator, reversed vending machine, parcel locker and other self-service terminals. Its durable housing allow it to operate as a stand-alone device for various logistics and manufacturing operations including assembly line, automated guided vehicle, packing station and more. An extensive selection of models is available to fulfill diverse application scenarios.

- Compact and durable design with IP54 sealing
- Powered by AI technology and deep learning
- High motion tolerance design
- Read challenging and problematic barcodes
- Choice of USB, standard RS232, or Universal interface
- Super large scanning field on UW model
- Capable of reading DPM codes on HD model
- Side-view model for space constrained applications
- Operating temperature from -30°C to 60°C
- Inherit Cino's powerful FuzzyScan DNA

### Scan All Your Needs

Powered by Cino's exclusive FuzzyScan imaging technology, the FA480 is capable of reading a vast array of problematic and challenging barcodes, including wrinkled, dirty, soiled, or watermark barcodes that are displayed on paper, plastic, metal, digital screens, and curved surfaces.

### Cutting Edge Imaging Technology

Powered by AI technology and deep learning, Cino's exclusive FuzzyScan imaging technology delivers unrivaled readability and motion tolerance, as well as accuracy across most real-world barcodes.

### Unsurpassed Reading Performance

The FA480 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 FA480 ideal for a wide range of applications.

### Unique Ultra-Wide-Angle Solution

The FA480 Ultra-Wide-Angle (UW) model features an amplified scanning field approximately four times larger than conventional products and a near-contact reading range, improving user experience in various applications. Engineered with ultra-fast motion tolerance of 4.6 m/s and higher, the UW model captures extremely fast-moving barcode with ease, making it the perfect addition to In Vitro Diagnostics (IVD), Reverse Vending Machine (RVM), mobile payment and other applications.



## Exclusive FuzzyScan Imaging Technology

### Ease of Integration

With its compact form factor, as well as two scan directions and three host interface cables to choose from, the FA480 is designed for ease of integration and offers a high level of adaptability.

#### Compact with two scanning directions

The FA480's small footprint allows an easy fit into various devices. You can select either a **front-view** or **side-view** model depending on your orientation needs. The side-view model is particularly suited for space constrained applications.

#### Enterprise-Class Durability

To ensure utmost reliability, the FA480 UW is purposely designed to operate under temperatures between  $-30^{\circ}\text{C}$  to  $60^{\circ}\text{C}$  ( $-22^{\circ}\text{F}$  to  $140^{\circ}\text{F}$ ). Constructed with IP54 sealing, the FA480 UW is excellent for both indoor and outdoor applications.

#### Intelli Button™ for optimal installation

The FA480 is equipped with an Intelli Button™, which not only serves as a physical trigger for manual programming, but can also work as a switch to activate the test mode, allowing users to find the most optimal position for installation.

#### Multiple interfaces

To accommodate host connection requirements, we offer three choices of interface: RS232, USB, and Universal. The Universal model provides great adaptability by supporting external triggers, plus OK and NG signal outputs to fulfill more advanced requirements.

#### Useful user-defined trigger command

This fixed mount scanner supports user-defined trigger command, which allows you to adopt the commands of the replaced scanner with ease, minimizing the amount of integration effort.

#### Smart Scenes™ for rapid adaptation

Similar to a digital camera, the FA480 offers a variety of useful scene options that are optimized for specific application scenarios. This feature enables users to achieve optimal scanning results with minimal efforts.

### An Extensive Lineup

To meet different scanning requirements across diverse application scenarios, a lineup of models is available for selection.

#### Ultra-Wide-Angle model (UW)

Not only provides an exceptionally broad scanning field, but also excels at capturing extremely fast-moving codes.

#### High-Density model (HD)

Optimized to read high-density barcodes and DPM codes with a moderate reading range.

#### Standard-Range model (SR)

Reads most real-world barcodes with an excellent reading range, ideal for various general-purpose applications.



## FUZZYSCAN DNA

### 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 Premium

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

#### iCode

A useful macro command barcode for enabling one-step 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

Image Sensor	1280 x 800 Pixels
Print Contrast	15% minimum reflective difference
Light Source	Red or warm white LED
Imager Field of View	<b>FA480-SR</b> 41.5 ° Hx 25.9 ° V <b>FA480-HD</b> 41.5 ° Hx 25.9 ° V <b>FA480-UW</b> 75.6 ° Hx 50.9 ° V
Min. Resolution	<b>FA480-SR</b> 2.7mil Code 39 4.8mil DM/QR <b>FA480-HD</b> 2.4 mil Code 39 4.5 mil DM/QR <b>FA480-UW</b> 4.0 mil Code 39 7.0 mil DM/QR
Reading Range *1	<b>FA480-SR</b> 13 mil (0.33mm) UPC/EAN up to 23.2" <b>FA480-HD</b> 13 mil (0.33mm) UPC/EAN up to 16.5" <b>FA480-UW</b> 13 mil (0.33mm) UPC/EAN up to 12.1"
Roll, Pitch, Skew	Roll: 360 ° ; Pitch: ± 75 ° ; Skew: ± 65 °
Motion Tolerance	<b>FA480-SR</b> Steadily read over 153 cm/s, with max. speed up to 617 cm/s (243 in/s) <b>FA480-HD</b> Steadily read over 153 cm/s, with max. speed up to 617 cm/s (243 in/s) <b>FA480-UW</b> Steadily read over 460 cm/s, with max. speed up to 920 cm/s (362 in/s)
Configuration Setup	FuzzyScan Barcode commands FuzzyScan iCode FuzzyScan PowerTool
Host Interfaces	USB HID (USB Keyboard) USB VCOM (USB COM port emulation) Standard RS232 serial
Data Processing	DataWizard Premium
Image Capture	BMP format

## Physical & Electrical Characteristics

Dimensions	47.6 mm (L) x 40.6 mm (W) x 25.6 mm (H) 1.87 in. (L) x 1.60 in. (W) x 1.01 in. (H)
Weight	101g
Scanning Directions	Choice of front-view or side-view scanning direction
Connector	FA480-xx-00x 9-pin D-sub female FA480-xx-11x 4-pin USB Type A FA480-xx-98x 15-pin D-sub HD female
Input Voltage	5VDC ± 10%
Current	Operating: Typical 360 mA @5VDC Standby: Typical 220 mA @5VDC

## Decode Capabilities

1D Linear Codes	Code 39, Code 39 Full ASCII, Code 32, Code 128, GS1-128, Codabar, Code 11, Code 93, 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, Linear & Linear Stacked
2D Codes	PDF417, Micro PDF417, Codablock F, Code 16K, Code 49, Composite Codes, DataMatrix, MaxiCode, QR Code, MicroQR, Aztec
Postal Barcodes	Australian Post, US Planet, US Postnet, Japan Post, Posi LAPA 4 State Code

## User Environment

Drop Specifications	Withstands drops from 1.5m (5ft) to concrete
Environmental Sealing	IP54
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 ~ 100,000 Lux
ESD Protection	Functional after 15KV discharge

## Safety & Regulatory

EMC	CE, FCC, BSMI, VCCI, KC
Safety *2	LED Eye Safety IEC62471, Exempt Group
Environmental	Compliant with RoHS directive

## Accessories

Cables	USB Cable Converter RS232 Cable Converter
Others	5VDC Power Supply Unit

1. The Reading Range are measured under Cino's test environmental condition.
2. Don't stare into the LED beam.

