

# FM480 Series

A Durable, High Performance Fixed Mount Scanner  
for General Purpose and Industrial Applications

Durable overmold construction  
and IP54 design

Ultra-compact and easy  
mounting design for flexible  
integration

Choice of front-view or side-view  
model for diverse application  
demands

Rich indication and user interface  
for intuitive operation

Support both external trigger and  
serial trigger

Additional OK and NG output  
signals for precise reading control

Useful test mode for quick and  
optimal installation

Outstanding reading capability  
on 3 mil barcode with more than  
3" depth of field

Up to 34" reading range on  
general barcodes

High speed scanning rate up to  
500 scans per second for snappy  
barcode capture

Unsurpassed readability on low  
contrast, soiled, poorly-printed  
or damaged barcodes

Supports GS1 DataBar, PDF,  
MicroPDF and composite code



Integrated with the innovative FuzzyScan 3.0 Imaging Technology and durable ultra-compact design, the FM480 series Fixed Mount Scanner from Cino impresses the user with outstanding scanning performance and industrial level dependability. This cost-effective FM480 creates the best value to boost your productivity for industrial and general purpose applications.

## Ultra-compact yet durable design

Thanks to the ultra-compact, robust overmold and IP54 rating construction, the FM480 is not only ideal for embedded scanning solutions such as kiosks and lottery terminals, but also perfect for industrial applications such as conveyer line scanning and test tube verification. The choice of front-view or side-view model and the design of industrial level M3 mounting holes make FM480 easy to be mounted anywhere and integrated with any device.

## Rich user interface and useful test mode

Equipped with 3 visible LED indicators and audible beeper, FM480 provides intuitive indication for users to monitor the reading status. The useful test mode allows users to identify the optimal reading position with ease.

## Outstanding reading performance

The FM480 provides superb performance on reading damaged, smudged, poorly-printed and low contrast barcode labels that are commonly found in the real world quickly and accurately.

# Specifications

## Performance Characteristics

|                     |  |
|---------------------|--|
| Optical System      | High performance Linear Imaging Engine   |
| Print Contrast      | 20% minimum reflective difference  |
| Minimum Resolution  | Typical 3 mil (Code 39, PCS 0.9)   |
| Working Distance *1 | Up to 24 inches on 100% UPC/EAN symbols<br>Up to 34 inches on 20 mil Code 39                 |
| Light Source        | 630nm visible red LED  |
| Scan Rate           | Dynamic scanning rate up to 500 scans per second   |
| Reading Direction   | Bi-directional (forward and backward)  |
| Pitch/Skew/Tilt     | ± 65° / 65° / 55°  |
| Operating Modes     | Trigger, Alternative, Level, Force, Presentation   |
| Host Interfaces     | RS232 serial<br>USB HID (USB Keyboard)<br>USB COM port emulation                             |
| User Interfaces     | 3 LEDs for power, Status, OK/NG indications<br>Test button<br>Programmable beeper            |
| Configuration Setup | Bar code command, Serial command<br>Windows utility - FuzzyScan PowerTool                    |
| Data Editing        | Condensed DataWizard via bar code command<br>Full-feature DataWizard via FuzzyScan PowerTool |

## Supported Symbolologies

|                |  |
|----------------|--|
| 1D Linear      | Code 39, Code 39 Full ASCII, Code 32, Code 39 Trioptic<br>Code 128, GS1-128, Codabar, Code 11, Code 93<br>Standard & Industrial 2 of 5, Interleaved & Matrix 2 of 5<br>German Postal Code, China Postal Code, IATA<br>UPC/EAN/JAN, UPC/EAN/JAN with Addendum<br>Telepen, MSI/Plessey & UK/Plessey<br>GS1 DataBar (formerly RSS) Linear, Linear-stacked |
| Linear-stacked | PDF417, Micro PDF417, Codablock F, Composite   |

## User Environment

|                        |  |
|------------------------|--|
| Drop Specifications    | Withstand 1.5m/5ft. drop to concrete       |
| Environmental Sealing  | IP54                                       |
| Operating Temperature  | -10°C to 50°C (14°F to 122°F)              |
| Storage Temperature    | -40°C to 70°C (-40°F to 158°F)             |
| Humidity               | 5% to 95% related humidity, non-condensing |
| Ambient Light Immunity | 0 ~ 100,000 lux                            |
| ESD Protection         | Functional after 15kV discharge            |

## Physical & Electrical Characteristics

|               |  |
|---------------|--|
| Dimension     | 47.6 mm (L) x 40.6 mm (W) x 23.1 mm (D)<br>1.87 in. (L) x 1.60 in. (W) x 0.91 in. (D)                              |
| Weight        | 120g (RS232 and Universal version)<br>95g (USB version)  |
| Scan Window   | Choice of front-view or side-view model  |
| Connector     | 9-pin D-sub female (RS232 version)<br>USB 4-pin Type A (USB version)<br>15-pin D-sub HD female (Universal version) |
| Mounting      | 2 screw holes (M3 x 4mm in depth)  |
| Input Voltage | 5VDC ± 10%   |
| Current       | Operating : Typical 165 mA @5VDC<br>Standby : Typical 70 mA @5VDC  |

## Safety & Regulatory

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

## Accessories

|        |                        |
|--------|------------------------|
| Cables | USB Power Steal Cable  |
| Others | 5VDC Power Supply Unit |

## Accessories



1. The reading distances are measured under Cino's test environmental condition.  
2. Class 1M LED product. Do not view directly with optical instruments.