# MIR3+

**High Performance Cost-Effective Area Barcode Scanning Module**

**CHAMPTEK** ®
*We value your ID's*

## Introduction

The MIR3+ module is a high performance, omni-directional area imager barcode scanner. It drivers the same high-quality when your products need to capture 1D and 2D bar codes, Its good ability to read bar codes that are printed on paper labels or displayed on the screen of a mobile phone or computer ;and the rapid scanning speed that protects worker productivity and the customer experience. With the MIR3+,you can create products that will make a difference for your customers – and their customers.  It is designed for various built-in and OEM solutions, such as self-service kiosks,POS(Point-of-Sales) terminals, ATM, price checkers, healthcare and mobile device solutions etc.

Numerous features make it easy to integrate the MIR3+ ,from two mounting areas options, keep imager on PCB board or standalone with a FPC to connect with board, and through documentation to a scan engine development board. With a multitude of software configuration through Idea set utility, you can easily optimize the performance of the MIR3+ for your application.

MIR3+ module is a high performance area imager scanner, provides customers with the most cost-effective solution in the market and perfectly suitable and definitely the best choice for any OEM and built-in application.
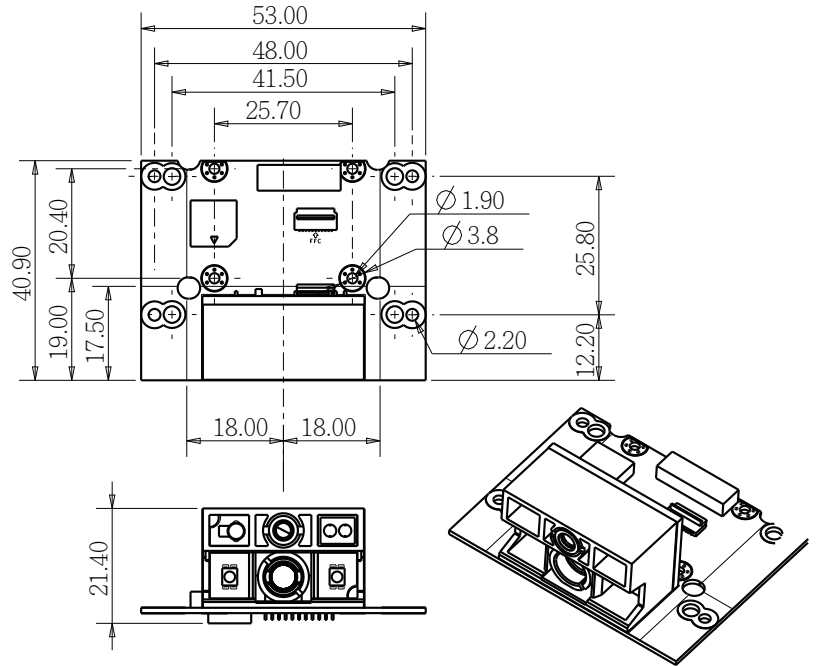
## Features

- Omni-directional scan pattern, no need to align barcode and scanner, ensuring user comfort and protecting worker productivity.
- Easily integrated with various OEM application while 1D and 2D barcode scanning.
- Focused Green-coloured crisp square 'spot' for accurate aiming and first time barcode capture.

- Flexible mounting options, either mounting on external or inner screw holes.
- With a multitude of software configuration options, you can easily optimize the performance of the MIR3+ for your application.

# MIR3+

## Reading Range

| Barcode mil | Depth of field |
|---|---|
| 4mil Code39 | 40~70 mm |
| 5mil Code39 | 40~90 mm |
| 6mil Code39 | 50~100 mm |
| 10mil Code39 | 50~230 mm |
| 13mil Code39 | 50~250 mm |
| 20mil Code39 | 50~300 mm |
| 10mil QRCode | 45~ 70 mm |
| 20mil QRCode | 50~170 mm |
| 10mil PDF417 | 35~150 mm |
| 20mil PDF417 | 80~255 mm |
| 13mil Data Matrix | 35~ 60 mm |
| 20mil Data Matrix | 50~100 mm |



## Specifications

### ● Physical Characteristics

| Weight | |
|---|---|
| Body weight | Approx. 0.67 oz (19.2g) |
| USB Cable weight | Approx. 1.79 oz (51g) |
| RS232 Cable weight | Approx. 2.32 oz (66g) |
| Material | Polycarbonate |
| Dimension | 53.00mm W x 40.90mm D x 21.40mm H (Wide board with two mounting area) 36.00 mm W x 40.90 mm D x 21.40 mm H (Narrow board with one mounting area) 30.20 mm W x 16.90mm D x 18.50mm H (Imager size with sensor board) |

### ● Electrical Characteristics

| Interface | RS232 | USB-HID(or Virtual COM port) |
|---|---|---|
| | DC Adaptor | USB Power |
| Supply Voltage | DC+5V±5% | DC+5V±5% |
| Current Draw | ±10% | ±10% |
| Stand by (Typ.) | 180mA | 180mA |
| Operation (Typ.) | 360mA | 360mA |

### ● Environmental

| Operating Temp. | 0°C to 50°C (32°F to 122°F) |
|---|---|
| Storage Temp. | -20°C to 70°C (-4°F to 158°F) |
| Relative Humidity | 20% to 95% (Non-condensing) |
| Ambient Light | Works in any lighting conditions from 0 to 100,000 lux |

### ● Performance

| Light Source | Visible red light 625nm(±5nm) LED |
|---|---|
| Scan Rate | 60 images per second |
| Sensor Resolution | 752 (H) x 480 (V) pixels |
| Field of View | Horizontal -40°, Vertical -25° |
| Pitch Angle | 5°~60°(±5°) |
| Skew Tolerance | 5°~60°(±5°) |
| Roll | 360° |
| Indicator | Good read beep |

### ● Reliability

| Life Time | |
|---|---|
| MTBF(Calculated) | 50,000 hours |
| Thermal Shock | |
| Low Temp. | -20°C (-4°F) |
| Cycle time | 30 minutes for high temp., 30 minutes for low temp. |
| Cycles | 24 cycles |
| Mechanical Shock | 2000G,0.7ms,half sinus,3axes' |
| Vibration | 8G r.m.s,from 10 to 500Hz,2 hours per axis, 3 axes |

### ● Readable Symbologies

**1D Symbologies**
UPC-A,UPC-E,EAN-8/JAN-8,EAN-13/JAN-13,Code 39,Code 128, Interleaved 25,Industrial 25,Matrix 25,Codabar/NW7, Code 93,China Post,MSI/Plessey,Telepen,GS1 Databar Omni-directional, GS1 Databar Limited,GS1 Databar Expended

**2D Symbologies**
Data Matrix,PDF 417,QR Code
Option :
Aztec,Maxi Code,Micro PDF 417,Micro QR Code,Han Xin Code,GM Code

Due to Champtek's / Scantech ID's continuing product improvement programs, specifications and features are subject to change