

# SPECIFICATION

Customer : \_\_\_\_\_

Item: \_\_\_\_\_

Model No. : **MCR14S** \_\_\_\_\_

Date :2018.02.26 \_\_\_\_\_

Champtek P/N. : \_\_\_\_\_

Spec. Version & Revision Date:        V01        2018.02.26 \_\_\_\_\_

File Name: \_\_\_\_\_

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**Revision History**

Version	Date	Context
V00	2016.03.25	Golden release
V01	2018.02.26	Performance update

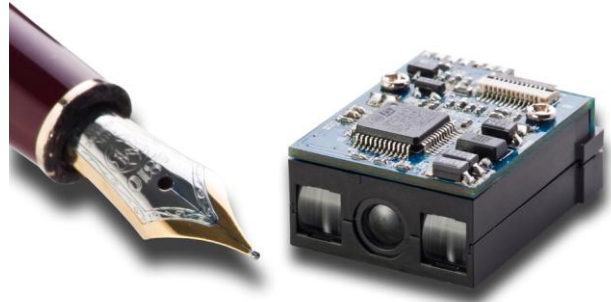
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**Due to Champtek's / Scantech ID's continuing product improvement programs, specifications and features are subject to change without notice.**

## A. General Description

The MCR Series brings the benefits of bar code scanning to a variety of OEM devices.



The MCR Series Scan Module is a perfect choice for your OEM design. The MCR Series brings the benefits of bar code scanning to all types of OEM devices. Now kiosks, medical instruments, diagnostic equipment, lottery terminals, vending machines and countless other appliances can all be equipped with the leading-edge scanning technology and reliability.

The MCR Series has been designed to provide the highest scanning performance in the smallest package possible. For added versatility, allowing for fast, cost-effective interchangeability when upgrading or modifying your OEM device for specialized applications.

MCR14S is a CMOS bar code decoding capabilities. MCR14S decode board is powered by a fast processor and to decode a wide array of 1D bar codes. The decode board is compatible with Utility, a PC-based software for easy Configuration.

The MCR14S is designed with the industrial standard size, mounting options and output to facilitate integration into existing applications. The Scanner module's miniature size makes MCR14S ideal for integration into data terminals and other small devices. MCR14S is supplied as an assembled module with a mounting bracket or as separate components for custom mounting.

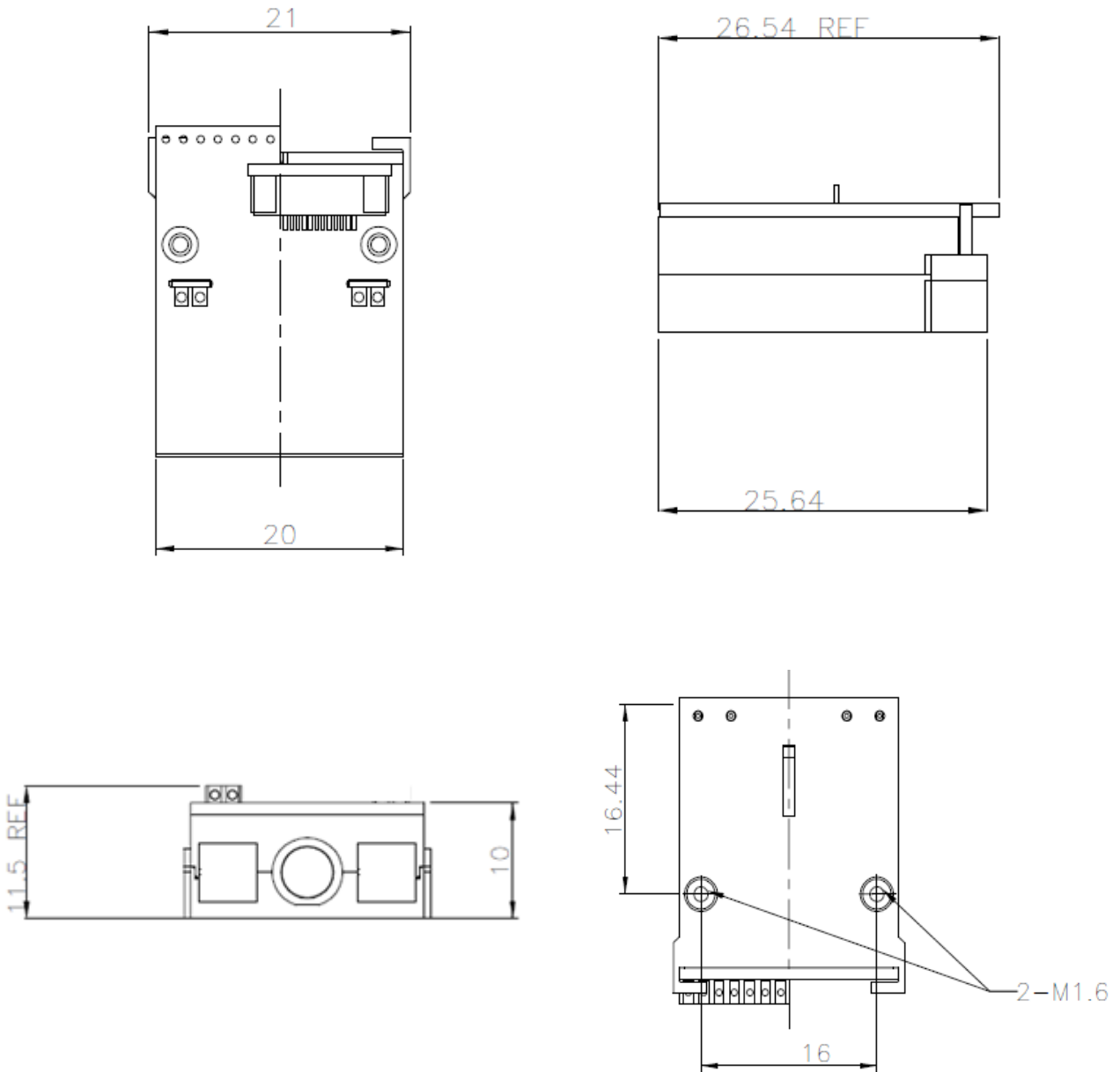
**Pb-Free (RoHS Compliant).**

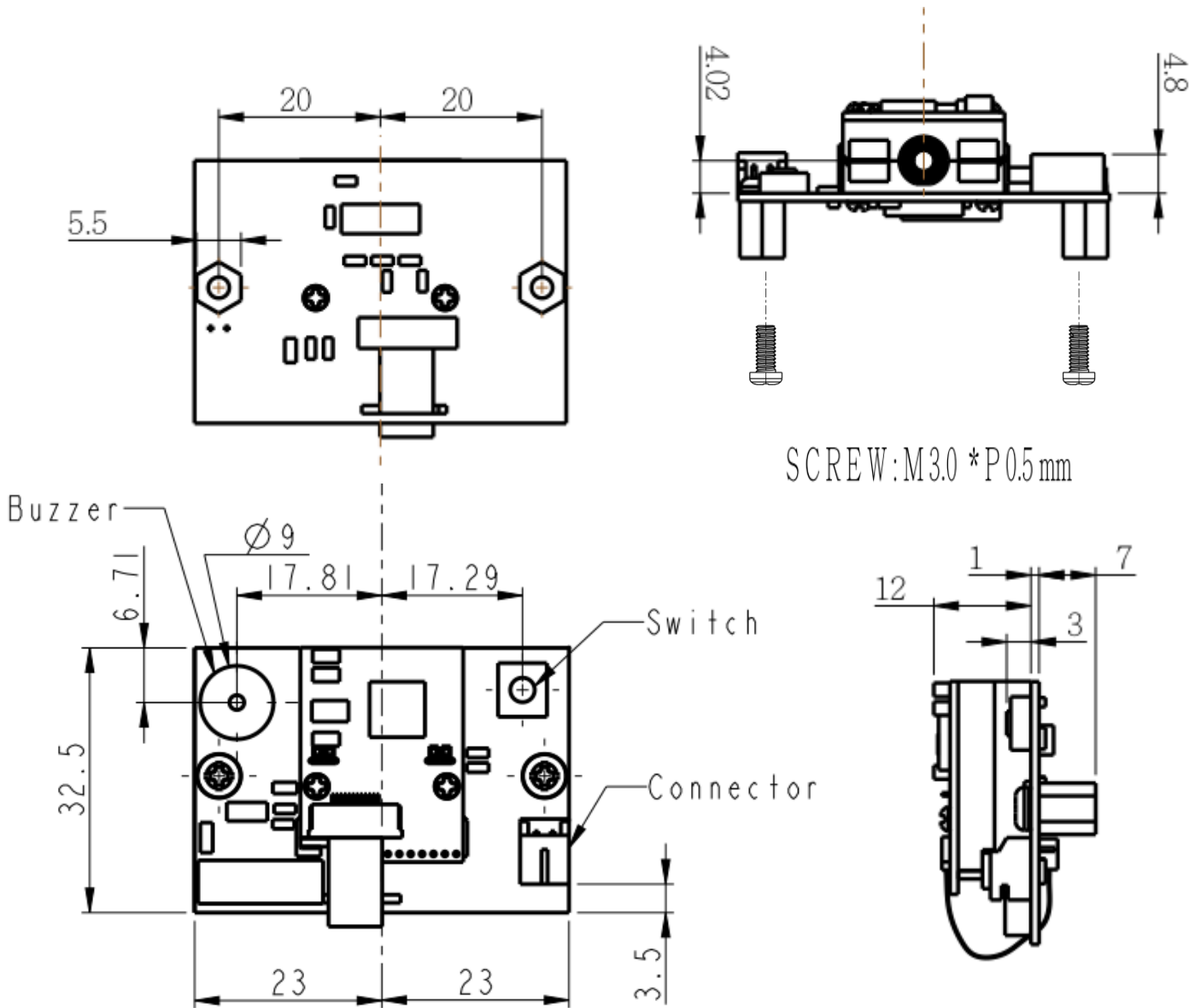
### B. Physical Characteristics

Weight	
Body weight	Approx. 7g
Material	ABS+ Glass Reinforced Plastic
Connector	FPC 12pin Pitch 0.5
Dimension	20mm W x 11.5mm H x 25mm L

#### Mechanical drawing

Unit : mm





**C. Electrical Characteristics**

Interface	RS232 TTL	USB
Supply Voltage		DC +5V ±5%
Output Voltage (Typ.)		+5V±5%
Output low Voltage (Max.)		0.7V
Current Draw		±10%
Power On (Typ.)	170mA	170mA
Stand by (Typ.)	50mA	50mA
Operation (Typ.)	150mA	150mA

## D. Performance

Light Source	Visible Red light 632nm LED
Sensor	Linear CMOS Sensor
Processor Type	32-bit
Operating Freq.	8 MHz (Internal)
Scan Rate	Smart detection, up to 100 scans per second
Reading Distance	Up to 250mm@20mil/0.5mm, PCS90%
Print Contrast Ratio	25%
Resolution	4mil/0.1mm@PCS90%
Indicator	Beep

Reading Angle	<i>Test Conditions : Code 39, 10mil/0.25mm,PCS90%</i>
Pitch Angle	5°~60° (±5°)
Skew Tolerance	5°~60° (±5°)
Ambient Light	10,000 Lux Max.

## E. Environmental

Operating Temperature	0 °C to 50 °C (32 °F to 122 °F)
Storage Temperature	-20 °C to 70 °C (-4 °F to 158 °F)
Relative Humidity	20% to 95% (Non-condensing)

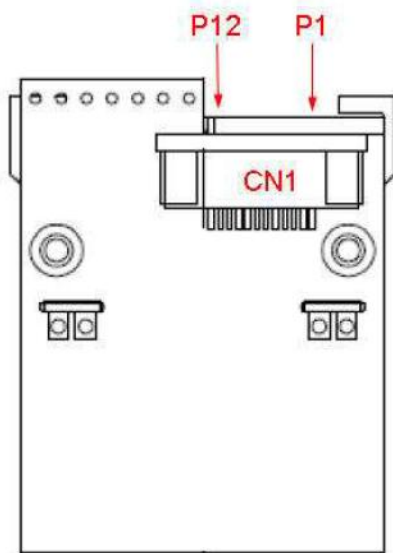
## F. Readable Symbologies

	Readable	Default Enable
All UPC/EAN/JAN	V	V
EAN128 Code	V	
Code 39	V	V
Code 39 Full ASCII	V	
Code32 / Italian Pharmacy	V	
Code 128	V	V
CODABAR/NW7	V	V
Interleave 25	V	V
Industrial 25	V	
MSI/PLESSEY	V	
Code 93	V	
China Postage	V	
GS1 DataBar	V	



## G. Decoder Data Output Connector

Type	FPC 12pin Pitch 0.5
Pin No.	Function
1	TG
2	AIM WAKEUP(Reserved)
3	GREEN LED
4	BZ
5	POWER DOWN(Reserved)
6	RTS
7	CTS
8	TXD (D+)
9	RXD (D-)
10	GND
11	VCC
12	Reserved



## H. Trigger Command

The RS-232 and USB Virtual COM command format for trigger is as following.

<STX> <TG> <ETX> <CHKSUM>

02 82 03 83 => HEX

Input 02820383 to trigger scanning.

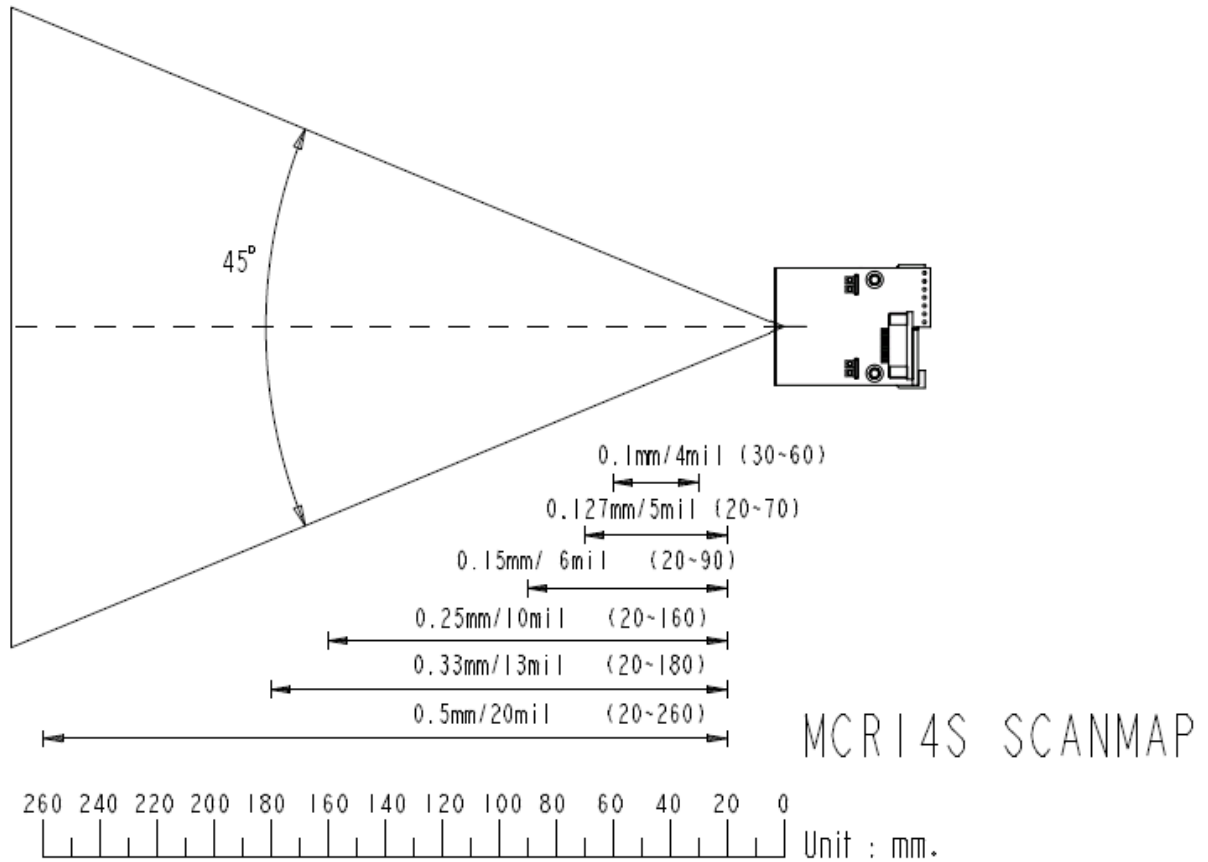
The USB(HID) command format for trigger is as following.

CCCCC <STX> <TG> <ETX> <CHKSUM>

CCCCC 02 83 03 83 => HEX

Input CCCCC02830383 to trigger scanning.

**I. Scan Map**



**J. Reliability**

<b>Life Time</b>	
Light Source	40,000 hours
MTBF(Calculated)	50,000 hours
<b>Thermal Shock</b>	
High Temp.	60 °C (140 °F)
Low Temp.	-20 °C (-4 °F)
Cycle time	30 minutes for high temp. , 30 minutes for low temp.
Cycles	24 cycles
<b>Mechanical Shock</b>	2000G, 0.7ms, 3 axes