eProx® MCM Module

Multi-Chip OEM Reader Module • 4025

HID

ACCESS reliability.

Application

The Multi-Chip Module (MCM) provides the functions of an HID proximity reader on a single integrated circuit. The "Prox by HID"™ technology can be easily integrated to an existing electronic module and is able to be surface mounted to an existing PCB.

The MCM enables RFID technology to be added to a wide array of electronic devices, including alarm panels, electronic door locks, biometric readers, logical access devices and process control equipment.

Features

◗ Allows OEMs to make their own HID interoperable readers, while retaining their own design aesthetics and product identity.
◗ Reduces development and per-unit costs by sharing existing components in the OEM module, such as LED, beeper, voltage regulator and transient suppression.
◗ Interoperable with all HID cards and readers.
◗ Offers Wiegand Data 1, Data 0, and Clock and Data output features.
◗ Provides output for a bi-color LED.

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The MCM Reader hardware includes the following basic features:
• Microcontroller
• 8 MHz ceramic resonator
• 128 byte EEPROM
• FSK base-band receiver circuitry
• Antenna exciter drive circuitry
• External bicolor LED drive capability
• External beeper drive capability

Customer Supplied Components
Several functions are partitioned outside of the MCM Reader due to their size or power dissipation requirements, or because existing electronic modules (i.e., alarm system keypads and control panels) already incorporate these functions. The MCM User Manual includes full instructions and recommended schematics for designing and connecting these functions to the MCM Reader, including:

• Voltage regulator
• Series resonant antenna circuit
• Peak detection circuit
• Transient surge protection
• Sounder
• LED's for user feedback
• Reset circuitry

Environmental Characteristics
Operating temperature range
-30°C to 65°C (-22°F to 150°F)

Storage temperature range
-40°C to 85°C (-40°F to 185°F)

Operating humidity range
5% to 95% non-condensing

Operating vibration limit
.04 g2/Hz 20-2000Hz

Operating shock limit
30g, 11mS, Half Sine

Power Requirements
Power Supply
Linear type recommended

Operating voltage range
4.5VDC – 5.5VDC
Absolute maximum
6.0VDC
Peak current
<150mA

Operating Parameters
Reader LED control
Red & Green External
Input Wiegand data pulse widths
20μSec - 100μSec
Frequency of Operation
125 KHz +/- 1 KHz
Input Wiegand data interval
200μSec – 20mSec

Accuracy
The unit will not have more than 1 misread per 10 million.

Factory Configurable Options
The reader MCM will be configurable via command cards.

Mounting Option
The Reader MCM is designed to be a surface-mount part. By adding mounting pads to a circuit board as per the package specification drawing (included in product documentation), the part can be attached like any other surface mount IC.

Base Part Number: 4025.

Specifications subject to change without notice. (Please see "How to Order" guide for a description of the options and associated part numbers).

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