

How Do Magnetic Card Readers Work?

Magnetic card readers use electronic technology to decipher the various tracks contained on the magnetic strip found on the back of credit, debit, and gift cards to provide you customer and banking information for complete point of sale transactions.

What Kind of Magnetic Card Reader Should I Buy?

There are a few important factors to take into consideration when trying to decide on a magnetic card reader for your POS system. These considerations include readability, durability, interface, track numbers, programmability, media types, and card encryption options.

Readability

Magnetic card readers are designed for either high volume or standard volume use. High volume card readers are equipped with components for a longer read life and are usually constructed of metal. They have a longer reading channel, which ensures a successful scan on the first pass. High volume card readers also have higher volume prices, but pay for themselves in durability and performance. They are recommended for retail environments with very high transaction volumes, such as a chain store.

Standard volume card readers are fine quality card readers for normal point of sale operations. These units occasionally require an additional pass to read the card and have a shorter reading life than higher volume models. They are economical, reliable, and a popular choice for most POS systems.

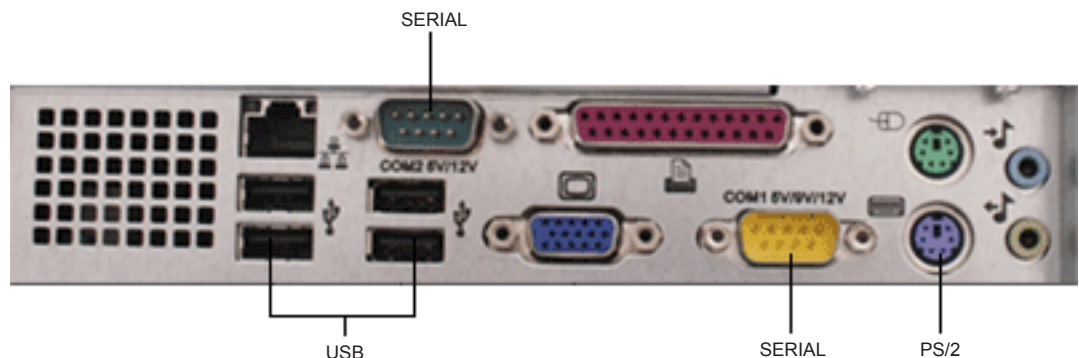
Durability

You need to consider factors such as the environment of intended use and frequency of use when selecting a card reader. Is your POS counter in a climate controlled area or outdoors? Is it operating in an unsecured self service kiosk or only by employees? Outdoor or public use of magnetic card readers warrants a metal constructed and/or weatherproof card reader.

Interface

Magnetic card readers are available with three different interface options: USB, PS/2 Keyboard Wedge, and Serial. The two most commonly used are the USB and PS/2, which send information back to the computer as if it were typed on a keyboard. Card readers connected via serial interfaces may require special software to interpret the data from the card reader. Most models are available with a variety of interface choices- you will need to select the part number with the proper interface for your POS set up.

► Back of Computer View



▶ Serial Connection Card Reader Example



SERIAL CABLE



COMPUTER PORT



▶ USB Connection Card Reader Example



USB CABLE



COMPUTER PORT



▶ PS/2 Connection Card Reader Example



PS/2 CABLE



COMPUTER PORT



▶ Integrated Card Reader Example



Track Numbers

Magnetic stripes on the back of cards can contain up to three different “tracks” of programmed information. The number of tracks used on a card depends on the type of card. Standard credit cards utilize track 1 and track 2. Track 3 may be used by other types of cards. Because magnetic card readers come in two track and three track versions, it is important to verify what information will be encoded on the types of cards you may be using.

Programmability

While all card readers are designed to read track 1 and track 2, or tracks 1,2, and 3 data right out of the box, most card readers can actually be programmed to divide, rearrange, edit, and validate fields of magnetic card data. Programming your card reader to change the way the data is viewed is important when running software that requires delivery of the data in a certain format. Keep in mind that using programming functionality of your card reader is an advanced feature and may require manufacturer support.

Media Types

All magnetic card readers read magnetic stripes, but some manufacturers offer combination models that also feature the ability to read barcodes. There are also slot card readers designed only to read barcodes. Some examples of cards media types that may use barcodes include membership cards, and employee and student ID cards.

Card Encryption

Securing customers' credit card data is the prime focus of PCI compliance. Encrypted magnetic card readers provide greater security than readers that send plaintext data, encrypting data at the time of reading, and transmitting that encrypted data to your credit card processor. These readers must be preprogrammed by your merchant account provider, though many can be updated remotely to meet any changing requirements.

Models to Try

High Volume



ID Tech EasyMag

Standard Volume



ID Tech MiniMag

Durability



ID Tech Omni

Reads Barcodes



UniTech MS146

Encrypted



Mag-Tek Centurion

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