



Visa Merchant Recommendations for Placement of Contactless Card Readers

The Visa Contactless Payment Platform offers Cardholders and Merchants a faster, more convenient payment method. Visa International has developed the following recommendations as general guidance for the placement of contactless card reading devices in a Merchant retail environment.

These recommendations are based on laboratory tests conducted on behalf of Visa International and industry best practices. They are intended to provide guidance to expedite contactless card reader integration into a Merchant point-of-sale environment and ensure efficient operation.

Where available, Visa has provided specific guidelines and placement recommendations. Merchants should consult with their Acquirers, Visa regional representatives, contactless card reader manufacturers, and installation technicians to determine the optimal implementation in their retail environment. There may be additional specific domestic and regional placement recommendations and/or requirements. Merchants and Acquirers are advised to consult with a Visa regional representative.

It is important to note that all contactless card readers must be tested and approved to support Visa Contactless Payment prior to their placement in Merchant retail environments. As a general rule, Merchants should consult with their Acquirers and contactless card reader manufacturers to determine the current approval status of their contactless card readers. The website www.visa.com/industryservices will list contactless card readers as they are approved.

1. **Compliance with Local Regulatory Requirements**

The contactless card reader must comply with all local market legal regulations ranging from electromagnetic emissions to consumer privacy.

2. **Proximity of Contactless Card Readers to Anti-Theft Devices**

The contactless card reader should be placed at least 200 centimeters (78.74 inches) away from an anti-theft Radio Frequency Identification (RFID) device. In laboratory tests, an anti-theft RFID device disrupted a contactless transaction when placed within 200 centimeters (78.74 inches) of the contactless card reader.

3. **Proximity of Contactless Card Readers to Transmitting Devices**

Active transmitting devices (e.g., mobile telephones, personal digital assistants, pagers, etc.) can disrupt a contactless transaction if it is very close to a contactless card while the card is attempting to communicate with a contactless card reader.

If the Cardholder presents the contactless card while holding an active transmitting device in the same hand, the transaction may be adversely impacted. The remediation is for the Cardholder to move the active transmitting device away from the contactless card and reader and represent the contactless card. A label or placard may be placed near a contactless card reader to advise Cardholders not to place an active transmitting device very close to a contactless card while it is communicating with a contactless card reader.



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4. ***Susceptibility of Contactless Card Readers to Electromagnetic Interference***

The contactless card reader should not be placed in close proximity to electrically powered equipment which can generate electromagnetic interference or static electricity, such as: personal computers, lighted displays, cooking appliances, or refrigeration equipment.

Visa recommends that:

- The point-of-sale device and contactless card reader power supplies are fitted with transient arrestor devices for protection from power surges.
- The contactless card readers should not be placed near equipment that switches inductive loads such as electrical distribution junctions as protection against interference.
- All electrically powered devices in use near a contactless card reader, such as cash registers, should be regularly tested to ensure proper electrical grounding and that there are no loose electrical connections or unshielded cables.
- Equipment that is improperly grounded or has exposed wiring could generate electromagnetic interference, which could adversely impact the operation of a contactless payment transaction.

5. ***Contactless Card Readers Mounted on Motor Vehicles***

A contactless card reader mounted on a motor vehicle should be positioned away from high voltage vehicle components such as ignition coils, ignition wires, and lamp relays. The card reader power supply should be from an auxiliary source with voltage filtering/smoothing. This protects the contactless card reader from potential interference and ensures the efficient performance of the contactless payment transaction.

This recommendation applies to any deployment scenarios involving motor vehicles such as buses or trains. Close proximity to a vehicle's electrical systems or unshielded internal electrical wiring, such as direct placement over the electrical system, could have a negative impact on a contactless card reader operation. Merchants should consult with their Acquirers, Visa regional representatives, contactless card reader manufacturers, and installation technicians to determine possible impacts on transaction interference.

6. ***Proximity of Contactless Card Readers to Metallic Material***

Metallic material positioned in between a contactless card and a contactless card reader will prevent the card and reader from communicating. Visa recommends that the space in between the card and reader should be clear of metallic material.

7. ***Proximity of Multiple Contactless Card Readers within Limited Retail Counter Space***

Merchants should place contactless card readers at least 30.48 centimeters (12 inches) away from each other. In retail locations where counter space is limited, the magnetic field of multiple readers in close proximity may overlap; thus disrupting the contactless transaction when a single contactless card is presented.

