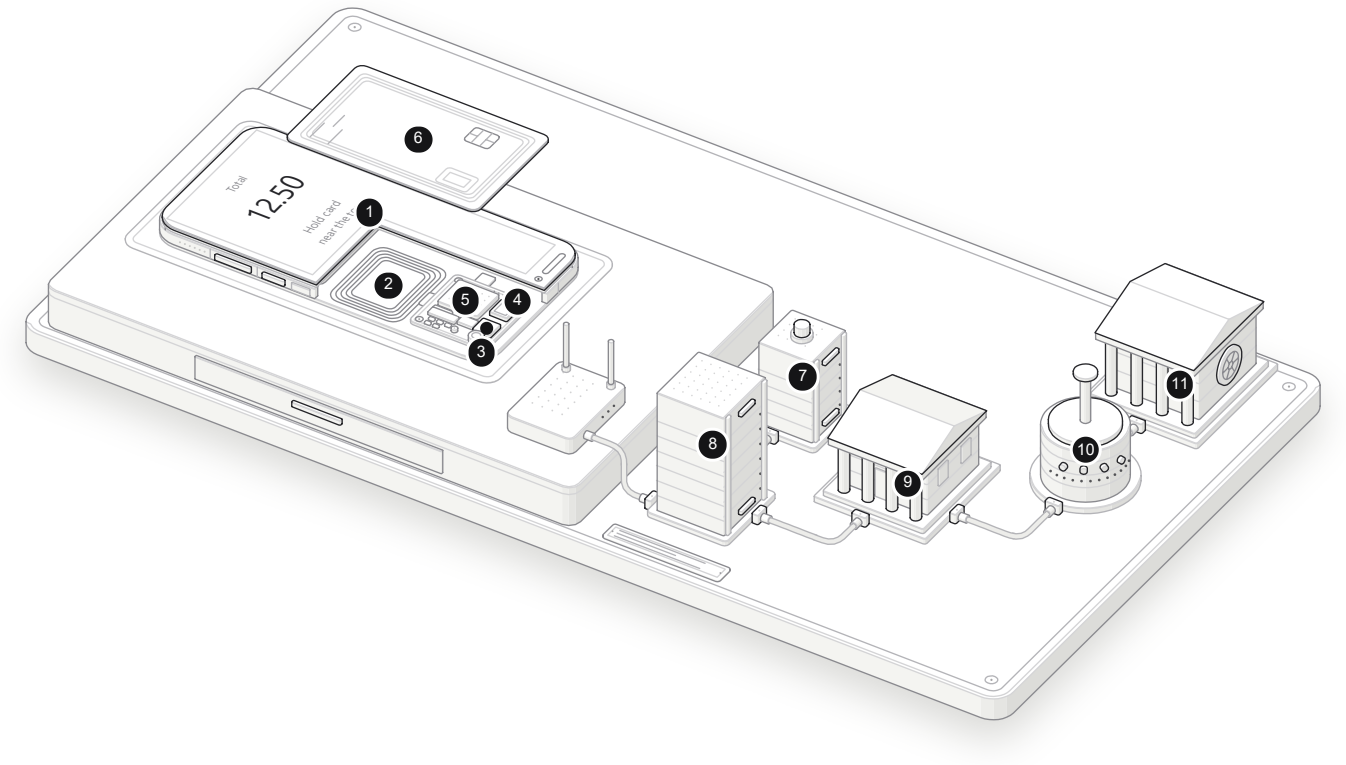
SoftPOS

TX-S1
HOW IT WORKS
AN ORDINARY PHONE, A SEALED CARD READ, A WATCH SERVER



How can an ordinary phone take a card payment safely?

The phone's own NFC coil powers a contactless card, which answers with a one-time code. The payment software encrypts the card data the moment it is read and seals any PIN into an encrypted PIN block. A watch server keeps checking the phone and the app, and the sealed data travels to the shop's bank, the card network and the card's bank, which says yes or no.

13.56 MHz
FIELD THAT POWERS THE CARD

1 code
ONE-TIME CODE, MADE FOR THIS PAYMENT ONLY

4 format
ISO 9564 PIN BLOCK THE PIN IS SEALED INTO

0
CARD DATA KEPT ON THE PHONE (EXCEPT OFFLINE PAYMENTS)

01 **Screen**
Shows the amount and, above the limit, a PIN pad that blocks screenshots.

02 **Reader coil**
Makes the 13.56 MHz field; its place differs by phone model.

03 **NFC chip**
Reader mode; other apps are kept off it during a payment.

04 **Security chip**
Some phones have one for keys; the standard does not require it.

05 **Main board**
Runs the payment app and its card-reading software.

06 **Contactless card**
No battery; the field powers its chip, which answers with a one-time code.

07 **Watch server**
Checks the app's reports and can stop payments.

08 **Payment back end**
The only place that can open the sealed card data and PIN block.

09 **Shop's bank**
The acquirer: sends the payment on.

10 **Card network**
Carries the request to the card's bank.

11 **Card's bank**
The issuer: checks the code and says yes or no.