



RuPay Contactless



NPCI has defined specification, which is based on dual interface contact and contactless and support both offline (balance on card) and online transactions.



Debit/Prepaid

**Card
Balance**

**Service
1**

**Service
2**

Contact + Contactless

Interoperable

Balance and Service on card

Offline: Purchase and Service

Online: Purchase, Service and Money Add

Pricing: Offline and Online





Key Features of RuPay Contactless

Key Functions	RuPay contactless Proposition
Card Type	<ul style="list-style-type: none">• Can be issued as Debit & Prepaid card
Standard	<ul style="list-style-type: none">• EMV standard in Contact mode• RuPay proprietary specifications in contactless mode
Device Interface	<ul style="list-style-type: none">• Offline(contactless) & online(Contact & contactless) transactions
Use cases	<ul style="list-style-type: none">• High value payments in modern Retail• Low value payments in Transit, Toll, Parking & Retail
Card Balance	<ul style="list-style-type: none">• Provision of storing balance on the card• Card balance can be topped up via cash & through online account
Storage Space	<ul style="list-style-type: none">• Provision for storing Acquirer or transit operator specific information or business rule e.g. seasonal pass
Security	<ul style="list-style-type: none">• Underlying technology is EMV which is adopted globally to safeguard against frauds
Channels	<ul style="list-style-type: none">• Can be used at ATM,POS and Ecommerce website to make payments





Transaction Types

Contact Transaction Type	
Channel	Transaction Type
PoS	Purchase
	Purchase with Cash Back
	Cash @ PoS
	Decline Advise
	Reversal Advise
	Service Creation
	Money Add
	Balance Inquiry

Contactless Transaction Type	
Transaction Mode	Transaction Type
PoS	Purchase
	Service Creation
	Money Add
	Balance Inquiry





Product Variant

Key features	Type 1	Type 2
Transactions supported	Online (Contact + Contactless)	Online (Contact + Contactless) and Offline (Contactless only)
Date Storage – Service creation	No service creation provision	Provision to create service area
Card Balance management	No card balance management is required, since, issuer does not support service based transactions	Issuer needs to make provision in their host system to process RuPay contactless service based transaction.
Settlement	Existing settlement process to be followed	Settlement systems required to be upgraded to support offline transaction settlement
Certification	Issuer host certification : Online (Contact + Contactless)	Issuer host certification : Online (Contact + Contactless) and Offline(Contactless only) with balance management
White Plastic	DI profile with RuPay applet Same card can be used when the bank decide to go for Type 2	DI profile with RuPay applet
Use cases	Retail + Transit (account based model)	Retail + Transit (card based NCMC model)

Card Balance Management

Virtual Account:

- Maintenance of Virtual Account in its Core Banking Solution by Issuer
- Virtual Account: Register maintained at Banks's Host for record maintenance of balance
- Virtual Account to be linked to Global Card Balance

Pool Account:

- Maintenance of Pool account by Issuer which is a pseudo account used for actual fund movement.
- After settlement, the pool account gets updated with the net funds

Money add

- Online financial transaction enabled on RuPay Contactless cards in addition to the existing financial transactions.
- Top Up Option using account or cash on dedicated terminals.
- Money add transactions shall be authorised by the issuer host.
- Top up balance will be added to the RuPay contactless card in 'Card Balance' after successful approval from Issuer.

Money Add Indicator

Data Element

Value

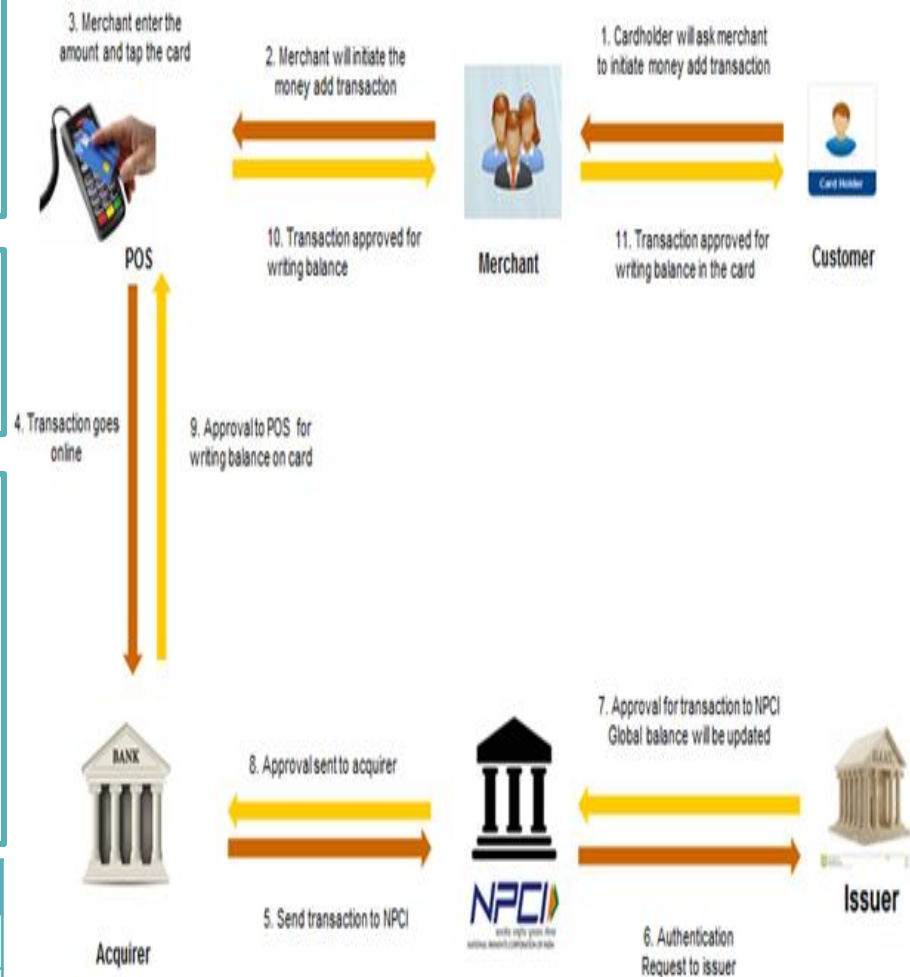
3

Digit 1 & 2 - 28

48

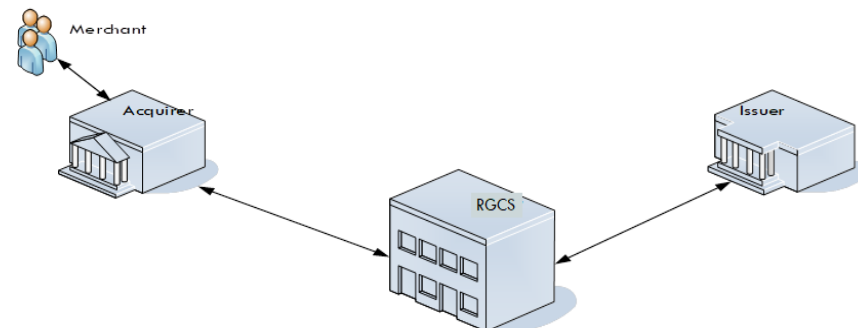
Tag 82:

01 – Using Debit to account linked to the Card.
02 – User payment by cash.



Settlement of online as well as the offline transactions will be processed at the end of the day.

NPCI, after settlement, sends incoming file to the issuer along with Daily Settlement Report and Raw Data.

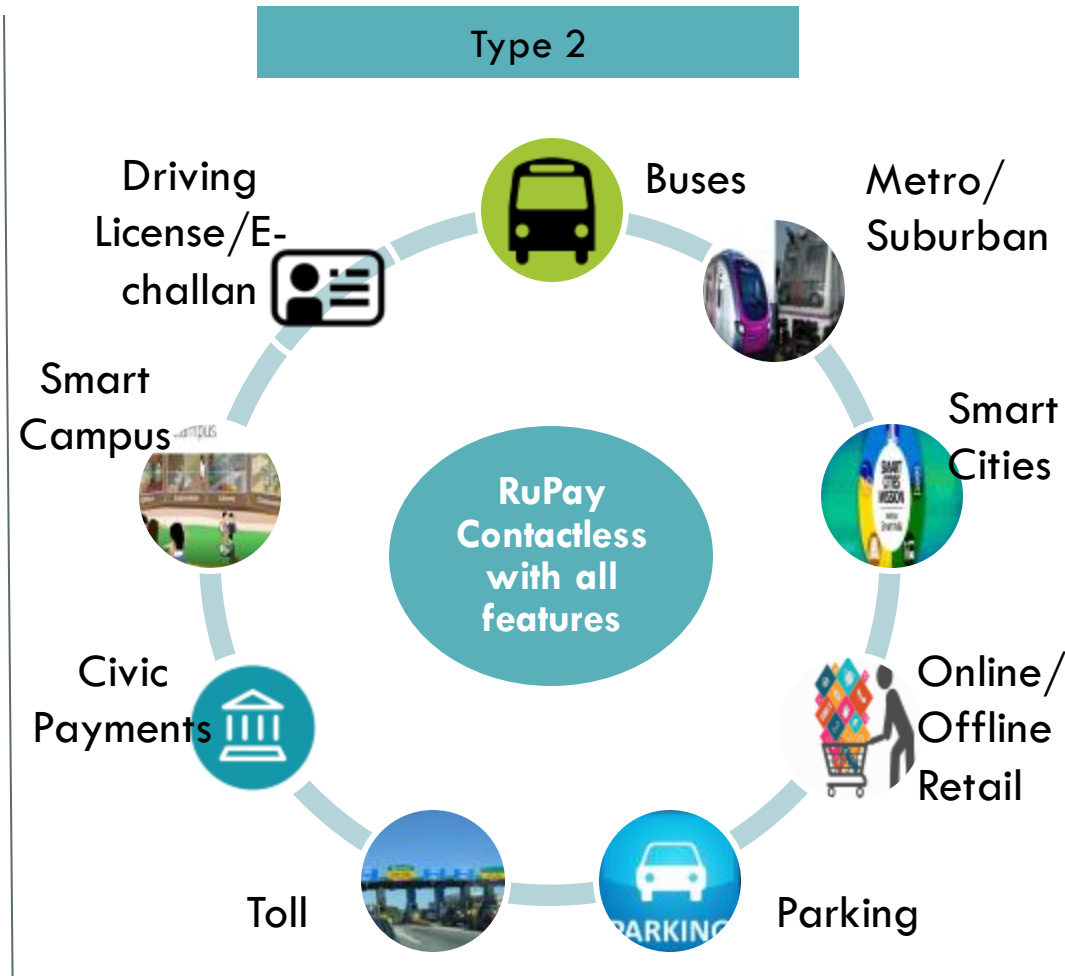


Key Pointers	Online Presentment	Offline Presentment
Transaction type included	<ul style="list-style-type: none"> Money Add Cash Money add Account 	Purchase (using card balance)
Process	<ul style="list-style-type: none"> Online approved transactions are presented in online outgoing file by acquirer. NPCI, after settlement, sends the incoming file with function code 200 to the issuer. 	<ul style="list-style-type: none"> Offline completed Transactions are presented in separate offline outgoing file by acquirer. NPCI, after settlement, sends the incoming file with function code 260 to the issuer.
File format	<ul style="list-style-type: none"> Same as current DMS online present format 	Offline Settlement <ul style="list-style-type: none"> Function Code- 260 9F27(CID) : 40, 9F26(AC) : TC value <nPosEntMode> : 07





Use Cases: Type 1/Type 2





Based on the same specification, NPCI will introduce contactless in retail, where basis of a floor limit the transaction will be processed either using an online account or an offline stored value on card without a pin.

The introduction of offline stored value on card is likely to keep the processing costs for these transactions as low as possible. Thus for all transactions below the floor value

- They will be processed offline using a stored value on card
- It may be processed by contactless only low cost terminal
- A fixed low MDR may apply to these transactions
- No receipts/SMS may be required
- No chargebacks may be offered on these transactions

Transactions above this floor limit (and below Rs 2000) may be processed in contactless mode against an online account (debit/credit) like any other card transactions.





Quick EMV & Full EMV

Key Pointers	Quick EMV	Full EMV
Issuer Host readiness	Minimal changes at the Issuer Host to support RuPay contactless card transactions	Issuer host needs to be updated to support Contactless transaction including Money Add and Service creation
On Behalf Transaction Processing via NPCI	Yes	No
Data Element Impact for Issuer	DE 3 - Processing Code DE 22 - Point of Service Entry Mode DE 39 – Response code DE 48 - Additional Data DE 48 Tag 60 - Chip data DE 61 - PoS Data Code	DE 3 - Processing Code DE 22 - Point of Service Entry Mode DE 23 - Card Sequence Number DE 48 - Additional Data DE 55 - Chip Data DE 61 - PoS Data Code





Product Road Map

Quick EMV

Implementation
of quick EMV in
Switch & RGCS

Biometric Card

Implement POC
with bank for
biometric cards

Retail

Retail acceptance
setup readiness

Toll POC

RuPay contactless
offline payments
POC at NHAI toll
plaza

Samsung Pay

RuPay
Contactless card
implementation
on Samsung Pay

HCE

Implementation of HCE
solution for bank

90 days

180 days

365 days

Parking POC

RuPay contactless
offline payments
POC at Airport
parking

Wearables

Introducing RuPay
Contactless in different
form factor

Campus POC

RuPay contactless offline
payments POC at
University Campus



- NPCI was entrusted by Ministry of Urban Development (MOUD) to prepare the standards & specifications of the NCMC
- NCMC is an interoperable, open-loop, EMV based contactless payment product. This advanced and secure card can be used for all payment applications including transport (Metro, Bus etc.), toll plazas and shopping.
- For payments lower than INR 2,000, the customers can simply tap their card and the transactions are processed in a matter of seconds.



Customers are also able to leverage other digital payment solutions offered by RBI / NPCI





Launched Projects

- Ahmedabad Smart city
- Kochi Metro
- BMTC

Projects under Implementation

- **Transit**
 - NMMT
 - Nagpur Metro
- **Smart Cities**
 - Raipur Smart City
 - Bhubaneswar Smart City
 - Surat Smart City

Upcoming Projects

- **Transit**
 - Noida Metro
 - MTC Chennai
 - DMRC
 - MMRDA
- **Municipal Body**
 - Greater Chennai Corporation





NPCI aims to touch every Indian by with one or the other
electronic payment product and support the
RBI's vision of a “**Less Cash**” society.

