

UPI Solution

What is UPI?

Unified Payments Interface (UPI) is a next generation online payment solution launched by National Payments Corporation of India (NPCI), the umbrella organisation for all retail payments in India, to promote cashless transactions in support of the Digital India initiatives led by Indian Prime Minister Narendra Modi.



UPI will transform the way people make payments today by empowering users to perform instant push and pull transactions from multiple accounts with their smartphones and a single identifier—such as mobile number or virtual payments address—without entering any bank account information. UPI is one of the most advanced methods of all the digital payment initiatives currently in use.

Top 5 key benefits of UPI

- **Immediate funds transfer:** instant payments 24 hours a day with no working hour or holiday restrictions.
- **Multiple account sources:** transact from several bank (or online payment/electronic wallets) accounts through a single UPI application.
- **No new payee delay:** no more waiting up to 24 hours—send money immediately, even to new vendors/payees.
- **Increased efficiency for both parties:** send invoices out electronically and get instant payment on payee approval.
- **Minimize risk:** sensitive details like bank account numbers and IFSC codes are masked, and there's no more need for delivery drivers to handle cash.

Why is a HSM required?

In order to ensure the highest levels of integrity in the UPI solution, NPCI has recognised the requirement to encrypt the private key used to process and store the transaction in a FIPS certified, tamper resistant environment—and have therefore mandated the use of an appropriate HSM for all participants.

Meeting UPI standards with Thales

Hardware Security Modules (HSMs) from Thales provide a secure environment for cryptographic processing, key protection, and key management that meet widely established and emerging standards while also maintaining high levels of operational efficiency.

Thales payShield 9000 HSM has support for UPI in its more recent standard firmware releases—meaning new customers can achieve instant compliance and existing customers with older firmware versions can utilize their existing hardware with a simple upgrade; saving the cost of procuring new hardware and leveraging their investment in the world's most trusted payment HSM, whilst continuing to secure transactions seamlessly.

Top 5 Key benefits of using Thales payShield 9000 for UPI Compliance

The world's most trusted payment HSM used in over 80% of global payment transactions.

Establishes a secure root of trust for all financial transactions throughout the UPI payment process with full end to end encryption: protecting user credentials, maintaining confidentiality and managing private keys responsible for digital signing.

Stateless design and tamper-resistant hardware ensures user PINs are never compromised.

Delivers comprehensive, certified security to support UPI, including enhanced GUI utility to create and manage digital certificates.

Protects the bank's reputation for stability and security. To enquire about a new or upgraded payShield 9000 to meet the required UPI standards please send an email to:

cpl.emea-sdr@thalesgroup.com or call [+44 \(0\) 1844 201800](tel:+44201844201800).

Learn more about our wider solutions at cpl.thalesgroup.com.

About Thales

The people you rely on to protect your privacy rely on Thales to protect their data. When it comes to data security, organizations are faced with an increasing amount of decisive moments. Whether the moment is building an encryption strategy, moving to the cloud, or meeting compliance mandates, you can rely on Thales to secure your digital transformation.

Decisive technology for decisive moments.