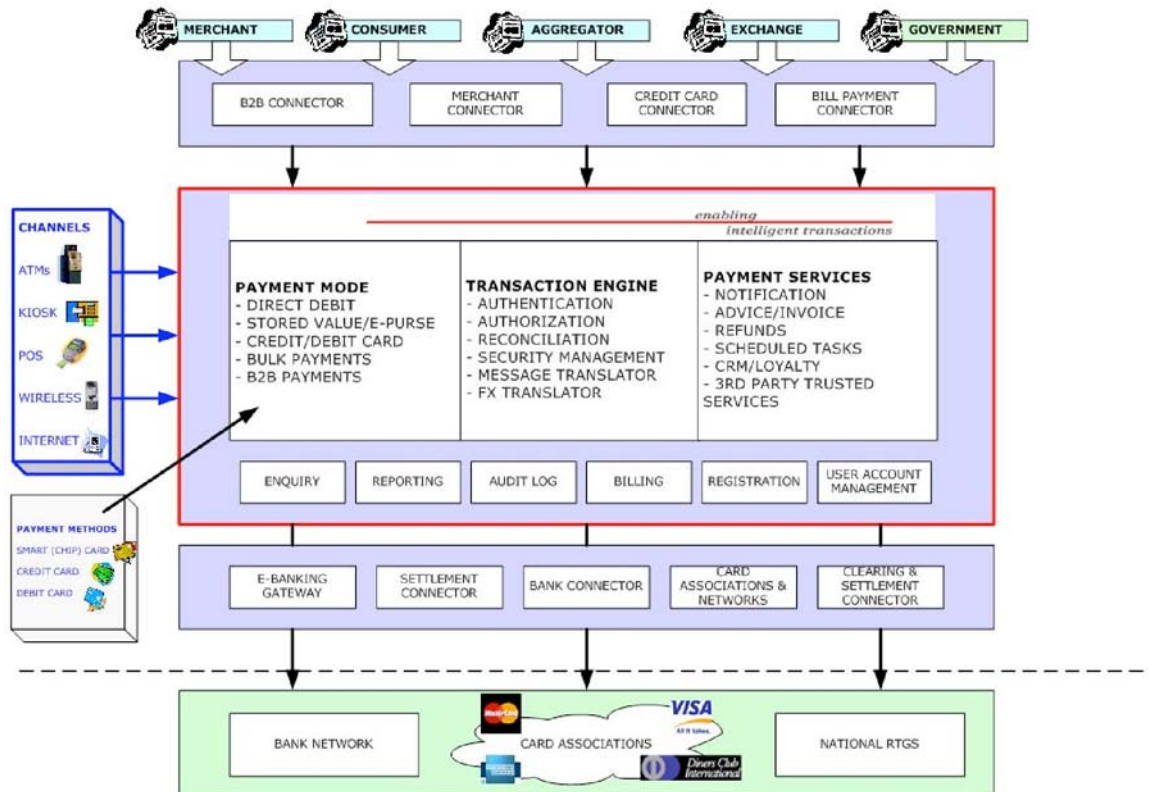


Technical Specification: e-Secure Integrated Payment Gateway

Full Featured Payment Gateway

IPG is a payment gateway product that enables banks to acquire merchants online via both wired and wireless channels. IPG is designed to allow banks to support both hosted and non-hosted merchants. IPG also supports seamless integration with Visa's VbV and Mastercard's SPA/UCAF Authentication Standards.

PAYMENTS SPHERE



CLEARING & SETTLEMENTS SPHERE

REALTIME CREDIT CARD AUTHORIZATION. IPG provides a real-time online credit card authorization for merchants. Credit card authorization requests are received from merchants and routed to the bank's credit card processing host for instant authorization.

SUPPORT FOR VISA 3-D SECURE AND MASTERCARD SPA. IPG is built with support for Visa's 3D Secure (or VbV) and Mastercard SPA/UCAF both at the front end and the back-end. This ensures that the payment gateway is compliant with the emerging standards.

HASSLE-FREE MERCHANT INTEGRATION. IPG provides a simple http based application programming interface (pAPI) that allows merchants to easily integrate

HASSLE-FREE BANK INTEGRATION. IPG provides supports connection to the bank's Credit card processing systems via existing interfaces such as NAC using the ISO8583 message format. This ensures quick and hassle-free integration to existing EDC network of the bank. The IPG may also be connected over the internet offering the possibility of the gateway being hosted in a 3rd party data center.

INTUITIVE WEB-BASED ADMINISTRATION INTERFACE. IPG's powerful browser based admin interface allows, it to be administered with ease by the use of just a browser. Hence with proper security infrastructure, the gateway may be even administered remotely.

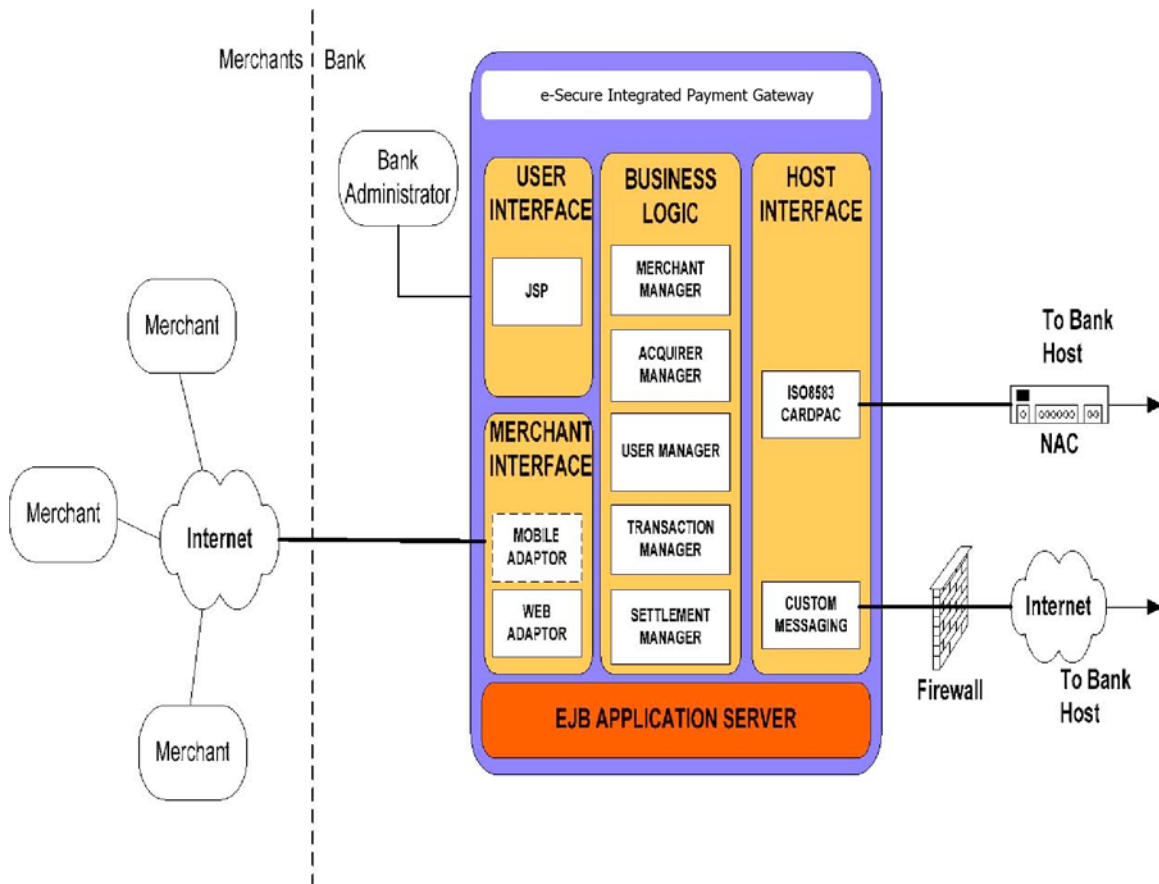
OPEN SYSTEMS PLATFORM. IPG is built using J2EE/EJB standards and written in 100% Java – this enables the bank to choose its deployment of choice. IPG runs on Unix/Windows and Linux environments and supports MS-SQL, Oracle, Sybase and DB2 RDBMS.

GROWS AS YOUR BUSINESS GROWS. IPG component based design allows it to be deployed from a single server environment to multiple servers as well as in a clustered HA environment. This gives the bank the choice of deploying on a scale that suits their current business needs and budgets while offering the option to expand seamless as the business grows.

PRICE-PERFORMANCE. IPG offers superior price-performance. IPG is lab-tested for performance and e-secure Technologies is committed to ensuring formal performance testing on standard hardware servers.

IPG Technical Overview

Architecture



IPG is built in Java on an open-system component architecture fully exploiting the features and benefits of J2EE/EJB. IPG supports n-tier architecture but is primarily divided into the following major tiers viz. User Interface, Merchant Interface, Business Logic, and Host Interface.

The User Interface tier is built using JSP and is responsible for the GUI. It provides the administration GUI for bank administrators and merchants.

The Merchant Interface tier is built using servlets and provides adaptors for different merchant channels such as the Web Adaptor, Dial-up Adaptor, Mobile Adaptor etc. Each channel allows integration to the gateway via a simple payment API.

The Business Logic tier is built using EJB components and is responsible for supporting the business logic for different financial transactions such as Authorization, Capture, Sale, Void, Reversals and Reconciliation and Settlement. It also supports common services such as User Authentication, Scheduling, Logging, Data communications and Data storage and retrieval.

The Host Interface tier is a connector framework that allows multiple connectors to support different host message as well as communication protocols. This tier supports TCP/IP, X.25 communication channels and ISO8583 message format as well as proprietary host formats. The tier is extensible to support other host interfaces such as SNA.

Minimum System Requirements

Pentium III 1.4GHz or higher class server
256MB RAM or higher
20GB HDD or higher
JRE 1.3 or higher (Windows NT/2000, Unix, Linux)
JDBC (Oracle, MS-SQL, Sybase)
Apache/Tomcat WebServer