

PRODUCT FEATURES

Middleware Features

- ▶ Open System Deployment
- ▶ Non-Stop Process/Task Environment [24*7 Process Availability]
- ▶ Non-Stop Port Environment [24*7 External Port Availability]
- ▶ Multi-Processing Capability
- ▶ Load Balancing Capability
- ▶ Highly Scalable
- ▶ Highly Fault Tolerant
- ▶ Highly Modularized
- ▶ Portability [Platform Independent Architecture]
- ▶ Layered N-Tier Architecture
- ▶ Highly Parameterized/Configurable
- ▶ High Throughput/Performance
- ▶ Un-Limited External Port/Device Support
- ▶ Run-Time Configuration
- ▶ Asynchronous Data Transfer

Core Features

- ▶ Allows Co-existence of Multiple Institutions
- ▶ Capable of routing/authorizing transactions within as well as across institutions having multiple network connectivity Co-existence of Multiple Institutions having CBS & non CBS
- ▶ Allows Co-existence of Multiple Institutions having Multiple Networks [External Network Connectivity, Tie-Up Banks, Visa, Master Card etc]
- ▶ Allows Co-existence of Multiple Devices [ATM, Kiosk, POS etc]
- ▶ Supports all types of Std. Transactions for multiple Institutions
- ▶ Supports Stand-In Feature for all Institutions based on the configuration
- ▶ Supports all types of Network Management Messages like Sign On, Sign Off, Log On, Log Off, Key Exchange
- ▶ Network Key Management
- ▶ Transaction Life Cycle can be configured. [This is Core feature of the Transaction Manager module and this allows the institution/bank to configure their own business logic for routing each & every transaction to different entities/networks/devices as well as when the transaction has to be completed based on their requirement]
- ▶ Multi-Currency Support
- ▶ Multi-Country Support
- ▶ Currency Conversion Support
- ▶ Supports HSM/Software based interface for PIN Processing
- ▶ Supports different kinds of Transaction Routing Logic as mentioned below
 - Routing based on Institution

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- Routing based on Network [Host, Visa, MasterCard, NFS etc]
- Routing based on Device Type [ATM, POS, Kiosk etc]
- Routing based on Message Type [Transaction request, Response, Reversal Request, Response etc]
- Routing based on Transaction Type [Withdrawal, Balance Inquiry, Transfer etc]
- Routing based on Network Priority
- Routing based on Host Type [CBS & Non-CBS]
- Routing based on Response Code
- Routing based on Acquirer Institution
- Routing based on Issuer Institution
- ▶ Supports unlimited number of external network
- ▶ Supports unlimited number of institutions
- ▶ Supports unlimited number of devices
- ▶ Supports parameterized network timeout for each external network
- ▶ Supports Parameterized Configuration for each Institution
- ▶ Support Network PIN Translation for connecting with external switch & Visa/MasterCard
- ▶ Unlimited Account Type Support
- ▶ Unlimited Card Type Support
- ▶ Tele PIN Support
- ▶ Card Grouping
- ▶ Account Grouping
- ▶ Transaction Grouping
- ▶ OAR Support [Multiple Account Linkage for the Same Card]
- ▶ Configurable PIN Retry Limit
- ▶ Multiple Limit Support
- ▶ Individual Card Based Limit
- ▶ Individual Account Based Limit
- ▶ Card Type Based Limit
- ▶ Account Type Based Limit
- ▶ Combination of Card Number & Account Type
- ▶ Combination of Card Type & Account Type
- ▶ Combination of Card Number & Account Number
- ▶ Complete Authorization Flow can be configured for a given institution
- ▶ List of Authorization Activities to be performed for a given institution can be configured
- ▶ Supports Std. IBM DES Algorithm for PIN related Processing
- ▶ Monitors all the Network connected with the Switch
- ▶ Allows the end user to initiate different kind of commands to a particular network based on the situation

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- ▶ Supports Automated Echo Messages
- ▶ Provides 100% guarantee for the delivery of the messages by continuously posting the SAF record until a response is received for that record
- ▶ Supports Store & Forward feature for all reversal messages, which are generated from switch.
- ▶ Supports FIFO posting for all SAF messages.
- ▶ Generates a unique sequential record no for each & every transaction, which is to be stored & forwarded through SAF.
- ▶ In built support for uploading the PBF [Positive Balance File] from the issuer institution for updating the latest account balance of all the customers.
- ▶ Provides flexibility of uploading the PBF records both through online as well as file based.
- ▶ Provides flexibility for skipping a particular SAF record, if a problem is found while posting the SAF Record.
- ▶ Different kinds of SAF Parameters and configurations can be set for each Network connected with Switch
- ▶ All the SAF related processing is completely parameterized and configurable as below and will be maintained for each network connected with switch
 - Replay Interval
 - Interval for replaying successive SAF records
 - SAF Timeout Interval
 - Timeout Interval for getting the response from the network for a given SAF request
 - SAF Property
 - Whether to replay the same transaction when a timeout occurs or to mark the network status as down
 - SAF Record Status
- ▶ Current Status of each SAF record stored for each network. Possible types of Status are
 - DONE [Record is Posted & got the response successfully]
 - PENDING [Record is Posted, but still didn't got the response]
- ▶ SKIPPED [Record is skipped, due to some problem with the record]
- ▶ SAF processing status of each network can be changed at run time, based on the requirement. Possible type of Processing Status is
 - RUNNING [Currently SAF processing is running for the Network]
 - SUSPEND [Currently SAF processing is suspended for the Network]
- ▶ RESUME [Resuming the SAF processing for a given network, which had been suspended already]
- ▶ Echo Messages can be parameterized based on the following
 - Send Echo, only when the Network is up
 - Send Echo, only when the Network is down
- ▶ Send Echo Always
- ▶ Configurable Echo Interval, for configuring the time interval in which consecutive echo should be sent to given network

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- ▶ Supports the following different status for a given network at any point of time
 - ONLINE [Network/Host is Up & Running and it's online with the Switch]
 - OFFLINE [Network/Host is Down]
- ▶ SAF [Network/Host is Down and Switch is Authorizing the Transaction in Stand-In Mode for that Network]
- ▶ SAFUPLOAD [Currently Switch is uploading the PBF Files for the given Network]
- ▶ Supports flexibility for changing Network Status at any given point of time.
- ▶ Allows temporary suspension/resumption of automated echo messages to a particular network based on the situation.

ATM Features

- ▶ Supports NDC+, D912 & Triton Std. Message Protocols
- ▶ Supports Diebold, NCR, Wincore & Triton Brand of ATM's and any type of terminal brands which supports the Std. Protocols [NDC+, D912 & Triton Std] can be supported with necessary certification
- ▶ ATM's belonging to multiple institutions can co-exist and can be easily differentiated using the ATM Identification No. configured in switch.
- ▶ Each Institution can have separate workflow, business logic and the transaction state, screen configuration and can be easily differentiated using the FIT [Financial Institution Table]
- ▶ Each Institution can decide the following configurations in each of their ATM's
- ▶ List of Institution Cards to be accepted
- ▶ Transaction Flow & List of Transactions to be supported for each Institution
- ▶ ATM's can be grouped based on the following and once grouped each group of ATMs will have the following distinct features
 - Distinct Transaction Flow
 - Distinct Screens
 - Distinct Dispensing Logic
 - Distinct Printer [Consumer Printer [CP]/Journal Printer [JP]/Statement Printer[SP]] Format
 - ATM's can be grouped based on the following under any Institution
 - Brand [Like Diebold, NCR, Wincore, Triton etc]
 - Functionality [Dip Card, Motorized]
 - Location etc.
- ▶ Dynamic Key Download Support which is a very important feature in terms of how secured the key is maintained across all the ATMs connected with switch. Dynamic key will be downloaded either when an ATM sends a power-up message during restart or can be invoked from switch. This feature will allow the key to be changed during periodic intervals.
- ▶ Multi Lingual Screens for all brands of ATMs
- ▶ Support Electronic Journal Pulling
- ▶ Support for multiple currency dispensing

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- ▶ Support for Dynamic Dispensing Logic, which will allow the institution to configure the ATMs to dispense more than one currency and the corresponding currency, rates with respect to amount can be maintained in switch for Limit Purpose
- ▶ Highly Configurable State, Screen, FIT & Miscellaneous Data through web based interface
- ▶ Supports the following ATM Transaction Sets and any additional transaction apart from the above can be easily supported based on the requirement
 - Balance Inquiry
 - Mini-Statement
 - Cheque Book Request
 - Statement Request
 - PIN Change
 - Fund Transfer
 - Mobile Top-Up
 - UBP (Utility Bill Payment)
 - Supports both full reversal & partial reversal functionality
- ▶ Highly configurable ATM Receipt Template Management
- ▶ Supports following ATM Commands
 - State Download
 - Screen Download
 - FIT Download
 - Miscellaneous Download
 - Key Download
 - FIT Download
 - Go In-Service
 - Go Out-Of-Service
 - Shutdown
 - Download Configuration Id
 - Get Configuration id
 - Get Supply Counters
 - Clear Supply Counters
 - Run Self Test
- ▶ Extensive web based monitoring for the below hardware status and more
 - Out of service Status

EzLink Enterprise EFT Switch

Features

Technical Benefits

Business Benefits

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- Offline Status
 - Card Reader Status
 - Journal Printer Status
 - Consumer Printer Status
 - Statement Printer Status
 - Dispenser Status
 - Alarm Faults
 - Chest Door Status
 - Latest Cash Position for each cassettes
- ▶ Supports extensive cash maintenance through supervisory card option
 - ▶ SMS and E-Mail alerts can be sent for any hardware fault sent by ATM, based on rules set by the financial institution.

POS Features

- ▶ Supports Hypercom ISO8583 Message format for POS
- ▶ Supports following transaction sets
 - Purchase
 - Void
 - Settlement
 - Reversals
 - Online Settlement
- ▶ Provides Extensive Merchant Management
- ▶ Provides Configurable Terminal Management

TECHNICAL BENEFITS

- ▶ From the operating system front, by running on UNIX based servers, EzLinkEnterprise provides high security and stability
- ▶ By having the EzLinkEnterprise deployed over the EzKernel middleware ensures porting of EzKernel alone for platform related changes
- ▶ Web based client/server architecture ensures platform independency by having the client application accessing through the browser
- ▶ By choosing Message Queues, Shared Memory for implementing the inter process layer, EzLinkEnterprise provides very fast, reliable data transfer across all the modules
- ▶ As all the core modules of EzLinkEnterprise is implemented using operating system native language C/C++, the entire application will be very fast, since all the application will be directly using the operating system calls for necessary services
- ▶ Since all the static database information's are maintained in the shared memory, database access will be very minimal and thus improving the application performance
- ▶ Provides very high TPS [Throughput per Second] along with Load Balancing
- ▶ Ensures very high security by maintaining all the confidential data's in encrypted format
- ▶ Extensive debug levels [CRITICAL, ERROR, TXN, DUMP, NORMAL, TEST] are maintained for all the modules, for debugging any issues at run time
- ▶ System logs can be enable at any time for tracking operating system related errors
- ▶ Highly parameterized native support for TCP/IP & Serial communication for communicating with external device

EzLink Enterprise EFT Switch

Features

Technical Benefits

Business Benefits

BUSINESS BENEFITS

- ▶ As the entire routing logic can be configured as per the requirement, this will benefit the financial institution where in complex routing scenarios has to be implemented and routing logic is subject to frequent changes
- ▶ EzLinkEnterprise will enable the financial institution to introduce new complex transactions at any point of time, without bothering much about the transaction flow & logic as the transaction flow can be configured as per the requirement
- ▶ As each and every financial institution will have their own set of rules and regulations as well as security policy, this will affect their authorization policy/logic to be implemented for their customers. As more than one financial institution can co-exist, this will lead to complexity as any changes in the authorization policy for one institution should not have impact on any other institution policy
- ▶ As EzLinkEnterprise allows the institution to have its own set of authorization flow & logic, any changes in the authorization policy for a specific institution won't have any impact on the other institutions. Also by having the authorization logic & flow as configurable, this will really benefit the financial institution whose authorization policy for their customer is subjected to frequent changes
- ▶ Usually, banking system of any financial institution will be either CBS or Non-CBS or might be a combination of both, where in some of the branches will be centralized or some will be distributed. Financial institution will be benefited by having their EFT solution to support any of the above possibility and it allows the institution to have ATM cards issued to both non-CBS as well as their CBS customers. EzLinkEnterprise supports CBS, Non-CBS & Combination of both for any financial institution, by allowing the financial institution to configure their routing & authorization logic according to their banking system set-up [CBS / Non-CBS / Combination of both]

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