



[https://verifone.cloud/docs/sca-functional-specification/feature\\_parity](https://verifone.cloud/docs/sca-functional-specification/feature_parity)

Updated: 23-Sep-2025

## Feature Parity - Mx9 vs Engage vs Neo

This section outlines the differences in commands and functionality across the Mx9 (VOS), Engage (VOS2) and Neo (VOS3) application specifications. It is designed to evaluate the parity between these platforms and serves as a key reference for users migrating terminals or platform from one OS to another.

### Defining Solution Type

Terms	Definitions
MX	Verifone MX Solutions which is applicable for all MX devices.
SCA 4.0 (Engage)	The platform version which is applicable for all Engage (VOS2) devices.
SCA 5.0 (Neo)	The platform version which is applicable for all Neo and Neo2 (VOS3) devices.
SCA - FDRC	SCA Enterprise solution connects directly to Fiserv (FDRC), which serves as the processor's authorization host for handling transaction approvals.
SCA - UGP	SCA Classic solution connects to UGP (Unified Global Protocol). This is the Verifone Payment gateway (also known as PAYware Connect) that will accept the UGP message specification and process the transaction to end processor's authorization host for handling transaction approvals. SCA UGP is also referred as "Point Classic Implementations".
SCA - TSYS	SCA Enterprise solution connects directly to TSYS, which serves as the processor's authorization host for handling transaction approvals.
SCA - Worldpay	SCA Enterprise solution connects directly to Worldpay (Vantiv), which serves as the processor's authorization host for handling transaction approvals.
SCA - Chase	SCA Enterprise solution connects directly to Chase, which serves as the processor's authorization host for handling transaction approvals.
SCA - GSC	SCA solution as GSC (Global Services Connector) connects to Verifone Greenbox (Cloud Services) gateway, which processes the transaction to end processor's authorization host for handling transaction approvals.

### Supported Industries

Feature/Functionality List

MX   Engage   Neo  
(SCA4)   (SCA5)   Notes

**Retail** - type of payment industry systems process transactions between the customer and business merchant account through card networks, banks, and payment processors, without features like tips, servers, or table management.



**Restaurant** - type of industry provides merchants with retail-style payment tools like POS systems, online ordering, mobile payments, and features for tips, servers, and table management.



**MOTO(Mail Order/Telephone Order)** is used for payments when the card is not present, like phone or mail orders. It's common in catalogue sales, travel, and service businesses.



**Non Petro Fleets**, like those using natural gas, use payment methods such as credit and fleet cards. They need systems to track fuel, manage maintenance, and access charging stations.



Supported for Worldpay and GSC solutions only.

Banking/Cash advance



Supported for Worldpay solution only.

## Integration Modes

Feature/Functionality List	MX	Engage (SCA4)	Neo (SCA5)	Notes
<b>Semi-Integrated mode of Application</b> connects directly to the payment host on the terminal. The POS uses an API/command to request payment authorization via the payment application on the terminal.				
<b>Standalone mode of Application</b> connects directly to the payment host on the terminal. The payment authorization has been initiated by the cashier manually on the terminal.				Not supported for GSC solution.
<b>Standalone + External PINPad (2-Piece Solution)</b> - a separate payment application handles the transaction, while customers enter PIN on a different device (the external PIN pad). The main application manages the payment and communicates with the payment processor.				Not supported for UGP and GSC solutions only.
<b>Semi Integrated + External Pinpad (2 Piece Solution)</b> – a payment system keeps card data separate from the POS. The POS starts the transaction, the PINPad reads and encrypts the card details, and the processor approves the payment, sending a response back to the POS.				Supported for UGP solution only.
<b>Pay at the Table (PATT)</b> - a payment system that allows customers to pay at the table without waiting for the server to process the payment at a central point. The payment is done using mobile devices, QR codes, or portable payment devices the server brings to the table.				Supported for Worldpay solution only.

## POS Messaging Interface (Commands)

## Security Commands

Feature/Functionality List	MX	Engage (SCA4)	Neo (SCA5)	Notes
Register POS				
Register Encryption POS (1.0, 2.0)				
UnRegister POS				
UnRegister All POS				
Test MAC				

## Session/Admin Commands

Feature/Functionality List	MX	Engage (SCA4)	Neo (SCA5)	Notes
Start Session				
Finish Session				
Set Date and Time				
Get Counter				
Lane Closed				
Apply Updates - as any pending updates from VHQ Downloads.				Partially supported for Engage (SCA4) and Neo (SCA5).

## Payment Commands

Feature/Functionality List	MX	Engage (SCA4)	Neo (SCA5)	Notes
Sale transaction (CAPTURE)				
Refund transaction (CREDIT)				
Void transaction				
Post Authorization(Force) transaction				
Pre Authorization transaction				
Sale Completion transaction				
Voice Authorization transaction				Not supported for FDRC, TSYS and GSC solutions.

Feature/Functionality List	MX	Engage (SCA4)	Neo (SCA5)	Notes
Balance Inquiry support for Credit, Debit, Gift, EBT cards and EMV Cards balance by setting ENABLEEMVFORBALANCE paramter.	✓	✓	✓	
Card Validation (zero dollar authorization)	✗	✓	✓	Not supported for UGP and Worldpay solutions.
Token Query to retrieve card token information	✓	✓	✓	Not supported for TSYS solution.
Token Renew	✗	✓	✓	Supported for UGP only.
Tip Adjustment transaction (ADD_TIP)	✗	✓	✓	
Reset Tip to remove tip from a specific transaction (RESET_TIP).	✗	✓	✗	Supported for TSYS solution only.
Gift card Activation (ACTIVATE)	✓	✓	✓	Not Supported for TSYS solution.
Gift card Block Activation (BLOCK_ACTIVATE)	✗	✓	✓	Supported for Chase solution only.
Gift card add amount (ADD_VALUE)	✓	✓	✓	Not Supported for TSYS solution.
Remove Value	✓	✗	✗	
Gift card Cash Out/Close/Unload at the Gift Payment Processor (GIFT_CLOSE)	✓	✓	✓	Not Supported for TSYS and Chase solutions.
Gift card Deactivation (DEACTIVATE)	✓	✓	✓	Not Supported for FDRC and TSYS solutions.
Gift card Reload/Reactivation (REACTIVATE)	✓	✓	✓	<ul style="list-style-type: none"> <li>• Reload/Reactivation is supported for GSC.</li> <li>• In Chase solution, this is supported for Reload and not Supported for Reactivate</li> </ul>
Opening a customer tab by performing a pre-authorization (OPEN_TAB)	✗	✓	✓	Not Supported for GSC solution.
Void of a Pre Authorized transaction	✓	✓	✓	
Closing a customer tab by performing a Sale Completion transaction (CLOSE_TAB)	✗	✓	✓	Not Supported for GSC solution.
Deleting an existing Tab by Voiding/Reversing the original transaction (DELETE_TAB)	✗	✓	✓	Not Supported for GSC solution.
Converting High Value Token to Low Value Token (TOKEN_CONVERT)	✓	✗	✗	
UPDATE	✓	✗	✗	
Support for QUERY_LPTOKEN	✓	✗	✗	
Reversal transaction	✗	✓	✓	Supported for TSYS solution only.

Feature/Functionality List	MX	Engage (SCA4)	Neo (SCA5)	Notes
Pays down the account balance on a Private Label card (PAYACCOUNT)				

## Secondary Port Commands

Feature/Functionality List	MX	Engage (SCA4)	Neo (SCA5)	Notes
Cancel				
Reboot				
Status Ability to return Battery Level as part of Status				
Queries if any VHQ updates are available (ANY_UPDATES)				
Query for the status of a VHQ update (UPDATE_STATUS)				
Obtains the status if the terminal has any SAF transactions (GET_SAF_STATUS)				
CONFIRMATION command, when the application has requested for a POS confirmation on the customer ID check through an unsolicited message for an APM transaction, for example Klarna.				Supported for FDRC and UGP solution only.

## Line Items Commands

Feature/Functionality List	MX	Engage (SCA4)	Neo (SCA5)	Notes
Add line items				
Override line items				
Remove line items				
Show line items				
Remove All the line items				

## Additional Line Items Command Features

Feature/Functionality List	MX	Engage (SCA4)	Neo (SCA5)	Notes
Negative Value for line items				
Font Colour for line items				
Discount Amount Inclusion in line items				
Display of Full Line-Item Screen and Split Line Item Screen				

## Store and Forward (SAF) Commands

Feature/Functionality List	MX	Engage (SCA4)	Neo (SCA5)	Notes
SAF Query				
SAF Remove				
SAF Edit				Supported for FDRC, UGP and TSYS only.

## Device Commands






















Feature/Functionality List	MX	Engage (SCA4)	Neo (SCA5)	Notes
Customer Survey command for 5 or 10 lines				
Customer Survey command				
Get Version				
Device Name Query				
Set Device Name				
Customer Buttons				
Payment Types Query				
Get Param				
Set Param				
Display Message Full Screen				Partially supported for MX.
Support for Display QR Code commands				
Cancel QR Code				
Display Image in Full Screen				
Left Panel Display				
Get Card Data Input Methods - SWIPE/TAP/INSERT and also returning track data for non PCI cards				
Capturing Check Box				
Support for PROVISION_PASS command				
Support for QUERY_NFCINI command				

Feature/Functionality List	MX	Engage (SCA4)	Neo (SCA5)	Notes
Support for Cancel Display Left Panel command				
Additional Device Commands Features				
Feature/Functionality List	MX	Engage (SCA4)	Neo (SCA5)	Notes
Signature Cancel Button Support				
Support for Acknowledgment Checkbox Option to SIGNATURE_EX				
Email Capture				
Support for accepting phone number, VAS data, and loyalty data when performing a card token request - specifically for PCI-compliant BIN cards related functions and avoid phone button option				
Support for custom background images for Charity Donation, Customer Question and Credit App forms				
Emoji and Emoji Text Support for Customer Question Command				
Support for Free Form Tip Entry				
Support for capturing Employee ID in Capture command				
Display Image Top and Middle Button Text Enhancement for Device Command				

## Report Commands































Feature/Functionality List	MX	Engage (SCA4)	Neo (SCA5)	Notes
Daily Summary				Supported for UGP solution only.
Settle Error				Supported for UGP solution only.
Transaction Search				Supported for UGP solution only.
Last Transaction				
Duplicate Check				Supported for UGP solution only.
Cutover				Supported for FDRC solution only.
Site Totals				Supported for FDRC solution only.
Settlement Summary				Supported for UGP and TSYS solutions only.
Settle				Not Supported for FDRC and GSC solutions.

## Barcode Commands (M424, M440, E280)

Feature/Functionality List	MX	Engage (SCA4)	Neo (SCA5)	Notes
Configure Barcode (BCCONFIG)				Supported for UGP and GSC solutions only.
Scan Barcode as single scan (SCAN)				Supported for UGP and GSC solutions only.
Barcode Start as multi-scan (BARCODEASYNC_START)				Supported for UGP and GSC solutions only.
Barcode Stop as multi-scan (BARCODEASYNC_STOP)				Supported for UGP and GSC solutions only.
Test Barcode (BCTEST)				Supported for UGP and GSC solutions only.
Disable All Symbology (BCDISABLEALLSYMBOLOGIES)				Supported for UGP and GSC solutions only.
Set Symbology (BCSETSYMBOLOGY)				Supported for UGP and GSC solutions only.

## Payment Types

### Card Types /Tender Types

Feature/Functionality List	MX	Engage (SCA4)	Neo (SCA5)	Notes
Credit card				
Debit card				
EBT (Foodstamp) card				
EBT (Cash Benefits) card				
EBT (Voucher) card				Not Supported for UGP and Worldpay solutions.
Gift card				Not Supported for TSYS solution.
Private Label CAPOne Synchrony ADS				Supported for Worldpay solution only.
EMV Support for FSA Transactions				Not Supported for TSYS and GSC solutions.
Merchandise Credit card				Supported for UGP solution only.
Support for Fleet cards				Supported for Worldpay and GSC solutions only.


Feature/Functionality List	MX	Engage (SCA4)	Neo (SCA5)	Notes
Support for Discount on Cash transaction				
CHECK as payment type for Sale completion transaction				Supported for UGP and GSC solutions only.
CHECK_SALE as payment type for Check Processing				Supported for UGP and GSC solutions only.
CHECK_AUTH				Supported for UGP solution only.
CHECK_VERIFY as payment type for Check Processing				Supported for UGP solution only.

### Alternate Payment Methods (APM) Transactions

Feature/Functionality List	MX	Engage (SCA4)	Neo (SCA5)	Notes
Alipay				
WeChat				
Affirm				
Klarna				
PayPal				
Venmo				
Linked Refund (CTROUTD Based Refund for APM)				
















### Message Encryption Schemes

Feature/Functionality List	MX	Engage (SCA4)	Neo (SCA5)	Notes
VCL/VSP, VSP(EPARAM) Encryption				Supported for FDRC, UGP and Chase solutions only.
RSA/TRA Encryption				Supported for FDRC solution only.
Voltage Encryption				Supported for TSYS solution only.
ADE Encryption Support. This is applicable for SSI only (Secure Services Interface - the messaging between SCA application and the host).				Not Supported for FDRC, TSYS and Chase solutions.
AES-DUKPT Encryption				Supported for FDRC, UGP and Worldpay solutions only.
















Feature/Functionality List	MX	Engage (SCA4)	Neo (SCA5)	Notes
NOE Encryption				

## Communication Network Features







### POS Communication Network Modes



















Feature/Functionality List	MX	Engage (SCA4)	Neo (SCA5)	Notes
TCP/IP Ethernet/Wireless (WiFi)				
WebSockets				
Bluetooth - <ul style="list-style-type: none"> <li>BT-PAN (Bluetooth Personal Area Network for Mobile or Tablet POS)</li> <li>Regular BT for Windows/MAC/Android</li> </ul>				
IP Over USB				
Serial Over USB				

### Host Communication Network Modes

























Feature/Functionality List	MX	Engage (SCA4)	Neo (SCA5)	Notes
Ethernet				
Wireless (WiFi)				
GPRS				
IP Over USB				
Dial Up				Supported for TSYS solution only.

### Network Configuration Set




Feature/Functionality List	MX	Engage (SCA4)	Neo (SCA5)	Notes
WebSockets Network - Priority based Switching				
Network Fallback from Primary to Tertiary Networks				

Feature/Functionality List	MX	Engage (SCA4)	Neo (SCA5)	Notes
Network Setup at initialization flow using CCP (Communication Panel)integration				Not Supported for TSYS solution.
Configuration of Network parameters using VHQ				
Configuration of Network Parameters using SET_PARAM command				
Configuration of Network Settings through Configuration Menu				
SSL Policy Overriding for the Customers using IP address instead of Hostname				Supported for UGP and Worldpay solutions only.
Proxy Settings for Host communication at Merchant environment				Supported for Worldpay solution only.

## Receipt Management




Feature/Functionality List	MX	Engage (SCA4)	Neo (SCA5)	Notes
Printing Merchant Copy or Customer Copy				
Enabling or disabling printing receipt				
Returning receipt back to POS and printing in terminal or just returning to POS				
Configuration of Header/Footer Details on the receipt				
Ability to return Line Items on the receipt				
Configuration of printing of Cardholder name on receipt				
Configuration of printing Terminal ID, Merchant ID, Client ID details on receipt				
Receipt Printing for Decline or Error transactions on receipt				
Prompt to Print Customer Copy in the Standalone mode				
Masking of Account Number on the receipt				
Printing of Signature lines on the receipt for EMV Transactions (by setting CTLSIGLINE and CNTSIGLINE parameters)				Supported for Worldpay solution only.
Enable Gratuity guidelines on receipt				

## Wallets





































Feature/Functionality List	MX	Engage (SCA4)	Neo (SCA5)	Notes
Apple VAS and Loyalty Requirements				

Feature/Functionality List	MX	Engage (SCA4)	Neo (SCA5)	Notes
Google VAS				

## Commerce Platform Trigger Support










Feature/Functionality List	MX	Engage (SCA4)	Neo (SCA5)	Notes
Triggers API - Support for the list of CP Triggers as Notifications and Requests (CP_SYSTEM_REQUESTS_XXXX and CP_SYSTEM_RECEIVES_XXXX)				

## Preamble/ Initialization Process







Feature/Functionality List	MX	Engage (SCA4)	Neo (SCA5)	Notes
Device Registration / Host Registration with MID/TID				Supported for FDRC, Chase and GSC solutions only.
CAPK Download				Supported for FDRC solution only.
MAC Key Download				Not Supported for TSYS solution.
Batch DB Purge - for Authorization and Sale - deletion of Records in database after configured days				
PropertiesDB Corruption Check and Backup				
Batch DB Health Check				
Test Sale And Test Void				
Merchant Settings Configuration during startup				
BIN update for VCL				
Network Configuration				
VCL Registration/PKI/TRA Key Download				
VHQ Device ID Prompt to be sent during the VHQ communication				

## Device Boarding Support





































Feature/Functionality List	MX	Engage (SCA4)	Neo (SCA5)	Notes
VHQ Device ID Prompt On Device				

Feature/Functionality List	MX	Engage (SCA4)	Neo (SCA5)	Notes
Sending Device ID via SET_PARAM command				Supported for FDRC and GSC solution only.
Device Registration and VSP Registration via SET_PARAM command				
Pre-Boarding of Terminal on VHQ				

## Canadian Feature Set

Feature/Functionality List	MX	Engage (SCA4)	Neo (SCA5)	Notes
Canadian Support (MACing) - Worldpay Canadian Processing				Not Supported for TSYS solution.
DUKPT Macing Support Configuration - MAC_METHOD				Supported for FDRC solution only.

## Payment Processing Set

Feature/Functionality List	MX	Engage (SCA4)	Neo (SCA5)	Notes
MACLess Interac Configuration - MAC_METHOD				Not Supported for TSYS solution.
Dual Language				Not Supported for TSYS solution.
Non QuickChip (Full EMV Flow) Configuration - quickchip				Not Supported for TSYS solution.
BIN Look up(CDT File) to determine Card types and details				
Honoring PAYMENT_TYPE/PAYMENT_TYPES field to restrict the current transaction to that payment field				
Signature Capture During the Transaction Flow For Approved Transactions Initiating Void If the Signature is Cancelled				Supported for UGP solution only.
Token renewal as part of the payment command				
AVS(Zip/Address) support for Manual transactions				
AVS and CVV Validation Based on Host Response				Supported for UGP and GSC solutions only.
Support for Quick Chip EMV				Not Supported for GSC solution.
Preferred AID(Preferring particular AID over others)				Partially supported for Engage (SCA4) and Neo (SCA5).
Kernel Switching - Kernel Configuration (NOCVM)				

Feature/Functionality List	MX	Engage (SCA4)	Neo (SCA5)	Notes
Support for Dynamic Currency Conversion (DCC) Transactions				Supported for UGP solution only.
Support for DCC Auto Opt in for Refund and DCC Transactions is allowed to process in offline mode				Supported for UGP solution only.
Support for DCC Transactions Store and Forward (SAF)				Supported for UGP solution only.
DCC Prompting Based on Host Response (DCC2PASS)				Supported for UGP solution only (with Worldpay end Host).
DCC Support Configuration Per Transaction Type and Card Entry Mode				Supported for UGP solution only.
Duplicate Transaction Check				
Support for enhanced Training Mode				
Support for External PINPad pushing EMV configuration from IPP to EPP SSL based External PINPad				Supported for FDRC, UGP and TSYS solutions only.
Application Control for VHQ downloads				
Support for Network Brand Multi-Sensory Advertising				
Support for Level-II Purchase cards				
Support for Level 3 Data Passthrough				
Advance DDK Functionality				
Toggling url (primary to secondary, vice versa) after X response timeouts				
Switch to primary url from secondary url after x transactions				Supported for GSC solution only.
Support for TOR (Time Out Reversal) - Host Specific				Supported for Canadian Debit only in UGP solution.
Auto Settlement(Trigger the Settlement at configured Time)				<ul style="list-style-type: none"> <li>Partially supported for MX.</li> <li>Not Supported for GSC solution (Engage and Neo).</li> </ul>
Auto Cashout of the Gift Card				Supported for FDRC, UGP and Chase solutions.

Feature/Functionality List	MX	Engage (SCA4)	Neo (SCA5)	Notes
Pin Bypass				
Token Based transaction support				Not Supported for TSYS solution.
Encryption of Account Number From POS ENCRYPT field in POS request				
Pre-Swipe/Pre-Dip Support - Ability to capture card details before tendering the Total				
Support for Early Card Capture				
Early Card Capture Extension for EMV and Other commands				
Store card details of current Sale transaction if it gets declined for Force(Post Auth)				Not Supported for UGP solution.
Buffering Line Item commands while Terminal is busy reading the pre-swipe/dip card				Supported for Worldpay and Chase solutions.
Buffering Payment Command while Terminal is busy reading the pre-swipe/dip card				
Quick chip - consumer prompting during EMV transaction				
Non Quick chip - consumer prompting during EMV transaction				
BAPI Support				
SCA to VHQ Transaction and Batch Reporting				
Displaying transaction type on the screen				
Validating encrypted card details				
Card Token - Kohl's Track Data Cross Check				
REF_TROUTD based transaction support				Supported for GSC solution only.
Capturing VAS data/EMAIL/TIP as part of the transaction flow				Partially supported for Engage (SCA4) and Neo (SCA5).
Auto last transaction				Supported for UGP solution only.
Partial EMV transaction support (Force, Token Query Transaction)				
ACK, NAK protocol with SSI host				
Contactless to contact fallback based on host response code				
Sending captured signature to payment host				

Feature/Functionality List	MX	Engage (SCA4)	Neo (SCA5)	Notes
EMV card language support				
EMV AID based payment type selection				
Configurable tender type selection screen before card read screen				
MSR PIN Debit Encouragement				
CVV/EXP/ZIP code prompt in manual entry transaction based on CDT/Config/POS request. ZIP Prompt is not based on CDT				
Controls CVV Bypass for all card types using ALLOWCVVBYPASS parameter.				
Controls Expiry prompt for Private Label Specifically using PRIVATELABELEXPREQD parameter.				
Controls Expiry prompt for Merchandise Credit Specifically using MERCHCREDITEXPREQD parameter.				
Controls CVV prompt for Private Label Specifically using PRIVATELABELCVVREQD parameter.				
Control Expiry prompt for Gift Cards Specifically using GIFTCARDEXPREQD parameter.				
Control CVV prompt for Token Query using PROMPTCVVFORTOKENQUERY parameter.				
Control CVV prompt for Gift Cards Specifically using GIFTCARDCVVREQD parameter.				
Control CVV prompt for Refund using ENABLECVVPROMPTFORREFUND parameter.				
Virtual Gift Card PIN Prompt Enhancement				Supported for Worldpay and GSC solutions only.
Honouring cash back amount from POS				
Honouring TIP amount from POS				
Service code check fallback based on configuration				
GIFT refund support				Supported for Worldpay and GSC solutions only.
Capturing INTERAC account type				Not Supported for TSYS solution.
KHOLS token query based transactions				
Padding 'F' to KSN based on configuration				
PINLESS DEBIT flag based on configuration				Not Supported for TSYS and Chase solutions.

Feature/Functionality List	MX	Engage (SCA4)	Neo (SCA5)	Notes
VSP registration as part of the transaction based on host response code				
TruRatings Interface support				Supported as a CP APP, however not supported for TSYS solution.
TKN_PROCESS support (Tokenization) in the SSI REQUEST				Supported for UGP solution only.
Mx Parity - SCA application does not show Negative sign for refund transaction				
Partial Authorization and Partial Approval Confirmation Screen				
Online PIN Retry Based on Host Response				
Capturing card details for debit void transactions				Not Supported for GSC solution.
PAYMENT_SUBTYPE support for GIFT transactions				Supported for UGP solution only.
Capture PIN for Contactless debit and EBT refund transactions irrespective of CVM (based on configuration)				Not Supported for Chase solution.
EMV fallback to All Entry Modes to Swipe Only				
POS_RECON field support				
MSR PIN Debit enhancements				
EMV Signature Capture Enhancements - Ability to skip signature below a certain limit				Partially Supported for Engage (SCA4) and Neo (SCA5)
Support for Private label Payments to Verifone Gateway or via Worldpay Direct and Additional Private Label, AVS Enhancements.				Supported for UGP, GSC and Worldpay Direct solutions only.
Visa Network Name in Receipt				
SCA to VHQ Field Expansion				
Add TOKEN_TYPE tag to support WP low value tokens (Worldpay Specific)				Supported for Worldpay solution only.
Token Query MOD-10 Enhancement				
CREDIT CONVERSION - An option, where the processors converts the signature request to a PIN less debit request based on certain criteria in the transaction request.(Worldpay specific).				Supported for Worldpay solution only.
CAPK Download Throttling (Fiserv Specific)				Supported for FDRC solution only.

## Unsolicited Message to POS

Feature/Functionality List	MX	Engage (SCA4)	Neo (SCA5)	Notes
When consumer option is selected on left panel				
When pre-swiped/dipped/tapped				
When card details are captured during transaction				Not Supported for Worldpay and Chase solutions.
When transaction is in flight				Not Supported for Worldpay and Chase solutions.
Detailed status of the transaction at each step of the flow - Event Notification POS Port Expansion				Partially supported for Engage (SCA4) and Neo (SCA5)
Unsolicited Messages Enhancement for Headless Mode operation in Ux SCA Support (UX301)				

## Store and Forward Processing

Feature/Functionality List	MX	Engage (SCA4)	Neo (SCA5)	Notes
Posting SAF transactions at Background				
SAF on Response Timeout/Support SAFing transaction during response timeout scenario				
Host Forced SAF Mode				
POS Forced SAF Mode				
SAF Throttling				Supported for FDRC, UGP and GSC solutions only.
Offline Approval on specific Host result/response codes				Supported for FDRC, UGP and GSC solutions only.
SAF of Online PIN				Supported for FDRC and UGP solutions only.
SAF Purge				Not Supported for TSYS solution.
SAFing of TOR /SSI URL FailOver and SSI TOR and SAF VOID Enhancement Logic				This is a Host specific functionality and supported for FDRC solution only.
Edit SAF				Supported for UGP solution and in GSC solution, only for PRE Auth functionality.
Posting SAF Transactions to SAF URL				

Feature/Functionality List	MX	Engage (SCA4)	Neo (SCA5)	Notes
SAF EMV online PIN transactions				For Engage (SCA4) and Neo (SCA5), if SAF is enabled, then it is Kernel switch. This is supported for FDRC and UGP solution only.
SAF of GIFT Transactions				Not Supported for TSYS solution.
Configuring SAF limits per card types				
Re-Posting Declined SAF Transactions				
Support for Storing DCC Transaction in SAF				
Disable Pinless Debit For SAF Transaction Forwards				
SAF Based on Command Type Support				
Avoid Online PIN Prompt During Terminal Offline Situation				




















## Media Files and Functionality Specifications

Feature/Functionality List	MX	Engage (SCA4)	Neo (SCA5)	Notes
Full Screen Image on Idle Screen (Idlemediamode)				
Full Screen Video on Idle Screen (Idlemediamode)				
Video + Banner Support				Supported for GSC solution only.
Full Screen Animation Idlemediamode				
Left panel image on Line Item Screen				
Left panel Animation on Line Item Screen				
Screen Saver Functionality				Supported in Standalone mode for all solutions.
Title Logo / title banner				
Background of device commands				
Welcome Screen Branding				















## On Device Configuration

Feature/Functionality List






















MX Engage (SCA4) Neo (SCA5) Notes




















































SCA Configuration Menu			
Four Corner Touch to access Config Menu			
BT Pairing Short Keys (5+Enter)			
Device Information Screen (1+Enter)			
ADK COM configuration via SCA Configuration menu			
TMS Operations - Call TMS			
Initiate Heartbeats Through SCA Config Menu			
Accessing MAC menu through Configuration menu			
Configuration of Commerce Application Settings			

### Terminal Management System (TMS)

Feature/Functionality List	MX	Engage (SCA4)	Neo (SCA5)	Notes
Vericentre				Supported for FDRC and TSYS solutions only.
VHQ				
Parameter Downloads				
Content Downloads				
Software Downloads				



### Standalone Mode Functionalities

Feature/Functionality List	MX	Engage (SCA4)	Neo (SCA5)	Notes
Keyboard Lock				Not Supported for FDRC, UGP and GSC solutions.
Commands based Authorization (Password for all transactions)				Supported for UGP solution only.
Batch Review				Supported in FDRC only for Deletion functionality. Not supported for UGP and GSC solutions.
Reprint				Not supported for UGP and GSC solutions.
SAF Offline Forward				Not supported for UGP solution.
Phone Order				Not supported for UGP and GSC solutions.
Clerk Management				Not supported for UGP and GSC solutions.



Feature/Functionality List	MX	Engage (SCA4)	Neo (SCA5)	Notes
Clear Batch				Not supported for FDRC, UGP and GSC solutions.
Unadjusted Tip Report				Supported for FDRC and Worldpay solutions only.
Open Tab Report				Not supported for UGP and GSC solutions.
Card Totals Report				
Detail Report				
Clerk Detail and Clerk Total Report				
Terminal Parameter Report				
IRS Tip Report				Supported for FDRC and TSYS solutions only.
Clerk Totals/Detail Report				Not Supported for UGP and GSC solutions.
Batch History Report				Not Supported for UGP and GSC solutions.
Shift Processing				Not Supported for UGP, TSYS and GSC solutions.
New Card on Close Tab/Completion				Not Supported for UGP and GSC solutions.
Password Levels				Not Supported for FDRC, UGP and GSC solutions.
Cashback Limit with Password				Supported for Chase solution only.
Sale Limit with Password				
Refund Limit with Password				Supported for Chase solution only.
Set time with SCA				Not Supported for FDRC, UGP and GSC solutions.
PLCC Disclaimer and Confirmation Flow for Standalone				
Protect Manual Entry Transactions with password				

## Card Rages Features



















### BIN Table Controls

Feature/Functionality List	MX	Engage (SCA4)	Neo (SCA5)	Notes
Payment Type (For NON EMV Cards)				

















## Feature Controls per BIN range

Feature/Functionality List	MX	Engage (SCA4)	Neo (SCA5)	Notes
CVV Prompt Logic for Keyed (Control Prompting for Card Not Present or Card Present Scenarios)				



























## Control with PMEBIN.db

Feature/Functionality List	MX	Engage (SCA4)	Neo (SCA5)	Notes
Controlling Expiration Date Check (Non EMV Cards)				
Controlling LUHN Check				
Manual Entry Support				
PCI BIN Marker (Allowing Gift Cards to return full Track Back to POS)				
PIN Entry Control (NON EMV Cards)				
Canadian Account Type Prompt (Savings/Checking Prompt)				
Contactless Receipt Limit Amount				
Signature Limit				
Offline Transaction Limit				

## Other Features

Feature/Functionality List	MX	Engage (SCA4)	Neo (SCA5)	Notes
Surcharge				Not Supported for UGP, TSYS and GSC solutions.
TIP feature, which includes Tip Prompt, TIP Configurations in Percentage or Whole Amounts and Tip Prompts Based on Transaction Types - Custom Tipping Functionality				Supported for GSC solution only.
Tax Prompt				Not Supported for GSC solution.
Cashback Prompt / Allowing OTHER Button for Cashback Selection				
Split Tender				Not Supported for TSYS and GSC solutions.
Amount confirmation				Not Supported for GSC solution.

































Feature/Functionality List	MX	Engage (SCA4)	Neo (SCA5)	Notes
Timeout Control For Different Commands (TIMEOUT_ERROR, TIMEOUT_INPUT, TIMEOUT_SUCCESS)		✓	✓	Supported for UGP and GSC solutions only.
Signature Limit	✓	✓	✓	
Merchant Settings Configuration during startup	✓	✓	✓	Not Supported for UGP and TSYS solutions.
Fraud Control		✓	✓	
Avoid Transactions Below particular Battery % (battery Threshold) / THRESHOLD configuration		✓	✓	Not Supported for UGP and TSYS solutions.
Negative Batch Settlement NEGATIVEBATCHSETTLE		✓	✓	Supported for FDRC and Chase solutions only.
Network Switching		✓	✓	
Host Keep alive support	✓	✓	✓	Supported for FDRC, Worldpay and Chase solutions only.
VCL BIN Update	✓	✓	✓	Not Supported for TSYS, Worldpay and GSC solutions.
Customized audio on card removal prompt	✓	✗	✗	
Custom Audio Token for errortone, normaltone & declinetone		✓	✓	
EMV Configuration report	✓	✓	✓	Supported for Worldpay and Chase solutions and Partially Supported for other solutions.
SCA Applogging	✓	✓	✓	
Identify Card Removal In Between Transaction (R01)	✓	✗	✗	
Credit App Command Encryption Support		✓	✓	
Credit App Field Reprompting /SCA Credit App Command with re-confirmation prompt support for prompt data	✗	✓	✓	Not Supported for TSYS and Chase solutions.
Sending Unsolicited Message to POS when the Battery drops below a particular Limit		✓	✓	
Battery Low Warning on screen	✗	✓	✓	Not Supported for TSYS and Chase solutions.
Bluetooth POS Connected Information on Screen	✗	✓	✓	Supported for UGP solution only.
VHQ Device Movement Alerts Based on LANE ID and STORE ID from POS	✗	✓	✓	
User Defined Catalog Update for UI and Receipt Printing	✗	✓	✓	

Feature/Functionality List	MX	Engage (SCA4)	Neo (SCA5)	Notes
Bluetooth Pairing Enhancements and UI updates for BT				Supported for UGP solution only.
Excess Tip Confirmation Control				
Pay With Points (Pay by Rewards)				Supported for UGP solution only.
Preset Tip Functionality				
Call For Authorization with host response codes				
VHQ Device Alerts During POS Disconnections				
VHQ Custom Attributes based on configured fields / Posting Specific Parameters from terminal to VHQ				
RAW Signature Format Support				
SCA Single Tap Functionality (Mandate in EU Regions)				
Custom Tipping for Restaurant				
Stored Credentials / Credential on File				
Pitstop Anywhere Support				
Device Info via QR Code				
Terminal Languages Support <ul style="list-style-type: none"> <li>English</li> <li>French</li> <li>Spanish</li> <li>Italian</li> <li>German</li> <li>Portugese</li> <li>Russian</li> </ul>				
Last Transaction feature, includes validation of the Last Transaction with the Gateway and return the locally stored Data and returning the SAF record				
Transaction Performance Metric				
Health Monitor For Device Diagnostics				
Purchase BIN Indicator Back to POS (CMRCL_FLAG)				
Debit Optimization (Worldpay Specific)				Supported for Worldpay solution only.
Allow POS to Pair with Terminal without entering the Entry Code. (AutoPair Function)				

Feature/Functionality List	MX	Engage (SCA4)	Neo (SCA5)	Notes
Embossed Number Calculation and returning back to POS				
Restricting EMV Fallback To Specific Payment Types				
Separate Settlement URL Configuration				Supported for Chase solution only.
Ability to Post EMV Transactions as CREDIT or DEBIT based on presence of PIN				
Ability to Prompt CREDIT/DEBIT card Types for EMV Cards based on specific AID				
Ability to Treat Offline PIN CVM cards as Debit for AUTOSELECT Payment Type				
NON ISO EBT Card Acceptance				
Disable The Contactless Acceptance On Preswipe Screen				
Disable Contactless Acceptance for Refund Transaction				
Disable Contactless Acceptance for Gift Transactions				
Returning Response Text To POS in terminal Language / Allows POS to display the Response Text in configured language of terminal				
Controlling the Format of the Amount Displayed on the terminal and Format being returned in Receipt / Currency Symbol Configuration Support				
Functionality to Return the Unmasked PAN for the NON PCI cards.				
Allow Swiping of EMV Cards with Service code 2xx or 6xx / Configurable in CAMCORE based on BIN ranges				
Returning AUTH_REF_NUM field back in the POS Response and Printing on the Receipt (WP specific, mapped to response field 105.3 of WorldPay response)				Supported for Worldpay solution only.

## Supported EMV AID

Feature/Functionality List	MX	Engage (SCA4)	Neo (SCA5)	Notes
MasterCard Global Credit (A0000000041010)				
Maestro (A0000000043060)				
Maestro US Common Debit (A0000000042203)				
Visa Global Credit (A0000000031010)				

Feature/Functionality List	MX	Engage (SCA4)	Neo (SCA5)	Notes
Visa Interlink (A0000000033010)				
Visa US Common Debit (A0000000980840)				
Visa Electron (A0000000032010)				
Amex Global Credit (A00000002501)				
Amex US Common Debit (A00000002504)				
Discover Credit (A0000001523010)				
Discover US Common Debit (A0000001524010)				
UnionPay Debit (A000000333010101)				
UnionPay Credit (A000000333010102)				
UnionPay Quasi (A000000333010103)				
UnionPay US Common Debit (A000000333010108)				
DNA (A0000006200620)				
Interac (A0000002771010)				
JCB (A0000000651010)				
Voyager (A0000000049999C00016)				Supported for Worldpay and GSC solutions only.
Wex (A0000007681010)				Supported for Worldpay and GSC solutions only.
EBT (A0000000044542)		