Nashville ISO Dual Specification

Addendum A
Usage with Integrated Terminal Management (ITM)

August 30, 2017

DSNS-0008A-2.19 (Draft I)
ISO Dual Addendum A

NOTICE

REVISION HISTORY

SECT	BRIEF DESCRIPTION OF CHANGE	REVISION ADDED
Spec	Changes from Revision 2.18 to 2.19	2.19 (Draft A)
6.2	Field 60, Table 1, Password Map, Offset 244 • Added 'FUTURE' designation to Cash Receipt position in password map (was added for FD4 cash receipt processing which has not been implemented yet)	Draft A
6.2	Field 60, Table 1, Cash Receipts Option, Offset 308.5 • Added 'FUTURE' designation to Cash Receipt option (was added for FD4 cash receipt processing which has not been implemented yet)	Draft A
6.4	Field 60, Table 3 • Added 'Signature Debit Allowed', Option 10, Bit 3 (Offset 109.5)	Draft A
6.4	Field 60, Table 3 • Added 'Signature Debit Card Type', Option 10, Bit 2 (Offset 109.6)	Draft A
6.30	Field 60, Table 51 • Added 'Credit Indicator Allowed' to Offset 355.5 *(this will allow to identify Credit Global AIDs that can add Credit Indicator on Contact EMV authorizations)*	Draft A
6.31	Field 60, Table 53 • Added 'Credit Indicator Allowed' to Offset 355.5 *(this will allow to identify Credit Global AIDs that can add Credit Indicator on Conatctless EMV authorizations)*	Draft A
6.24	Field 60, Table 30 (Lac Region Options) • Added 'Force/Offline Transactions' to Option 1, Bit 4 (Offset Id 4.4) • Added 'Manual ITBIS' to Option 1, Bit 3 (Offset Id 4.5) • Added Offset Id 11 'Print Decline Receipt' • Added Offset Id 12 'Settlement Repor' *(Per Sandra Bright's Request dated 6/17/2015)*	Draft B Draft B Draft B
6.24	Field 60, Table 30, Offset 4.6 and Offset 11 and 12(Lac Region Options) • Added 'Print Taxes' to Option 1, Bit 2 (Offset Id 4.6) • Changed Offset 11 to 'LAC Logo Indicator' from 'Print Decline Receipt' • Removed Offset 12 'Settlement Report' *(Per Manu Agarwals's Request dated 8/18/2015)*	Draft B Draft B Draft B
6.24	Field 60, Table 30, Offset 4.7 Bit 1 (Lac Region Options) • Added 'Confirm Total Amount' to Option 1, Bit 1 (Offset Id 4.7) *(Per Chaitanya Upadhyays Request dated 2/3/2015)*	Draft C
6.26	Field 60, Table 32, Added New Table for Canada Processing Options • Debit Refund Transaction Limit,Offset 4.1 Bit 7 • Interac Purchase Transaction Batch Limit, Offset 4.2 Bit 6 • Debit Refund Maximum Threshold Amount, Offset 5 *(Per Derek Peel's request to add 3 new Interac related options for Canada Region applications dated 2/24/2015)*	Draft D Draft D Draft D Draft D
8	Added Section 8 Appendix B • Added a note in Appendix B for Card Type BIN Ranges *(Per request from John Ashish (North FE) 'PFA spec update for "PRJ-030882 – MC 2 BIN". For consistency we want an appendix to be added for BIN ranges like it exists in other North FE specs' dated 3/11/2016)*	Draft D Draft D
6.30	Field 60, Table 51, Options 2, Bit 2 (Offset 355.6) • Added 'Zero Fill Tag 9F03 for Cash Back Amount' *(Contact AID level parameter that controls if Tag 9F03 has to be zero filled when cash back applies. Current INTERAC requirement)*	Draft E Draft E
6.30	Field 60, Table 51, Options 2, Bit 1 (Offset 355.7) • Added 'Include Tag 5F24 Value in Field 14' *(Contact AID level parameter that controls if Tag 5f24 value is to be included in Field 14. Current Mastercard and INTERAC requirement)*	Draft E Draft E
6.31	Field 60, Table 53, Options 2, Bit 2 (Offset 355.6) • Added 'Zero Fill Tag 9F03 for Cash Back Amount' *(Contactless AID level parameter that controls if Tag 9F03 has to be zero filled when cash back applies. Current INTERAC requirement)*	Draft E Draft E

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6.31	Field 60, Table 53, Options 2, Bit 1 (Offset 355.7) • Added 'Include Tag 5F24 Value in Field 14' *(Contactless AID level parameter that controls if Tag 5f24 value is to be included in Field 14. Current Mastercard and INTERAC requirement)*	Draft E Draft E
6.27	Field 60, Table 33 • Added New Table 33 – DCC options *(This table consists of different DCC parameters(DCC margin Percentage) by the card type.)*	Draft F
6.30	Field 60, Table 51, Options 2, Bit 0 (Offset 355.8) • Added 'CAID Online PIN for Credit Route' *(Contact AID level parameter that controls if Online PIN can be prompted on Common AID transactions that are pre-disposed to route to Dual(Credit) network e.g. Open Tab)* *Note: Visa Does Not want VISA CAID PIN Authenticated transactions (PAVD)to be routed to Visa Dual Network*	Draft G
6.31	Field 60, Table 53, Options 2, Bit 0 (Offset 355.8) • Added 'CAID Online PIN for Credit Route' *(Contactless AID level parameter that controls if Online PIN can be prompted on Common AID transactions that are pre-disposed to route to Dual(Credit) network)* *Note: Visa Does Not want VISA CAID PIN Authenticated transactions (PAVD)to be routed to Visa Dual Network*	Draft G
6.24	Field 60, Table 30, Offset 4.8 Bit 0 (Lac Region Options) • Added 'Debit EMV Allowed' to Option 1, Bit 0 (Offset Id 4.8) *(Per Upendra Dama's Request dated 1/27/2017)*	Draft G
6.28	Field 60, Table 34, Signature Threshold Limit • Added Signature Threshold Limit Table.	Draft H
6.23	Field 60, Table 27, Security Table • Added Token Type	Draft I

CONTENTS

1 NEW FEATURES

The following features are new. ***Please check on availability before attempting to implement any of these features.***

- New parameters required for Mexico
- New parameters required for LAC
- New parameters added to support automated firmware downloads
- New parameters to support MC and Visa Common AID processing
- New parameter to support DCC Check Box for Visa
- New Table (Parameters) added to support New Debit Refund Limit logic for Canada

Please refer to the Revision History for the details of all references to these features in the manual.

2 INTRODUCTION

2.1 OVERVIEW

The Nashville ISO Dual interface includes support for integrated terminal management (ITM) as described in this document. Integrated terminal management (ITM) is when merchant specific information is controlled from the FDCN front-end system via the ISO Dual interface. The main components are described below.

Initialization Processing

The ISO Dual specification includes support for integrated terminal management including initialization processing for customizing the setup for a merchant based on parameter option information stored in a global Terminal Management System (TMS) on the FDC Nashville host for each terminal location. Initialization should always take place immediately after a full program download but can also be supported as a user initiated option based on a local terminal function or as a host initiated (automated) option on any host response (typically the settlement totals or statistics response).

Automated Initialization Processing

The ISO Dual interface supports automated initialization processing whereby the host indicates to the terminal on a settlement response that the terminal needs to request a refresh of the initialization information.

Logon Password Security

The ISO Dual interface also supports logon security to prevent more than one terminal from processing with the same FDC Nashville terminal ID. FDC Nashville logon security is enforced by requiring the terminal to submit a logon password as part of all communication sessions. The logon password is assigned, managed and enforced by the FDC Nashville host system.

Automated Application Download Processing

The ISO Dual interface supports automated application download processing whereby the host indicates to the terminal on a settlement response that the terminal needs to connect to a download host and request a download of new application files.

Automated Settlement

The ISO Dual interface supports automated settlement whereby an auto download time is loaded to the terminal as part of the initialization processing.

Card Type Determination

The ISO Dual interface supports card type determination whereby card ranges are loaded to the terminal as part of the initialization processing. The terminal only receives card range information that applies for the merchant's location based on entitlements setup at the FDC Nashville host.

Paper Check Processing

For paper check processing services supported by the Nashville host, the ISO Dual interface supports initialization parameters that define the check service card type and applicable paper check approval options for the merchant and selected check service. Current paper check services supported by the FDC Nashville system are TeleCheck and Certegy.

Electronic Check (ECA) Processing (TeleCheck)

For TeleCheck electronic check (ECA) processing, the ISO Dual interface supports initialization parameters that define applicable check approval options for the merchant.

2.2 OTHER REFERENCES

- ISO 8583 — Bank card originated messages — Interchange message specifications — Content for financial transactions, Rev 1987 (E)
- FDC Nashville 'ISO Dual Specification' (Revision 2.10 or later)
- FDMS Nashville 'ISO Dual Addendum B – Usage Without Integrated Terminal Management (ITM)'

2.3 TERMINOLOGY

TERMINOLOGY	MEANING
Online	Process the transaction to the host online at the time the transaction is entered.
Offline/Advice	Store the transaction offline to the terminal's memory at the time the transaction is entered and process to the host as an advice at the time of the next online transaction or settlement session.
Authorize	Process the transaction online to the host at the time the transaction is entered and capture only if an approval code is received from the host.
Force	Process the transaction without requiring an online approval code from the host. An operator entered auth code or a voucher # may be required. A force transaction may be processed online at the time of entry or submitted as an advice on the next online or settlement session.
Terminal Management	Process whereby a terminal receives merchant specific parameter information from a remote terminal management system. The parameter information controls merchant, host and card type specific processing at the terminal.
Integrated Terminal Management (ITM)	Integrated terminal management (ITM) is when merchant specific information is controlled from the FDC Nashville front-end system via the ISO Dual interface.
Batch Download	Process whereby a terminal requests to restore previously processed transactions from an open batch on a remote host data capture system.

2.4 INTEGRATED TERMINAL MANAGEMENT (ITM) FEATURES

2.4.1 Initialization Processing

ISO 8583 parameter initialization may be required during normal transaction processing as well as immediately following a full program download. The POS application can support the following three methods for updating applicable terminal parameters whose values are based on predefined constants, data in the merchant/terminal specific Customer Information File (CIF) or in global system files on the FDCN host:

Program Startup: Based on completion of full program load

User Initiation: Based on local terminal function for refreshing parameter values

Automated Initiation: Based on the ISO Processing Code flow control flag on any response (last two significant digits of the ISO Processing Code)

All of these conditions must be recognized by the POS application, which should in turn initiate the appropriate message sequences to request the new parameter values. The initialization parameters are made up of various packets that are loaded as Private Use Field 60 tables. The POS application should not depend on the tables being loaded in any particular order or that all tables of the same type are loaded contiguously. Once initialization has been started, program execution should not be allowed to continue until the initialization process completes successfully.

Initialization Flow Diagram

(Msg=ISO Dual Message Type, PC=ISO Dual Field 3 Processing Code)

POS Application	FDCN Host
Request First Init Tables Send first Host Parameter Request ➔ (Msg: '0800', PC '930000')	
Request Remaining Tables If x=1 then Send next Host Parameter Request ➔ (Msg: '0800', PC '930001')	**Send Init Tables to Terminal** Send Parameter Response 🡐 (Msg: '0810', PC '93000x') If last table then x=0 else x=1
Parameter Init Complete, **Check for New Logon Password** If Field 53 received during parameter init, initialize logon password	
Check For Batch Download Needed If batch download not required (Batch Download Required, Host Table 4, Option 1, Bit 2 disabled), go to **Init Complete**	
Request First Batch Record Send first Batch Detail Request ➔ (Msg. '0300', PC '000000')	
Request Remaining Batch Records If 'x' = '1' then Send next Batch Detail Request ➔ (Msg. '0300', PC '000000')	**Send Batch Records** 🡐 Send Batch Detail Response (Msg. '0310', PC '<original PC>x') If last batch record then x=0, else x=1
Init Complete Disconnect	

Automated Initialization Processing

The ISO Dual interface supports automated initialization processing whereby the host indicates to the terminal on a settlement response that the terminal needs to request a refresh of the initialization information.

Automated Initialization Flow Diagram (Settlement)
(Msg=ISO Dual Message Type, PC=ISO Dual Field 3 Processing Code)

POS Application	FDCN Host
Send Offline Advice to Host If pending advises, send Advice Request ➔ (Msg: '0220')	**Process Advice** 🡐 Send Advice Response (Msg: '0230')
Send Totals Send Settlement Totals Request ➔ (Msg: '0500', PC '920000')	
	Reconcile Totals 🡐 Send Reconciliation Totals Response (Msg: '0510', PC '920000') Set Response Code = '95' if out-of-balance
Upload Batch if Out-Of Balance If first/more, send Batch Upload Detail Request ➔ (Msg: '0320', PC '<original>')	**Process Detail** 🡐 Send Batch Upload Detail Response (Msg: '0330', PC '<original>'')
Send Upload Totals If batch uploaded, send Totals Request ➔ (Msg: '0500', PC '960000')	
	Reconcile Totals 🡐 Send Reconciliation Totals Response (Msg: '0510', PC '96000x')
Clear Batch If successful, clear batch; otherwise abort and display error	
Report Statistics (optional-ignored by host) Send Statistics Request ➔ (Msg '0800', PC '910000')	
	Send Statistics Response 🡐 Send Statistics Response (Msg: '0810', PC '91000x')
Initialize If Required If 'x' = 4, perform INIT (see initialization flow diagram, page 12**Error! Bookmark not defined.**)	
Settlement Complete Display message and disconnect	

2.4.2 Logon Password Security

Logon password validation will be required each time the POS application connects to the FDCN host. The password will be submitted in Field 53-Security Related Control Information for all messages sent to the FDCN host. The host will return a Field 39 error Response Code of '96' and appropriate Field 63 Host Response Table 22 text ('Host ERROR 50, CALL HELP DESK') to be displayed if the logon password stored in the CIF (host data base) does not match the logon password in the request message. The application must be able to accept a new logon password in Field 53-Security Related Control Information of any host response message (this would typically only occur during host initialization immediately following a full program download).

2.4.3 Automated Application Download Processing

On the 0810 initialization response, the host can indicate that a full program download is required by including a Private Use Field 63 Schedule Download Table 42. The information in this table includes information that specifies that the download should take place immediately or, optionally, the time and date when the download should first be attempted as well as the download phone number or IP URL/Port to be used for the download. Typically, the terminal application would not initiate the download until the batch is closed regardless of the auto download time supplied.

2.4.4 Automated Settlement

Information is supplied during initialization processing to optionally enable terminal auto settlement based on a host-supplied time of day and a max number of auto settlement attempts allowed. Typical auto settle processing by the POS application is determined by the host auto settle time and the date the terminal was last auto settled. If auto settle is enabled, settlement should occur if more than one day has elapsed since the last settlement (power was removed, etc.) or auto settlement has not occurred for the current day and the current time is greater than or equal to the settle time. The condition where no transactions exist when it is time to settle should be treated the same as if settlement had occurred for that day. The condition where there is an intervening user initiated settlement should be ignored relative to the next auto settlement initiation; in other words, the terminal should auto settle at the appointed time regardless of intervening user-initiated settlements. Parameter initialization may reset the auto settle time but should not affect the date last settled; the same rules apply as stated above. The terminal should auto settle at the first occurrence of the auto settle time after a program download. Typically, if the applications attempts to auto settle and cannot complete settlement within the max number of settlement attempts allowed, an error prompt is displayed and/or an error report is generated on the printer and no more attempts are made until there is further keyboard activity at the terminal. Typically, auto settlement is not attempted until the terminal has been idle for some period of time (varies by application).

2.4.5 Card Type Determination

Card type BIN ranges will be loaded from the Nashville host during initialization. These card type ranges are used to determine the card type that applies for a swiped or keyed account number. Multiple ranges may be associated with the same card type and in some cases the ranges may be ambiguous or overlapping. The terminal application must have a mechanism in place for resolving these ambiguities. Typically, if the POS application determines that an account number matches more than one range for different card types, a card type confirmation prompt is presented for each card type (not range) based on the order of the range entries as loaded from the host until a card type is selected. The Card Type ID (Private Use Field 63, Table 66) must be included in *any* message that contains detail for a transaction to identify the card type originally selected. In addition, if the card range Confirm Card Type Option is enabled, the card type confirmation prompt should also be presented. If the card type is not confirmed, the application should continue searching the range entries for another match. Typically, the Nashville host will always enable this option when ambiguous card type ranges apply.

2.4.6 Paper Check Processing

For check guarantee only (not ECA) services supported by the Nashville host, initialization parameters typically define the check service card type, the check service host, the check processing user interface type, and applicable check approval fields. The ISO fields and tables that apply specifically to check approval processing are shown below.

Private Use Field 60, Terminal Configuration Initialization Table 1

Check Reader Installed	Enables and disables MICR check reader input
Check Service Card Type ID:	Identifies applicable Card Type Table
Check Service Host ID:	Identifies applicable Host Table
Check Service Type:	Defines the prompting method: DLN - Use Check Options DLN to define prompting sequence/fields MICR - Use Check Options MICR to define prompting sequence/fields BOTH - Menu option required to select DLN or MICR to define prompting fields NONE - Check processing not allowed
Check Options-MICR:	Selects check options for MICR Check Service Type (see below):
Check Options-DLN::	Selects check options for DLN Check Service Type (see below)

CHECK OPTIONS	TYPE	SUGGESTED PROMPT	FIELD	TBL	COMMENT
MICR Number	..40AN	INSERT CHECK	63	58	Allow magnetic read or manual input
Bank Number	9AN	ENTER BANK #	63	59	Keyed only (do not prompt if MICR # read from check reader device)
Account Number	..18AN	ENTER ACCOUNT #	63	60	Keyed only (do not prompt if MICR # read from check reader device)
Check Number	9AN	ENTER CHECK #	63	59	Keyed only (do not prompt if MICR # read from check reader device)
DLN/Allow Card Swipe	..76Z, ..32AN	ENTER ID NUMBER	35, 45 63	 61	Allow card reader input or keyed ID Number (typically DLN)
DLN/Manual Only	..32N	ENTER ID NUMBER	63	61	Allow keyed input only
State Code	2N	ENTER ID TYPE	63	62	Keyed only
Birth Date	6N	ENTER BIRTH DATE	63	63	Keyed only (mmddyy)

Private Use Field 60, Card Type Initialization Table 3

Card Type Name	Check service name to display and/or print
Merchant Issuer Name	Check service merchant ID

Private Use Field 60, Host Initialization Table 4

Currently always ‘1’ for Nashville

2.4.7 Electronic Check (ECA) Processing (TeleCheck)

For TeleCheck ECA, initialization parameters define the check service card type, the check service host, the check processing user interface type, and applicable check approval fields. The ISO fields and tables that apply specifically to TeleCheck ECA processing are shown below.

Private Use Field 60, Terminal Configuration Initialization Table 1

FIELD	COMMENT
Clerk/Server Entry	Enables/disables entry of an employee ID for ECA sale transactions
Dual Amount Entry	Enables/disables re-entry verification of the amount for ECA sale transactions
Check Service Card Type ID:	Identifies applicable Card Type Table
Check Service Host ID:	Identifies applicable Host Table
Check Service Type:	'ECA" *(used to trigger ECA processing within the terminal application)*
ECA Options 11	
Check Writer's Print Name Receipt Line	Enables/disables the check writer's printed name line on the receipt
Duplicate Checking	Enables/disables duplicate MICR # checking (raw MICR only)
SSN Prompt	Enables/disables check writer's SSN prompt
ZIP Code Prompt	Enables/disables check writer's ZIP code prompt
Birth date Prompt	Enables/disables check writer's birth date prompt
Auto Determine Check Type	Enables/disables auto determination of the check type from the raw MICR data
Verify Manual MICR	Enables/disables re-entry/verification of a manually keyed MICR #
ECA Options 12	
Check Writer's Receipt Address Line	Enables/disables the check writer's address lines (address line and city/state/ZIP line) on the receipt
Dual MICR Read	Enables/disables second read/verification of the raw MICR data
BCN (Billing Control #) Prompt	Enables/disables BCN prompt
BCN Min Length	Minimum # of characters that must be entered for the BCN (bypass of field allowed if '00').
BCN Max Length	Maximum # of characters allowed for the BCN
BCN Prompt Text	Text to display for BCN prompt (if a space, terminal uses default text, e.g. 'Enter Billing Control #')
BCN Default Value	Terminal displays default value if not spaces; user may press ENTER to accept default or may enter override value
MICR/Second ID Floor Limit	Prompt for second ID (e.g. driver's license) for personal checks where the MICR data was read via a check reader if the check amount is greater than or equal to the MICR/Second ID Floor Limit (e.g. '0050' = $50) - second ID always required for personal checks if the MICR # is manually keyed – second ID is never required for business checks
Telephone Prompt Floor Limit	Prompt for check writer's phone # if the check amount is greater than or equal to the Telephone Prompt Floor Limit – applies for both personal and business checks
Image Upload Phone #	Defines the phone number to use for uploading check images to the TeleCheck host (currently for Eclipse only)
ECA Sale Consumer Support #	For printing on ECA approved sale receipt
ECA Denial Consumer Support #	For printing on ECA consumer denial receipt

Private Use Field 60, Card Type Initialization Table 3

FIELD	COMMENT
Table ID	'03' – Identifies the table as a card type or issuer table
Table Length	Total length of data that follows for this table
Card Type Number	Relative position of this card type/issuer table relative to other card type/issuer tables
Card Type ID	Must match Check Service/ECA Card Type ID in Terminal Table 1
Card Type Name	'ECA' – used for receipts, reports and displays to indicate ECA card type
Referral Telephone #	Not applicable
Options 1	
Adjust Allowed	Enables and disables ability to do ECA adjustments
Amex PIP Descriptors Required	Not applicable
Voice Referral Allowed	Not applicable
Force Sale Allowed	Not applicable
Expiry Date Required	Not applicable
Manual PAN Allowed	Not applicable
PIN Entry Required	Not applicable
Check Guarantee Card Type	Not applicable
Options 2	
Block Card Verify	Not applicable
Block Refunds	Not applicable
Print Auth Only Receipts	Not applicable
Check Expiration Date	Not applicable
Capture Transaction	Not applicable – ECA approved transactions always captured
Print Receipt	Not applicable – ECA approved transactions require receipt
Key Invoice Number	Enables/disables keying of invoice number
Verify PAN Check Digit	Not applicable
Options 3	
Allow Cash Only Transaction	Not applicable
Void Processed Offline	Not applicable – Voids always processed online
Refunds Offline	Not applicable
Signature Not Required	Not applicable – Signature always required
Cash Back Entry	Not applicable
Block Voids	Enables/disables the ability to do voids
Options 4	
Purchase Card Sales Tax	Not applicable
Block Auth Only	Not applicable
Tax Reporting	Not applicable
Verify Last 4 PAN Digits	Not applicable
Debit Card Type	Not applicable
Default Account	Not applicable
Floor Limit	Not applicable – ECA second ID and telephone prompt floor limits specified in terminal table
Under Authorized Auth %	Not applicable
Block PIN Entry Transactions	Not applicable
Options 5	Not applicable

FIELD	COMMENT
Merchant Issuer Number	TeleCheck SE # - print on merchant/customer receipts as TeleCheck Merchant #
Additional % To Add To Auth	Not applicable
Checkout Type	Not applicable
Partial Reversal % Tolerance	Not applicable
Card Type Mnemonic	ECA Card Type Mnemonic – used for printed reports and display when full name too long
Custom Card Type Indicator	Not applicable
Cashback Limit	Not applicable
Options 6	
Force Refund Approval Code	Not applicable
AVS/Card Not Present	Not applicable
Credit Plan # (Terms) Prompt	Not applicable
Upward Adjustments	Not applicable
Allow Refund Authorization	Not applicable
AVS/Card Present	Not applicable
Voucher # For Force Transactions	Not applicable
Card Code Validation	Not applicable
Max Transaction Amount Digits	‘09’
Customer Code Prompt IDs	Not applicable
Swipe Only Transactions	Not applicable
Options 7	
Allow Force Refunds	Not applicable
Existing Debt Payment Prompt	Not applicable
ECI Prompt	Not applicable
Recurring Payment Prompt	Not applicable
ECA Card Type	Indicates this card type as ECA

3 FIELDS AND TABLES

Format types and field lengths in the layout specifications below utilize ISO 8583 conventions. The following may further clarify the field layout type/length indicators:

- In the table below, a lower case 'n' implies a numeric as used in each field definition to represent the maximum number of elements for variable length fields and the exact number of elements for fixed length fields.
- All data elements begin on a byte boundary.
- Fixed length 'N' type fields with an odd length are right justified to a byte boundary and zero filled on the left.
- The length indicator for a variable length field ('..' and '...') is a count ('nn' or 'nnn' respectively) of the number of elements to follow (not always the number of bytes, nibbles, etc.) and it does NOT include the length of the length indicator.
- All length indicators for variable length fields are represented in a binary coded decimal (BCD), right justified to a byte boundary and zero filled on the left.
- The variable Primary Account Number (Field 2), with an odd length is left justified within the field and 'F' filled.
- 'AN' implies numeric digits, 'a'-'z' and 'A'-'Z'.
- 'ANS' implies numeric digits, 'a'-'z', 'A'-'Z' and all other printable characters.

INDICATION	COMMENT
AN n or ANS n	**Alphanumeric Fixed Length** - ASCII printable character set. Left justified, space filled. Field size 'n' is expressed in bytes. Example: Response Code - Bit 39 - Length 2 - '01': Hex 30 31
AN ..n or ANS ..n	**Alphanumeric Variable Length (2)**. Left justified, space filled, if necessary. Field size 'n' is expressed in maximum number of bytes allowed, excluding the length byte. Example: Additional Response Data - Bit 44 - Length 2 - '02': Hex 02 30 32
AN ...n or ANS ...n	**Alphanumeric Variable Length (3)**. 'n' is maximum number of bytes allowed, excluding length. Amounts using this type have two assumed decimal places. Example # - Bit 62 - Length 10 - '0000123456'): Hex 00 10 30 30 30 30 31 32 33 34 35 36 Example (Tip Amount - Bit 54 - Length 12 - $32.96): Hex 00 12 30 30 30 30 30 30 30 30 33 32 39 36
AN ….n or ANS ….n	**Alphanumeric Variable Length (4)**. 'n' is maximum number of bytes allowed, excluding length. Amounts using this type have two assumed decimal places. Example # - Bit 48-15 - Length '10' - '0000123456'): Hex 00 10 30 30 30 30 31 32 33 34 35 36 Example (Tip Amount - Bit 54 - Length 12 - $32.96): Hex 00 12 30 30 30 30 30 30 30 30 33 32 39 36
AN V ANS V	**Alphanumeric Variable Length (without length byte)**. length determined by some other method (length byte for table or field, delimiters, etc.)
ANSB ….n	**Alpha, numeric, special characters and binary representation of data - variable length (up to 9999)**
N n	**Packed Numeric Fixed Length**. 0-to-9 values packed in 4-bit BCD. Right justified, zero filled. Field size 'n' is expressed in significant digits or half-bytes. When the size is an odd number, the **first** half-byte of data is padded with a 4-bit 0 (null). Amounts under this format type have two assumed decimal places. Examples: Process Code - Bit 3 - Length 6 - '004000': Hex 00 40 00
N ..n	**Packed Numeric Variable Length 2**. Field size 'n' is maximum digits or half-bytes, excluding length byte. When the size is an odd number, the **last** half-byte is normally padded with a 4-bit 0 (null); *however, the PAN-Field 2 is left justified and padded with a HEX F for odd lengths)* Example: PAN/Account # - Bit 2 - Length 13 - '4100123456789': Hex 13 41 00 12 34 56 78 9F
N ...n	**Packed Numeric Variable Length 3**. Field size 'n' is maximum digits or half-bytes, excluding length byte. When the size is an odd number, the **last** half-byte is padded with a 4-bit 0 (null). Example: Length 13 - '4100123456789': Hex 00 13 41 00 12 34 56 78 90
Z ..n	**Track 2 Data**. Same as 'N ..n' but allowing a Hex D as a valid digit for the field separator.
B n	**Binary**. The field allows the full range of binary data without regard to ASCII value, printability or command duplication. Field size is expressed in **bits**.

4 FDCN NASHVILLE ISO DUAL FIELDS

The following fields are supported in the FDC Nashville ISO Dual specification primarily to support integrated terminal management processing.. Refer to the ISO Dual specification for a full description of the fields.

FIELD	TABLE	FIELD NAME	ATTRIBUTE	COMMENT
53		Logon Password	N 16	Allows access to the Nashville host
60		Software/Revision ID	AN ...31	For init request and statistics
60	nn	Parameter Initialization Tables	AN ...999	See descriptions that follow.
63		Private Use Fields		
	42	Schedule Download	AN …65	Used to trigger auto download of program on 0810 response
	49	Terminal Status	AN …22	Submitted on initialization request

5 ISO TRANSACTION TYPES SUPPORTED

This interface includes the following message types primarily to support integrated terminal management. Refer to the Nashville ISO Dual Specification for a full description of these messages.

MESSAGE TYPE	PROCESSING CODE	COMMENT
0800		Network Management Request
	93000x	Host Parameter Initialization 930000 – First Request 930001 – Subsequent Request
0810		Network Management Response
	93000x	Host Parameter Initialization Response 930000 – Session Complete - Do Not Send Another Request 930001 – Session Not Complete – Send Next Request

6 FIELD 60 PARAMETER INITIALIZATION TABLES

In general, tables are not loaded in any particular order and tables of the same type are not necessarily loaded contiguously. Range tables will always be loaded in order of Card Range Position (the same order in which they should be searched). Tables will not be split across message sessions. Tables that do not apply or that are undefined should be ignored and not cause a communication error during the initialization process.

Field 60 includes a global length byte for all tables that follow. The Field 60 global length byte is followed by some number of complete tables depending on the max buffer size allowed for the response to the terminal. Each table includes a table ID, a table length, and table data. If present, the max buffer size indicated in Field 60 Software/Revision ID from the 0800 request will be used to determine the number of Field 60 tables that can be included in the response. If the max buffer size is not present in Field 60 Software/Revision ID on the 0800 request, Field 60 on the response will be limited to a maximum of 320 bytes. Again, there is no order or sequencing of tables implied except for range tables which must be loaded in sequence order. The terminal must ignore tables that do not apply for the merchant or that are undefined in the terminal application – the presence of these tables should not cause an error at the point of sale. The terminal should allow and ignore new fields added to end of an existing table.

ISO Dual Field 60 Parameter Tables:

ISO Dual Field 60 Table	Name of Table	Records Loaded	Applicability Condition During A Parameter Initialization Session
Table 0	Clear Init Data	Single	One global record for a TID. Always first table sent.
Table 1	Terminal Configuration	Single	One global record for a TID
Table 2	Card Range	Multiple	One record for every card BIN range supported for all entitlements/card types configured for a TID
Table 3	Card Type	Multiple	One record for every entitlement/card type configured for a TID (i.e. MC, Visa, Amex, Diners, JCB, check, loyalty, private label, gift card and/or debit)
Table 4	Host	Multiple	One record for every applicable host (First Data/Nashville, Amex, and/or Check)
Table 5	Amex Descriptor Data	Single (conditional)	One record if merchant is configured for Amex Reverse PIP
Table 6	AgriCard Sales Tax Text	Single	One record if AgriCard is entitled for a Canadian merchant
Table 7	Variable Configuration	Single	One record for variable configuration options
Table 10	Display and Print Text	Single	One global record for a TID
Table 14	*Packet Dial Network*	*Single*	*Not used.*
Table 15	Everest PIN Pad Configuration	Single (conditional)	One record if TID is configured with certain VeriFone PIN pad types
Table 16	Merchant Message Text	Single (conditional)	One record if a merchant is configured to print merchant message lines on the settlement report
Table 17	*Healthcare In-Network Payer*	*Multiple (conditional)*	*One record for each payer if a TID is configured for health care processing. Note: Health care processing is no longer supported.*
Table 18	Proximity Card Reader Options	Single (conditional)	One global record if a TID is configured with a contactless reader
Table 19	IP Configuration	Multiple (conditional)	One record for each applicable IP host (First Data/Nashville, TeleCheck, and/or download)
Table 20	Extended Download Information	Single (conditional)	One record.
Table 22	DCC Receipt Text	Multiple (conditional)	One record for each entitlement/card type that supports DCC and that is configured for the merchant
Table 23	DCC Currency Code	Multiple (conditional)	One record for each supported DCC currency if DCC is supported for the TID
Table 24	Multi Merchant TID List	Multiple (conditional)	One record for the parent and one record for each child TID when terminal is configured for multi-merchant processing
Table 25	Store and Forward	Single (conditional)	One record if the merchant is configured for store and forward processing (i.e. for wireless)
Table 26	Star Contactless	Single (conditional)	One record if TID qualifies for Star contactless processing
Table 27	Security	Single (conditional)	One record if TID configured for TransArmor security processing
Table 30	LAC Region Options	Single (conditional)	One record.
Table 31	Mexico Region Options	Single (conditional)	One record.
Table 50	EMV Terminal Configuration	Single (conditional)	One record if TID supports EMV processing (i.e. for Canada)
Table 51	Contact EMV Application ID (AID) Configuration	Multiple (conditional)	One record for each contact EMV chip program supported (i.e. MC Credit, Visa Credit and/or Interac Debit for Canada or Amex for Canada)
Table 53	Contactless EMV Application ID (AID) Configuration – ***Canadian Version***	Multiple (conditional)	One record for each contactless EMV chip program supported (i.e. MC Credit, Visa Credit and/or Interac Debit for Canada)
Table 53	Contactless EMV Application ID (AID) Configuration – Canadian Version ***US Version***	Multiple (conditional)	One record for each contactless EMV chip program supported (i.e. MC Credit, Visa Credit and/or Amex for US)

6.1 FIELD 60, TABLE 0 - CLEAR INIT DATA

If this table is received, previously stored initialization data should be cleared before the new data is written. *This table is always sent as the first table for all initialization sessions.*

ID (0)	FIELD	TYPE	COMMENT
1	Table ID	N 2	'00'
2	Table Length	N 4	'0000' (No data)

6.2 FIELD 60, TABLE 1 - TERMINAL CONFIGURATION

Only one terminal configuration table is downloaded during an initialization session. This table defines global terminal configuration parameters.

ID (1)	FIELD	TYPE	COMMENT
1	Table ID	N 2	'01'
2	Table Length	N 4	Total length of data that follows
4	Parameter Init Tracking #	N 2	The Parameter Init Tracking # is managed by the host and must be echoed in subsequent initialization sessions in Private Use Field 60, Software ID/Revision data.
5	Initialization Control	N 2	Controls whether the terminal should clear all batch data from the terminal. '00' - Do not clear batches '01' - Clear all batches
6	Filler	N 2	'00'
7	Filler	N 2	'00'
8	Merchant Local Date/Time	N 12	This field should be used to reset the time and date of the terminal's system clock. Format: 'yymmddhhmmss'
14	Telephone Dial Options	B 8	Identifies the telephone operation options. Note: This option is not currently supported and will always be '0'. MSB 7 Keyboard Dialing 1:Yes 6 Toll Dialing 1:Yes 5 Memory Dialing 1:Yes 4 Referral Dialing 1:Yes 3 Auto Answer 1:Yes 2 Enhanced dial messages 1:Yes 1 unused 0 unused
15	Terminal Password	N 4	This default merchant password can be used as the default password for local terminal password functions. If an application allows the changing of the default password, this field should be ignored on subsequent initialization sessions.
17	Filler	N 24	All 'F's
29	**Options 1:**	B 8	Unless otherwise stated, '0' = disabled and '1' = enabled
29.1	Confirm Summary Totals	(MSBit 7)	Controls whether the terminal displays the settlement totals for operator confirmation before the transactions are settled to the settlement host.
29.2	Date Format	(Bit 6)	Controls the format of 4 digit dates for print and display purposes. '0'=MMDD, '1'=DDYY *Note: Currently only format 'MMDD' is supported.*
29.3	Print Time/Receipt	(Bit 5)	Controls whether the time is printed on the customer receipt. Note: Most POS applications always print the time on the receipt and ignore this option. Currently the option is always set to '1'.
29.4	Lodging Processing	(Bit 4)	Controls whether lodging processing applies.
29.5	Clerk/Server Entry	(Bit 3)	Controls whether employee ID processing applies. The employee ID long and short text is defined in the Display and Print Text Initialization Table 10. The tip amount is submitted to the host in Field 63, Table 10.
29.6	Tip Entry	(Bit 2)	Controls whether tip processing applies. The tip and pre-tip text are defined in the Display and Print Text Initialization Table 10. The tip amount is submitted to the host in Field 54.

ID (1)	FIELD	TYPE	COMMENT
29.7	Display Track Data After Swipe	(Bit 1)	Controls whether the track data is displayed after a card swipe for operator confirmation relative to the data embossed on the card. If the data is not confirmed, the transaction should be aborted.
29.8	Dual Amount Entry	(LSBit 0)	Controls whether the amount must be re-entered when a single amount entry applies or the amount total must be keyed when multiple amount fields apply. If the re-keyed amount or the amount total is incorrect, an error message must be displayed and all amount fields must be re-keyed. If this is option is ignored or not supported, the total amount ***must*** be confirmed by the operator whenever multiple amount fields apply (tip, tax, cash back, …).
30	**Options 2:**	B 8	Unless otherwise stated, '0' = disabled and '1' = enabled
30.1	Shift Processing	(MSBit 7)	Controls whether shift processing applies.
30.2	Receipt Pre-Printing	(Bit 6)	Controls whether some portion of the receipt is pre-printed before online communication with the host is initiated.
30.3	Void Offline	(Bit 5)	Controls whether voids (deletes) are processed offline as advice transactions or online at the time the void is performed. The Void Offline terminal option can be overridden by the card type Block Voids and Void Offline options.
30.4	Refunds Offline	(Bit 4)	Controls whether refunds are processed as online authorizations or as force transactions (not both). This option may be ignored if using the card type refund options (Block Refunds, Allow Force Refunds and Allow Refund Authorizations).
30.5	Frequency Program (02)	(Bit 3)	Controls whether FDMS Frequency Program '02' applies.
30.6	Receipt Total Line	(Bit 2)	Controls whether a line is printed on the customer receipt for the total amount of the transaction. Note: This option is currently always set to '1' and may be ignored by POS applications that always print the total line when more than one amount applies (tip, tax, cash back, …).
30.7	Printer Used	(Bit 1)	Controls whether printing applies in general.
30.8	Tax Exempt Merchant	(LSBit 0)	Controls whether the merchant is considered tax exempt. *Note: For commercial cards, the Field 63 Table 68/69 tax field is set to zero and the tax exempt indicator is set to '1' even if the merchant is tax exempt – the table must be submitted for commercial card transactions regardless of the status of this bit.*
31	**Options 3:**	B 8	Unless otherwise stated, '0' = disabled and '1' = enabled
31.1	Automatic Server Logon	(MSBit 7)	Controls whether an employee ID is automatically accepted regardless of whether the ID has been setup in an internal Employee ID table. This option does not apply if Clerk/Server Entry is disabled (see above) or if the POS application does not support an internal employee ID table.
31.2	Card Read/ PIN Pad	(Bit 6)	Controls whether a customer card swipe is supported on an attached PIN pad device. *Note: All PIN pads do not have card swipe capabilities*.
31.3	Check Reader Installed	(Bit 5)	Controls whether a check reader applies for check approval transactions.
31.4	'Imprint Now' Prompt	(Bit 4)	Controls whether an 'Imprint Now' prompt must be confirmed by the operator for manually keyed card present transactions.
31.5	Verify Receipt	(Bit 3)	Controls whether a receipt is printed for verification transactions. *Note: This option should be ignored if verification transactions are not supported by the POS application.*
31.6	Amount Verify/PIN Pad	(Bit 2)	Controls whether the total transaction amount must be verified by the ***customer*** on an attached PIN Pad device. *Note: Not all PIN pads support this feature.*

ID (1)	FIELD	TYPE	COMMENT
31.7	Block Card Present Prompt	(Bit 1)	Controls whether the 'Card Present?' prompt is blocked or should be displayed and confirmed by the operator for manually keyed transactions. If not blocked, the response to the Card Present? prompt will determine the card present status for the transaction; if blocked, the card present status is based on the Card Present Default which follows. '0' – Display Card Present? prompt (retail and telephone/mail order both) '1' – Do not display Card Present? prompt (see below)
31.8	Card Present Default	(LSBit 0)	Controls whether the card present status for a transaction defaults to card present or card not present for manually keyed transactions. This option only applies if Block Card present Prompt (above) is enabled. '0' – Default card present status is 'Not Present' (telephone/mail order) '1' – Default card present status is 'Present' (retail)
32	**Options 4:**	B 8	Unless otherwise stated, '0' = disabled and '1' = enabled
32.1	Bypass Prompt For Tip	(MSBit 7)	Controls whether tip entry should be bypassed when entering the initial transaction data. *Note: This option would be enabled for businesses where the customer typically enters the tip after the approval is received from the host. This option can be used in conjunction with the Enter Tip After Sale option below. This option only applies if Tip Entry is enabled (see above).* '0' – Prompt for tip when entering transaction data if Tip Entry is enabled '1' – Do not prompt for the tip when entering transaction data
32.2	IRS TRAC Reporting	(Bit 6)	Controls whether IRS tip total reporting applies for employee ID related reports. *Note: This option only applies if both Tip Entry and Clerk/Server Entry are enabled (see above).*
32.3	Auto Rental Processing	(Bit 5)	Controls whether auto rental processing applies.
32.4	Server Settlement Totals	(Bit 4)	Controls whether employee ID totals are included on the settlement report. *Note: This option only applies if Clerk/Server Entry is enabled and the Printer Used option is set.*
32.5	Tender/Cash Prompt	(Bit 3)	Controls whether tender or cash back prompting applies along with the sale/purchase amount prompting. *Note: This option is not typically supported by POS applications.* '0'=Cash Prompt '1'=Tender Prompt (Tender-sales = cash)
32.6	Batch Review By Clerk/Server	(Bit 2)	Controls whether batch review is allowed for individual servers (controlled by local supervisory password management). *Note: This option is not typically supported by POS applications.*
32.7	Reserved	(Bit 1)	Reserved for legacy 'Server Prompt' (TMS Feature ID 165) – assumed to be obsolete.
32.8	Adjust By Clerk/Server	(LSBit 0)	Controls whether adjustments are allowed for individual servers (controlled by local supervisory password management). *Note: This option is not typically supported by POS applications.*
33	Receipt Line 2	A 23	Typically DBA Street Address to print on customer receipt and reports
56	Receipt Line 3	A 23	Typically City, State and ZIP to print on customer receipt and reports
79	Receipt Line 1	A 23	Typically DBA Name to print on customer receipt and reports
102	Currency Symbol	A 1	Symbol to use when printing or displaying formatted amounts. *Note: Currently only* "$' is supported.
103	Max Digits/Transaction Amount	N 2	The maximum number of digits that should be allowed for the total unformatted amount of the transaction (not including the currency symbol or decimal point). This field can be overridden by the card type option Max Transaction Amount Digits.

ID (1)	FIELD	TYPE	COMMENT
104	$ Decimal Point Position	N 2	The position of the decimal counted from the right most position of a formatted amount. *Note: Currently only a value of '03' is supported for this field*.
105	Language (Canada)	N 2	Controls the language used for printer and display text. '00' - USA/English '01' – French ~~'02' - Spanish~~
106	Max Digits/Settlement Amounts	N 2	The maximum number of digits that should be allowed for the total unformatted settlement amount (not including the currency symbol or decimal point).
107	Check Service/ECA Type	N 2	Controls the menu prompting options for check approval processing.. '00'=none, '01'=MICR, '02'=DLN, '03'=MICR/DLN, '04' for ECA CPO, '05' for ECA Split Dial
108	Check Service/ECA Card Type ID	N 2	Card Type ID for the associated Card Type Table '03';
109	Check Service/ECA Host ID	N 2	Host ID for the associated Host Table '04';
110	Password Options	B 8	Unless otherwise stated, '0' = disabled and '1' = enabled
110.1	Filler	(MSBit 7)	'0'
110.2	Block Force Debit Password	(Bit 6)	Controls whether password entry is blocked for force debit transactions
110.3	Block Force Password	(Bit 5)	Controls whether password entry is blocked for force transactions
110.4	Block Report Password	(Bit 4)	Controls whether password entry is blocked for report functions
110.5	Block Adjust Password	(Bit 3)	Controls whether password entry is blocked for adjustments
110.6	Block Refund Password	(Bit 2)	Controls whether password entry is blocked for refund transactions
110.7	Block Void Password	(Bit 1)	Controls whether password entry is blocked for void transactions
110.8	Keyboard Lock	(LSBit 0)	Controls whether the keyboard is locked. *Note: This option is not typically supported*.
111	Default Transaction	N 2	Controls the default swipe at idle transaction. 00=Sale, 01=Cash, 02=Bal Inquiry ,03=Open Tab, 04=Pre-Auth
112	Filler	N 2	'00'
113	Filler	N 2	'00'
114	Telephone Line Hold	N 2	Controls the # of seconds the line is held open if multiple transactions on the same connect are allowed.
115	Filler	N 4	'0000'

ID (1)	FIELD	TYPE	COMMENT
117	PIN Pad Type	N 2	Defines the PIN Pad type setup at the FDMS host. **Note:** *If the POS application can determine that the host PIN Pad type is not correct, an error should be displayed for the operator.* '00' – None - no PIN pad configured '05' - Hypercom S7CR (integrated card reader) Master Session '06' - Hypercom S8/S7/S7CR, S9, S9C – DUKPT, P1300 '07' – Hypercom S9C (for T4210 and T4220 only, for auto card swipe prompt) '21' - VFI 102 '22' - VFI 301, 2000 '23' - VFI 470-Integrated' '24' - VFI 1000, BankPoint, 1000SE, BankPoint II, FD-10, FD-10C, FD-400 (integrated), FD-30, FD35 '25' - VFI Everest '26' – Cuets SC 550, 552 and SC5000 '27' - VFI 3750 Integrated PIN pad '28' – VFI OMNI 7000LE, Mx830 '29' – K23 Integrated PIN Pad '30' – T4100 Internal PIN Pad '31' – VFI 5000 SC '32' – T4210, T4220, M4230, T4230 Integrated PIN Pad '33' – i5100 Integrated PIN Pad '34' – i3010 PIN Pad '35' – Vx810, Vx670, Vx680 Integrated PIN Pad '36' – Ingenico i6580 '37' – VFI 1000SE with Integrated Contactless Reader '38' – ViVO 8100 with integrated contactless reader, chip reader and card reader (Reserved) '39' – Vx805 with Proximity-Chip Reader - with integrated contactless reader, contact chip reader and card reader '40' – FD130 Integrated PIN Pad with integrated contact and contactless chip readers

ID (1)	FIELD	TYPE	COMMENT
118	Printer Type	N 2	Defines the printer type setup at the FDMS host. ***Note:*** *If the POS application can determine that the host printer type is not correct, an error ('Bad Printer Type…') should be displayed for the operator.* '00'-Unknown or not applicable '01'-Hypercom P7 '02'-VFI 250, 900 (BFE applications only) '03'-VFI 250, 900, PrintPoint 1000 '04'-Hypercom T7P (40 column) '06'-Hypercom Friction P8 and T77F (integrated) '07'-Hypercom Sprocket P8 and T77S (integrated) '08'-Thermal/40 Column - VFI 350, DataCard Silent Partner, PrintPoint 3000, OMNI 3200/3200/SE '09' -Thermal/32 Column - VFI 300 '10' - VFI 470/32 Column Integrated '11' - Hypercom T7PT Thermal/40 Column T7P, T7+, FD, T4100, T4210, T4220, M4230 T4230 and T4205 (all integrated printers) '12' - Hypercom T77T Thermal/40 Column Integrated T77 '14' - OMNI 3750 Integrated '15' – Hypercom T7*Plus* Wide Paper '16' – K76 With Dial/IP or Dial only Comm Module ~~'17' – K76 With Dial Only Comm Module~~ '17' – i5100 Integrated Printer '20' – Epson Slip Printer TM-U295 '55' – Vx Integrated (e.g. OMNI 3750, Vx570, Vx810, Vx670, Vx680)
119	**Options 5**	B 8	Unless otherwise stated, '0' = disabled and '1' = enabled
119.1	Enter Tip After Sale	(MSBit 7)	Controls whether the tip is prompted for after an approval response is received from the host (before the transactions is stored to the batch) – adding the tip at this point eliminates the need to recall the transaction later to add the tip. *Note: If the transaction is a debit, if a tip was entered along with the other transaction data or if Tip Entry is disabled, this option is ignored.*
119.2	Settlement Detail	(Bit 6)	Controls whether transaction detail is printed on the settlement report.
119.3	Direct Marketing/AVS	(Bit 5)	Controls whether AVS with order number entry applies. *Note: Card type AVS options further define AVS processing. This option only applies if the card type AVS/Card Not Present (mail/telephone) option is enabled.*
119.4	Prompt for Table #	(Bit 4)	'0'=disable, '1'=enable (prompt and print on customer receipt)
119.5	AVS	(Bit 3)	Controls whether AVS without order number entry applies. *Note: See card type AVS options also. Note: Card type AVS options further define AVS processing*.
119.6	Print Copy Distribution	(Bit 2)	Controls whether 'TOP COPY MERCHANT...' verbiage is printed on the bottom of the customer receipt.
119.7	Print ID Line	(Bit 1)	Controls whether an 'ID: _____' line is printed on the customer receipt.
119.8	Print Phone Line	(LSBit 0)	Controls whether a 'PHONE:_____' line is printed on the customer receipt
120	Check Options-MICR	B 8	Controls check approval prompting for the MICR Check Service Type (see above); *Note: This option is ignored when supporting the enhanced check processing Tables 12.*
120.1	DLN/Allow Card Swipe	(MSBit 7)	Controls whether to prompt for DLN and allow keyed or swiped entry
120.2	Birth Date	(Bit 6)	Controls whether to prompt for birth date
120.3	State Code	(Bit 5)	Controls whether to prompt for state code
120.4	DLN/Manual only	(Bit 4)	Controls whether to prompt for DLN but allow keyed entry only

ID (1)	FIELD	TYPE	COMMENT
120.5	Account Number	(Bit 3)	Controls whether to prompt for the bank account # from the check
120.6	Bank Number	(Bit 2)	Controls whether to prompt for bank routing number from the check
120.7	MICR Number	(Bit 1)	Controls whether to prompt for the check MICR line data
120.8	Check Number	(LSBit 0)	Controls whether to prompt for check number
121	Check Options-DLNII	B 8	Controls check approval prompting for the DLN Check Service Type (see above); *Note: This option is ignored when supporting the enhanced check processing Tables 12.*
121.1	DLN/Allow Card Swipe	(MSBit 7)	Controls whether to prompt for DLN and allow keyed or swiped entry
121.2	Birth Date	(Bit 6)	Controls whether to prompt for birth date
121.3	State Code	(Bit 5)	Controls whether to prompt for state code
121.4	DLN/Manual only	(Bit 4)	Controls whether to prompt for DLN but allow keyed entry only
121.5	Account Number	(Bit 3)	Controls whether to prompt for the bank account # from the check
121.6	Bank Number	(Bit 2)	Controls whether to prompt for bank routing number from the check
121.7	MICR Number	(Bit 1)	Controls whether to prompt for the check MICR line data
121.8	Check Number	(LSBit 0)	Controls whether to prompt for check number
122	Options 6	B 8	Unless otherwise stated, '0' = disabled and '1' = enabled
122.1	Display Last 4 After Swipe	(MSBit 7)	Controls whether the last 4 digits of the account # is displayed after a card swipe for operator confirmation relative to the data embossed on the card. If the data is not confirmed, the transaction should be aborted.
122.2	Duplicate Transaction Check	(Bit 6)	Controls whether the POS should check for duplicate account #'s and require operator confirmation if found. If enabled, duplicate account numbers should be flagged on the batch detail report.
122.3	Duplicate Invoice # Check	(Bit 5)	Controls whether the POS should check for duplicate invoice #'s and require operator confirmation if found.
122.4	Folio/Room # Required	(Bit 4)	Controls whether either a folio or room number is required when Lodging Processing (see above) is enabled.
122.5	Room Prompt	(Bit 3)	Controls whether a room number is required when Lodging Processing (see above) is enabled.
122.6	Folio Prompt	(Bit 2)	Controls whether a folio number is required when Lodging Processing (see above) is enabled.
122.7	Auth Key Becomes Debit Key	(Bit 1)	Controls whether the auth only key is used for debit processing rather than auth only processing. Note: This option is not typically supported by POS applications.
122.8	Encryption Method	(LSBit 0)	Controls the encryption method for the attached PIN pad device. '0'=Master Session, '1'=Derived Unique Key Per Transaction (DUKPT)
123	Alpha Key Function	N 2	Controls the function associated with the ALPHA key. Note: This option is not typically supported. '00'=Balance, '01'=Inc Auth, '02'=Open Tab
124	Auto Settle Prompt Timeout	N 2	The number of minutes of idle time required before an auto settlement is initiated.
125	Auto Settle Prompt Retry Timeout	N 2	The number of minutes required between a failed auto settlement attempt and the subsequent re-try auto settlement attempt.
126	Auto Settle Prompt Retry Count	N 2	The number of auto settlement re-try attempts allowed after which an error message should be displayed and all further attempts aborted until the next occurrence of the auto settlement time.
127	Search Key For Inc Auth	N 2	Controls the preferred search key for searching the batch for a specific transaction. Note: This option is not typically supported by POS applications. '00'=ticket/invoice #, '01'=room #, '02'=folio #, '03'=RA order number

ID (1)	FIELD	TYPE	COMMENT
128	Prestigious Floor Limit	N 2	Indicates the Prestigious floor limit for some lodging applications. Note: This option is not currently supported and will always be '00'. '00'=$0.00, '01'=$500, '02'=$1000, '03'=$1500
129	Max Sales Tax %	N 4	For POS applications that allow local setup of the sales tax %, the Max Sales Tax % controls the maximum % that can be setup locally. Format: n.nnn Note: This option is not currently supported and will always be '0000' for no maximum.
131	Auto Settle Time	N 4	This is the time of the day when the terminal should attempt to auto settle the terminal. The Auth Settle Time is used in conjunction with the Auto Settle Prompt Timeout, the Auto Settle Prompt Retry Timeout and the Auto Settle Prompt Retry Count (see above). Format: hhmm
133	Unused	N 2	'00'
134	Signature Capture Type NOT CURRENTLY SUPPORTED	N 2	Defines the signature capture pad type setup at the FDMS host. Note: If the POS application can determine that the Signature Capture Type is not correct, an error should be displayed for the operator. '00' – No device '01' – NCR 5991 '04' – Checkmate '05' – Hypercom CS7CG
135	Lodging Options 7	B8	Unless otherwise stated, '0' = disabled and '1' = enabled
135.1	Duplicate Pre-Auth Folios	(MSBit 7)	Controls whether duplicate folio numbers are allowed for check-in transactions.
135.2	Duplicate Closed Folios	(Bit 6)	Controls whether duplicate folio numbers are allowed for check-out transactions.
135.3	Check-In/Out Time	(Bit 5)	Controls whether check-in and check-out times are required. 0 – Not required 1 – Check-Out time required
135.4	Confirm Pre-Auth/Close Date/Time	(Bit 4)	Controls whether check-in/pickup and checkout/return dates must be confirmed with override capability at close time or implied by the transaction dates of the pre-auth and close transactions. *Note: If Bit 5 above is disabled, confirmation of the time is not required.* 0 – Confirmation time and date not required – default to current time and date 1 – Confirm time and date values on pre-auth and close
135.5	Settle Incomplete Folios	(Bit 3)	Controls whether confirmation is required for open folios at settlement time.
135.6	Old Pre-Auth Action	(Bit 2)	Controls the purge action required for open folios that have reached the Pre-Auth Age Limit (see below) after each successful settlement session. '0'=Auto delete all open folios older than the Pre-Auth Age Limit (see below) '1'=Force operator to delete or save each open folios older than e Pre-Auth Age Limit (see below)
135.7	Confirm Duration	(Bit 1)	Controls whether the duration must be confirmed at lodging checkout or auto rental close time.
135.8	Register (Till) Processing	(LSBit 0)	'0'=disable, '1'=enable
136	Pre-Auth Age Limit	N 2	'The # of days before some action is required after a settlement session (see Old Pre-Auth Action above).
137	Auto Tip Percent	N 2	Controls the % of the transaction amount that is automatically calculated for the gratuity or tip amount. Note: This field is not currently supported and will always be '00' for not applicable.

ID (1)	FIELD	TYPE	COMMENT
138	Open Tab Default Amount	N 4	Defines the default open tab amount in whole dollars. Typically, the POS application will allow the operator to override the default amount on a transaction by transaction basis.
140	Max # Adjustments	N 2	Defines the maximum number of adjustments allowed to amount fields (base amount, tip, tax, …) before password entry is required.
141	Debit Surcharge %	N 2	Defines the % of the base amount of the transaction and which is then automatically added to the base amount for all debit transactions.
142	Options 8	B8	Unless otherwise stated, '0' = disabled and '1' = enabled
142.1	Preprint Entire Receipt	(MSBit 7)	Controls whether the entire receipt is pre-printed (leaving a line for the auth code). This option only applies if the Receipt Pre-Printing option is enabled (see above).
142.2	Open Tab Signature Line	(Bit 6)	Controls whether a signature line is printed on an open tab receipt. This option only applies if the Print Open Tab Receipt option is enabled (see below).
142.3	Print Open Tab Receipt	(Bit 5)	Controls whether an open tab receipt is printed automatically.
142.4	Print Close Tab Receipt	(Bit 4)	Controls whether an close tab receipt is printed automatically.
142.5	Allow Different Card Close Tab	(Bit 3)	For lodging processing, controls whether a new card (account #) may be used when checking-out a folio.
142.6	Single Settle/No totals/confirm	(Bit 2)	Controls whether an operator initiated settlement automatically settles to all applicable hosts without operator input or confirmation of totals.
142.7	Manual Entry Password	(Bit 1)	Controls whether password entry is required before an account # can be manually keyed.
142.8	PIN Pad Tip Entry	(LSBit 0)	Controls whether the tip is requested from the PIN pad device (keyed by the cardholder).
143	Options 9	B8	Unless otherwise stated, '0' = disabled and '1' = enabled
143.1	Settle With Open Tabs	(MSBit 7)	Controls whether settlement is allowed if there are open tabs in the batch.
143.2	Predial	(Bit 6)	Controls whether the POS device will initiate the dial after the card swipe rather than waiting until after all transaction fields have been entered by the operator.
143.3	Disable Dial Tone Test	(Bit 5)	Controls whether the POS device will bypass validation of dial tone at the beginning of a dial session
143.4	Settle With Unadjusted Tips	(Bit 4)	Controls whether settlement is allowed if there are unadjusted tip transactions in the batch.
143.5	PIN Pad Cash Back Entry	(Bit 3)	Controls whether the cash back amount is requested from the PIN pad device (keyed by the cardholder).
143.6	Confirm Shift # At Settlement	(Bit 2)	Controls whether a newly generated shift number (see below) must be confirmed by the operator with override capabilities.
143.7	Auto Reset Shift # At Settlement	(Bit 1)	Controls whether the shift number should be automatically reset to '001' after settlement
143.8	Increment Shift # On Reset	(LSBit 0)	Controls whether the shift number should be automatically incremented by '001' after settlement
144	Sales Tax Generation Method	N2	Controls how sales tax will be generated if the Tax Reporting card type option is enabled. '00'=Not Applicable '01'=Calculate based on Sales Tax % (below) '02'=Prompt for tax
145	Sales Tax %	N6	Indicates the sales tax % to use when the Sales Tax Generation Method = 01/Calculate (see above); Format: nn. nnnn; Note: When using the host supplied Sales Tax %, ignore Max Sales Tax % above.
148	Options 10	B8	Unless otherwise stated, '0' = disabled and '1' = enabled

ID (1)	FIELD	TYPE	COMMENT
148.1	Truncate Account # Customer Receipt	(MSBit 7)	0=Do not truncate, 1=Truncate on Customer Copy
148.2	Block Exp Date Print Customer Receipt	(Bit 6)	0=Print exp date, 1=Do not print expiration date on customer copy
148.3	Truncate Account # Merchant Receipt	(Bit 5)	0=Do not truncate, 1=Truncate on Merchant Copy
148.4	Process Tax	(Bit 4)	0=Do not process tax, 1=Process tax
148.5	Print Promissory Footnote	(Bit 3)	0=Do not print, 1=Print 'I agree' verbiage
148.6	Merchant Message Flag	(Bit 2)	0=Do not print, 1=Print merchant message lines (from Field 60, Table 16) if not all spaces
148.7	Offer Processing	(Bit 1)	0 – Do not enabled offer processing 1 – Enable offer processing
148.8	ECR # Prompt	(LSBit 0)	0 – Prompt for ECR # 1 – Do not prompt for ECR #
149	ECA Options 11	B8	Unless otherwise stated, '0' = disabled and '1' = enabled
149.1	Check Writer's Print Name Receipt Line	(MSBit 7)	Enables/disables the check writer's printed name line on the receipt
149.2	Duplicate Check Checking	(Bit 6)	Enables/disables duplicate MICR # checking (raw MICR only)
149.3	SSN Prompt	(Bit 5)	Enables/disables check writer's SSN prompt
149.4	ZIP Code	(Bit 4)	Enables/disables check writer's ZIP Code prompt
149.5	Birthdate Prompt	(Bit 3)	Enables/disables check writer's birth date prompt for personal checks
149.6	Auto Determine Check Type	(Bit 2)	Enables/disables auto determination of the check type from the raw MICR data
149.7	Verify Manual MICR	(Bit 1)	Enables/disables re-entry/verification of a manually keyed MICR #
149.8	Unused	(LSBit 0)	
150	Options 12	B8	Unless otherwise stated, '0' = disabled and '1' = enabled
150.1	Check Writer's Receipt Address Line	(MSBit 7)	Enables/disables the check writer's address lines (address and city/state/ZIP) on the receipt
150.2	Prompt for Product Code	(Bit 6)	'0' – Do not prompt '1' – Prompt for product code (ECA split dial only)
150.3	Block Demo Mode	(Bit 5)	Enables and disables the ***ability*** to enable demo mode at the terminal. *Note: This feature does not actually enable or disable demo mode itself – that is performed in a local terminal function.* '0' – Allow demo mode '1' – Block demo mode
150.4	IRS Signature Line	(Bit 4)	0 – Do not print IRS Signature Line on IRS report 1 – Print IRS Signature Line on IRS report
150.5	Customer Reference #	(Bit 3)	0 = Do not prompt for Customer Reference Number 1 = Prompt for Customer Reference Number, Print on Receipt and Send to Host
150.6	Unused	(Bit 2)	
150.7	Dual MICR Read	(Bit 1)	Enables/disables second read/verification of the raw MICR data
150.8	BCN (Billing Control #) Prompt	(LSBit 0)	Enables/disables BCN prompt
151	BCN Min Length	N 2	Minimum # of characters that must be entered for the BCN (bypass of field allowed if '00'). Ignore this field if BCN Prompt option is disabled.
152	BCN Max Length	N 2	Maximum # of characters allowed for the BCN Ignore this field if BCN Prompt option is disabled.

ID (1)	FIELD	TYPE	COMMENT
153	BCN Prompt Text	AN 16	Text to display for BCN prompt (if spaces, terminal uses default text, e.g. 'Enter Billing Control #') Ignore this field if BCN Prompt option is disabled.
169	BCN Default Value	AN 24	Terminal displays default value if not spaces; user may press ENTER to accept default or may enter override value Ignore this field if BCN Prompt option is disabled.
193	MICR/Second ID Floor Limit	N 4	Prompt for second ID (e.g. driver's license) for personal checks where the MICR data was read via a check reader if the check amount is greater than or equal to the MICR/Second ID Floor Limit (e.g. '0050' = $50) - second ID always required for personal checks if the MICR # is manually keyed – second ID is never required for business checks
195	Telephone Prompt Floor Limit	N 4	Prompt for check writer's phone # if the check amount is greater than or equal to the Telephone Prompt Floor Limit (e.g. '0050' = $50) – applies for personal and business checks
197	Check Reader Type	N2	'00' – None '01' – Magtek MINI MICR '02' – VFI CR600 '07' – MagTek Imager
198	Unused	N 4	'0000'
200	Image Upload Phone #	N 24	Defines the phone number to use for uploading check images to the TeleCheck host (currently for Eclipse only): 0-9 Dial digit as specified A Select DTMF/tone dialing mode (default if not specified) B Dial tone pause (2 seconds) C Select pulse dialing mode D Disable PABX dialing (ignore if PABX dialing not ..... EA Treat as '*' dialing digit EB Treat as '#' dialing digit EC Treat as 'A' dialing digit ED Treat as 'B' dialing digit EE Treat as 'C' dialing digit EF Treat as 'D' dialing digit F Filler (ignore)
212	ECA Sale Consumer Support #	AN 14	For printing on ECA approved sale receipt (e.g. '(nnn) nnn-nnnn')
226	ECA Denial Consumer Support #	AN 14	For printing on ECA consumer denial receipts (e.g. '(nnn) nnn-nnnn')
240	E-Commerce Merchant Type Default	AN 1	E-commerce default merchant type: '0' – Prompt for type '7' – Channel-Encrypted E-Commerce Trans) '8' – Non-Secure E-Commerce Transaction
241	FPS Print Option	N 2	Indicates the merchant and customer receipt printing option for all Fast Payment Service transactions. 0 = None 1 = None-prompt cuts copy? 2 = Customer receipt only 4 = Merchant receipt only 10 = Both receipts w/confirm 18 = Both receipts automatic
242	Receipt Column Mode	AN 1	Number of columns (characters) that print across the width of the receipts and reports. The more columns, the smaller the text. 1 = 32 Columns 2 = 42 Columns

ID (1)	FIELD	TYPE	COMMENT
243	Customer Copy Option	AN 1	Printing options for the customer receipt. 0 = None 1= Confirm 2 = Automatic
244	Password Map	N 20	Password levels for 20 transaction types 'NNNNNNNNNNNNNNNNNNNN' where 'N' can be: 0 = Access Freely/No Password Required 1 = Manager password required 2 = Supervisor password required 3 = Clerk password required 4 = Custom/Host specific Transaction and position in the map are shown below: 1 - Tip adjust 11 – Other setup 2 - Reports 12 - Tabs 3 - Reprint 13 – Batch review 4 - Sale 14 – Offline sale 5 - Phone 15 – Balance inquiry 6 - Check 16 – Auth only 7 - Void 17 – Batch totals 8 - Refund 18 - Shift 9 - Settle 19 – Store and Forward 10 - Server setup 20 – Cash receipt ***(FUTURE)***
254	Merchant Type	AN 1	Merchant type from TMS. Current defined values are: A – Auto Rental C – Cash Advance H – Hotel R – Retail F – Food/restaurant T – Telephone/mail order O – Other Q – Quick Service U – Unique X - Transportation
255	Settle Mode	AN 1	Defines terminal prompting at settlement: 0 = Do not confirm 1 = Display/confirm totals 2 = Enter totals
256	Clerk/Server Mode	AN 1	Defines type of clerk/server prompting: 0 = No entry 1 = Logon 2 = Prompt
257	Tip Processing Mode	AN 1	Defines type of tip processing: 0 = No entry 1 = Prompt for tip 2 = Bypass tip on sale
258	Shift Processing Mode	AN 1	Defines type of shift processing 0 = None 1 = Automatic (based on time) 2 = Manual (user controlled)
259	Duplicate Transaction Check Mode	AN 1	Defines type of duplicate transaction checking: 0 = None 1 = Last trans 2 = Whole batch

ID (1)	FIELD	TYPE	COMMENT
260	Gift Card Password Map	N 16	Password levels for 16 gift card transaction types 'NNNNNNNNNNNNNNN' where 'N' can be: 0 = Access Freely/No Password Required 1 = Manager password required 2 = Supervisor password required 3 = Clerk password required 4 = Custom/Host specific Transactions are for **Position – Transaction Type** 1 – redemption, post auth 2 - activation 3 - reload, add-value 4 - balance inquiry 5 - balance transfer 6 - void 7 - cash out 8 - reports 9 - delete batch 10 – pre-auth 11 – adjustment 12 – return 13 – balance merge 14 – *(reserved for future use)* 15 – *(reserved for future use)* 16 - *(reserved for future use)*
268	Options 13	B8	Unless otherwise stated, '0' = disabled and '1' = enabled
268.1	Print 2nd Receipt on Voids	(MSBit 7)	0=Do not print 2nd receipt, 1=Print 2nd Receipt (Customer Copy)
268.2	Truncate Account # on Reports	(Bit 6)	0=Do not truncate, 1=Truncate (print last 4 digits of account # only)
268.3	Print Checkout/Close Receipt	(Bit 5)	Controls whether the terminal will print a checkout/close receipt when lodging or auto rental processing is enabled. 0=Do not print checkout/close receipt 1=Print checkout/close receipt
268.4	Discounted Tip Processing	(Bit 4)	Controls whether the terminal will support discounted tip processing when tip entry also applies. 0=Do not allow discounted tip processing 1=Allow discounted tip processing
268.5	MasterLink/ICU Location	(Bit 3)	'0' – MasterLink/ICU Canadian processing disabled '1' – MasterLink/ICU Canadian processing enabled
268.6	Loyalty Processing	(Bit 2)	'0' – Loyalty processing disabled '1' – Loyalty processing enabled
268.7	Truncate Account # on Display	(Bit 1)	0=Do not truncate, 1=Truncate (display last 4 digits of account # only)
268.8	EMV Enabled ***(Check for Availability)***	(LSBit 0)	Controls whether the terminal will allow EMV processing (contact or contactless) '0' – EMV processing disabled '1' – EMV processing enabled (US EMV only)
269	Merchant Currency Code	AN 3	Merchant's currency code (numeric currency indicator)
272	Merchant Category Code (MCC)	AN 4	Merchant's MCC Code

ID (1)	FIELD	TYPE	COMMENT
276	Suggested Tip %	N 2	Controls whether a suggested tip amount based on this percentage is printed on the merchant receipt copy. Three tip percentages are supported. '00' – '99' with '00' meaning feature is disabled
277	Suggested Tip % 2	N 2	'00' – '99' with '00' meaning feature is disabled
278	Suggested Tip % 3	N 2	'00' – '99' with '00' meaning feature is disabled
279	Customer Language (US)	N 2	Controls the language used for customer prompting (e.g. from a PIN pad): '00' - USA/English '02' – Spanish '99' – Prompt for Language ***Note: Default to English if language indicated is not supported by the POS application.***
280	Default Loyalty Account #	N 16	The 16 digit default Loyalty account # ('6272289999999999') used to fill the ISO Dual Bit 4 account number field when a loyalty transaction is not also a credit/debit payment transaction.
288	Loyalty Password Map	N8	Password Levels for 8 loyalty transactions types 'NNNNNNNN' where 'N' can be: 0 = Access Freely/No Password Required 1 = Manager password required 2 = Supervisor password required 3 = Clerk password required 4 = Custom/Host specific Transactions are for cash sale, add account, redeem points, inquiry, reverse sale, report, and reprint last respectively for positions 1 – 7; Position 8 to be defined.
292	Merchant Language (US)	N 2	Controls the language used for merchant prompting (e.g. from the terminal): '00' - USA/English '02' – Spanish '99' – Prompt for Language ***Note: Default to English if language indicated is not supported by the POS application.***
293	Unused	N2	Unused
294	Excessive Tip %	N2	Percentage used to calculate and determine if tip amount is excessive. (30 = 30%).
295	Alpha Currency Code	A 3	Alpha ISO currency code (i.e. 'USD' for US or 'BBD' for Barbados). Left justified with trailing spaces.
298	Purge History Age Limit	N2	Number of days after which batch histories are automatically cleared.
299	Merchant Country Code	AN 3	Merchant numeric country code (for example ''840' for US, '124' for Canada). For EMV, this field is used to populate Tag 9F1A'.
302	Max Amount without Password	N 12	Amount above which the merchant level password is requested (2 implied decimal places, e.g. 000000010000 = $100.00)
308	Options 14	B8	Unless otherwise stated, '0' = disabled and '1' = enabled
308.1	Print Purged Pre-Auth Receipt	(MSBit 7)	Enables/disables printing of automatically deleted check-in transactions.
308.2	Print Purged Pre-Auth Void Receipt	(Bit 6)	Enables/disables printing of automatically deleted check-in transactions.

ID (1)	FIELD	TYPE	COMMENT
308.3	Contactless Allowed	(Bit 5)	Controls whether the terminal will allow contactless processing '0' – All contactless processing disabled (MSD and EMV) '1' – Contactless processing allowed
308.4	AVS Mismatch Accept Prompt	(Bit 4)	Enables/disables an 'Accept?' prompt when an AVS mismatch result code applies. If not accepted, POS device will perform real-time reversal to the authorization system.
308.5	Cash Receipts ***(FUTURE)***	(Bit 3)	Enables cash reporting at the terminal.
308.6	Allow PIN Bypass for Chip	(Bit 2)	Controls whether PIN bypass is allowed for Common AID contact and contactless chip transactions. '0' – Do not allow PIN Bypass '1' – Allow PIN Bypass
308.7	Cash Back Entry ***(FUTURE)***	(Bit 1)	Indicates whether the 'Debit Cash Back feature is enabled in TMS/FDPOS for a TID. Go forward terminals use this flag in conjunction with the 'Block Cash Back' flag in Field 60, Tables 51/53 to determine whether to prompt for cash back for EMV chip transactions. *For non EMV chip transactions, terminals use the Cash Back Entry flag in Field 60, Table 3.* '0' – Cash back entry is disabled for the merchant's TID '1' – Cash back entry is enabled for the merchant's TID
308.8	Unused	(LSBit 0)	Unused
309	Default Incidental Amount	N 10	Used to calculate total transaction amount (2 implied decimal places, e.g. 0000001000 = $10.00)
314	Pre-Auth Void Age Limit	N 2	Number of days after which voided check-in transactions are automatically cleared (00-99).
DO NOT ADD ADDITIONAL FIELDS TO THIS TABLE *(Default max default size at front-end is 320 bytes counting 3 digit length bytes)*			

6.3 FIELD 60, TABLE 2 - CARD RANGE

One card range table is loaded for each applicable credit, debit, EBT or private label card type. A keyed or swiped account number is compared with each range table until a match is found based on Low PAN Range Prefix, High PAN Range Prefix and PAN length. If a keyed or swiped account number matches ranges for more than one card type (as indicated by the Card Type Pointer/Table ID), then the operator must be allowed to select between the unique card types. If the keyed or swiped account number matches more than one range for a single card type then only the first range match applies for that card type.

ID (2)	FIELD	TYPE	COMMENT
1	Table ID	N 2	'02'
2	Table Length	N 4	Total length of data that follows
4	Card Range Position	N 2	Indicates relative position of this card type/issuer table relative to other card type/issuer tables and implies the order in which the ranges should be searched
5	Low PAN Range Prefix	N 10	The first 10 digits of the entered primary account # (PAN) must be greater than or equal to the Low PAN Range Prefix. If the entered account # is less than 10 digits in length, it should be right justified with leading zeroes to 10 before being compared to the Low PAN Range Prefix.
10	High PAN Range Prefix	N 10	The first 10 digits of the entered account # must be less than or equal to the High PAN Range Prefix. If the entered account # is less than 10 digits in length, it should be right justified with leading zeroes to 10 before being compared to the High PAN Range Prefix.
15	Card Type Pointer/Table ID	N 2	Indicates the card type that applies for this card range. This field must match the Card Type ID in the associated Card Type Table 03.
16	Host Pointer/Table ID	N 2	Indicates the host that applies for this card range. This field must match the Host ID in the associated Host Table 04.
17	PAN Length	N 2	If this field is non-zero, it must be equal to the length of the entered account #. If this field is zero, a length match is not required.
18	**Options 1:**	B 8	Unless stated otherwise, '0'=disable, '1'=enable
18.1	Unused	(MSBit 7)	'0'
18.2	Unused	(Bit 6)	'0'
18.3	Unused	(Bit 5)	'0'
18.4	Unused	(Bit 4)	'0'
18.5	Purchase Card	(Bit 3)	Originally used to indicate that a range was a purchase card range. *Note: For newer applications, this field has been replaced by the Commercial Card Type indicator below.*
18.6	Unused	(Bit 2)	'0'
18.7	Unused	(Bit 1)	'0'
18.8	Confirm Card Type?	(LSBit 0)	Controls whether the associated card type must be confirmed and if not confirmed, the account # range match attempt continued with subsequent tables. Some applications always confirm ambiguous card types (account #'s that match a range entry for more than one unique card type) and, therefore, ignore this option.
19	**Options 2 (Unused):**	B 8	'00000000'
20	Card Type Mnemonic	AN2	Abbreviation for the associated card type (matches the card type abbreviation in the matching card type table for this range).
22	Reserved	N 2	'0000'
23	Reserved	N 2	'0000'
24	Range Type (custom processing)	N 2	This field can be used to define custom (hard coded) processing **for a card type range.** '00' – Credit '01' – Confirm card type (legacy usage only)

ID (2)	FIELD	TYPE	COMMENT
			'04' – Wright Express '05' – Private Label '07' – Purchase card (legacy usage only) '08' – Bridgestone/Firestone '09' – FDMS Gift card '10' – Loyalty '11' – Mobile Payment (LAC)
25	Commercial Card Type	AN 2	This field is used to specify the type of commercial card processing that applies for this range. '00'= Do not treat as a commercial card '01'=Treat as a purchase card (customer code and tax apply) '02'=Treat as corporate card (tax applies) '03'=Treat as business card (tax applies) '04'=Treat as unknown - request commercial card type indicator on auth request using Field 63, Table 73 and expect indicator on auth response via Field 63, Table 74; tax and/or customer code may apply after the auth based on the returned type) ***Note:*** *Commercial card tax and customer code are submitted in Field 63, Table 68 whenever they apply – regardless of the merchant or transaction's sales tax exempt status*.

6.4 FIELD 60, TABLE 3 - CARD TYPE

One card type table is loaded for each card type and up to one check approval type as applicable based on merchant setup at the FDC Nashville host.

ID (3)	FIELD	TYPE	COMMENT
1	Table ID	N 2	'03' – Identifies the table as a card type or issuer table
2	Table Length	N 4	Total length of data that follows for this table
4	Card Type Number	N 2	Indicates relative position of this card type/issuer table relative to other card type/issuer tables – numbers may not be contiguous
5	Card Type ID	N 2	Identifier used to match an account # BIN range to a card type or issuer; each entry from the account # BIN table includes a Card Type ID (or pointer) which must match a Card Type ID entry in a Card Type/Issuer Table
6	Card Type Name	A 10	Card type/issuer print and display text
16	Referral Telephone #	N 24	The number the terminal dials after a referral response to connect the merchant with the voice auth number. ***NOT CURRENTLY SUPPORTED***
28	**Options 1**	B 8	Unless stated otherwise, '0'=disable, '1'=enable
28.1	Adjust Allowed	(MSBit 7)	Controls whether the original entered/authorized amount can be changed or adjusted; open/close tabs and adding a tip after the fact are considered adjustments and therefore, controlled by this option as well '0' – Adjustments are not allowed '1' – Adjustments are allowed
28.2	Amex PIP Descriptors Required	(Bit 6)	Controls whether Amex PIP descriptor data is included on AX PIP Financial Capture, Batch upload and Financial Reversal messaged; if enabled, the operator selects the appropriate descriptor code based on the descriptor data supplied from the FDMS host (Amex Descriptor Data Table 5); currently only 2 PIP descriptor codes are supported for a single merchant
28.3	Voice Referral Allowed	(Bit 5)	Controls whether the operator is allowed to enter an approval code after receiving a referral response on a sale authorization without having to re-key the transaction data in the force function; if 'Voice Approved?' confirmed then 'Enter Authorization Code'
28.4	Force Sale Allowed	(Bit 4)	Controls whether the issuer allows entry of a voice approved sale transaction in a separate force sale function; for force sale transactions, entry of an auth code is always required
28.5	Expiry Date Required	(Bit 3)	Controls whether an expiration date is required for an issuer; the date must be read from the magnetic stripe for swiped transactions and keyed for manually keyed transactions
28.6	Manual PAN Allowed	(Bit 2)	Controls whether manual entry of the account number is allowed in general for an issuer; the Swipe Only Transaction options (see below) can override this global option for individual transaction types
28.7	PIN Entry Required	(Bit 1)	Controls whether PIN entry is required in general for this issuer; the Block PIN Entry Transactions (see below) options can override this global option for individual transaction types
28.8	Check Service Card Type	(LSBit 0)	Controls whether this issuer is a check approval service; most fields in this table do not apply for check service issuers
29	**Options 2**	B 8	Unless stated otherwise, '0'=disable, '1'=enable
29.1	Block Card Verify	(MSBit 7)	Blocks the card verification transaction which is typically not a supported transaction for most applications and therefore, this option is typically ignored
29.2	Block Refunds	(Bit 6)	Controls whether *ALL* refunds are blocked for an issuer; if refunds are blocked all other issuer refund options should be ignored (see

ID (3)	FIELD	TYPE	COMMENT
			below)
29.3	Print Auth Only Receipts	(Bit 5)	Controls whether an auth only receipt should be printed for auth only transactions
29.4	Check Expiration Date	(Bit 4)	Controls whether a sale transaction should be blocked if the expiration date is in the past; this option should be ignored if Expiry Date Required is disabled above
29.5	Capture Transaction	(Bit 3)	Controls whether an approved authorization should be captured/stored in the batch; if this option is disabled, the transaction should be treated as an authorization only transaction (not stored)
29.6	Print Receipt	(Bit 2)	Controls whether, in general, a transaction receipt should be printed for this issuer; other options may override this option for specific transaction types (Print Auth Only Receipt, Print Open Tab Receipt, Print Close Tab Receipt, …)
29.7	Key Invoice Number	(Bit 1)	Controls whether the invoice number should be keyed by the operator; if this option is disabled, an invoice number should be generated by the POS application
29.8	Verify PAN Check Digit	(LSBit 0)	Controls whether last digit of the account # (the check digit) should be verified based on the LUHN (MOD 10) check digit algorithm. If the verification fails, error text is displayed and the transaction is aborted.
30	**Options 3**	B 8	Unless otherwise stated, '0'=disabled, '1'=enable
30.1	Reserved	(MSBit 7)	'0'
30.2	Allow Cash Only Transaction	(Bit 6)	Controls whether a cash only (no purchase amount) transaction is allowed. This option only applies if Cash Back Entry is enabled for the card type (see below).
30.3	Void Processed Offline	(Bit 5)	Controls whether voids are processed as offline advice transactions rather than online at the time of entry. This option only applies if Block Voids (below) is disabled.
30.4	Refunds Offline	(Bit 4)	Controls whether refunds are processed as online authorizations or as force transactions (not both). Ignore this option if 'Block Refunds' is enabled or if using the Allow Force Refunds and Allow Refund Authorizations below (which supports refund authorizations and force refunds both being enabled). This option can override the terminal level Refunds Offline option.
30.5	Reserved	(Bit 3)	'0'
30.6	Signature Not Required	(Bit 2)	Controls whether a signature line is required on the customer receipt.
30.7	Cash Back Entry	(Bit 1)	Controls whether cash back is allowed for purchase sale transactions for this card type. *Note: Cash back entry for EMV chip transactions is controlled (in go forward applications) by a Field 60 Table 1 option and AID level Table 51/53 options.*
30.8	Block Voids	(LSBit 0)	Controls whether voids (deletes) are blocked for this card type. '0'=Voids allowed, '1'=Voids are not allowed
31	**Options 4**	B 8	Unless stated otherwise, '0'=disable, '1'=enable
31.1	Purchase Card Sales Tax	(MSBit 7)	Controls whether sales tax is required for purchase card transactions for this card type.
31.2	Block Auth Only	(Bit 6)	Controls whether auth only transactions are blocked for this card type. '0'=Auth only allowed, '1'=Auth only not allowed
31.3	Tax Reporting	(Bit 5)	Controls whether sales tax entry applies globally for all sale transactions for this card type. Commercial card sales tax applies even when the 'Tax Reporting' flag is disabled.
31.4	Reserved	(Bit 2)	'0'
31.5	Reserved	(Bit 2)	'0'
31.6	Reserved	(Bit 2)	'0'
31.7	Verify Last 4 PAN	(Bit 1)	Controls whether the operator is prompted to enter the last 4 digits of

ID (3)	FIELD	TYPE	COMMENT
	Digits		the embossed account # for swiped transactions. The entered digits are compared to the last 4 encoded digits read from the magnetic stripe. If they do not agree, error text is displayed and the transaction is aborted.
31.8	Debit Card Type	(LSBit 0)	Controls whether this card type is classified as debit. Special processing applies for debit transactions.
32	Default Account	N 2	This field is used to set the 3rd position of the ISO Processing Code (Field 3) if an account is not selected from the PIN pad (when Account Type Selection is enabled); use the Default Account position 2 for the 3rd position of the Processing Code when communicating with the Nashville host; use the first position of the Default Account to set the 3rd position of the Processing code when communicating with the AMEX PIP host.
33	Filler	N 4	'0000'
35	Floor Limit	N 4	When the authorization sale amount is less than or equal to the card type Floor Limit. store (capture) the transaction to the batch without online authorization. Set the approval code (ISO Field 38 to spaces).
37	Under Authorized Auth Tolerance %	N 2	A transaction is considered under authorized if the final transaction amount minus the total authorized amount is greater than the Auth Tolerance % of the total authorized amount. **Legacy Usage:** *If the Auth Tolerance % is not zero, then* a transaction is considered under authorized if the final transaction amount minus the total authorized amount is greater than the Auth Tolerance % of the total authorized amount.
38	Block PIN Entry Transactions	B 8	'0'=Require PIN entry, '1'=Block PIN entry
38.1	Unused	(MSBit 7)	'1'
38.2	Disable for Pre-Auth	(Bit 6)	Controls whether PIN entry is blocked for pre-auth (auth only) transactions
38.3	Disable for Bal Inquiry	(Bit 5)	Controls whether PIN entry is blocked for balance inquiry transactions
38.4	Disable for Cash Back	(Bit 4)	Controls whether PIN entry is blocked for cash back transactions
38.5	Disable for Adjustment	(Bit 3)	Controls whether PIN entry is blocked for adjustment transactions
38.6	Disable for Void	(Bit 2)	Controls whether PIN entry is blocked for void transactions
38.7	Disable for Refund	(Bit 1)	Controls whether PIN entry is blocked for refund transactions
38.8	Disable for Debit	(LSBit 0)	Controls whether PIN entry is blocked for debit transactions
39	Filler	N 4	'0000'
41	**Options 5**	B 8	Unless otherwise stated, '0'=disabled, '1'=enable
41.1	Account Type Select	(MSBit 7)	Controls whether the type of account (checking, savings, …) must be selected from the PIN pad for debit card types. If enabled the account type selected is moved to the 3rd and 4th bytes of the ISO Processing Code Field 3.
41.2	Lodging Accounting #	(Bit 6)	Controls whether to prompt for a customer accounting # (AN 10) for lodging transactions. If required, the account # is submitted in Field 63, Table 72.
41.3	Shipper	(Bit 5)	Controls whether AVS shipper fields (ship to ZIP and freight amount) apply for AVS transactions. *Note: This field is not generally supported*.
41.4	# of Payments Prompt	(Bit 4)	Controls whether to prompt for '# of Payments'. If enabled, the # of Payments entered is submitted in Field 63, Table 48. *Note: This field is not generally supported*.
41.5	Allow In-Store Payment	(Bit 3)	Controls whether an in-store payment transaction is allowed for this card type. An in-store payment is similar to a refund but submitted with an ISO Processing Code of '21a00x'.
41.6	Force Processed On-	(Bit 2)	Controls whether force transactions are processed online at the time of entry (ISO Message Type 0200) rather than processed later as offline

ID (3)	FIELD	TYPE	COMMENT
	line		advice transactions (ISO Message Type 0220). Unique processing codes may apply for online force transactions.
41.7	Balance Inquiry Is Blocked	(Bit 1)	Controls whether the balance inquiry transaction is blocked for this card type.
41.8	Signature Capture ***(NOT CURRENTLY SUPPORTED)***	(LSBit 0)	Controls whether signature capture is allowed for this card type. *Note: This feature is not generally supported at this time.*
42	Merchant Issuer Number	A 16	This is the processor's merchant or service establishment number. Typically it is only used for printing on the customer receipt.
58	Additional % To Add To Auth Amount	N 2	The transaction amount is increased by this percentage and submitted as the authorization amount. If approved, the original transaction amount is printed on the receipt and stored as the transaction amount rather than the amount plus the additional percentage. *Note: This field is not currently supported and will always be '00'.*
59	Filler	N 4	'0000'
61	Checkout/Close Type	N 2	This field controls what special fields are prompted for during a lodging checkout or auto rental close transaction ('00'=Standard, '01'=VS, '02'=AX). *Note: This field is not currently supported and will always be '00'.*
62	Partial Reversal % Tolerance	N 2	A lodging, auto rental or mail order transaction is considered over authorized if the total authorized amount minus the final auth amount is greater than the Partial Reversal Tolerance % of the total authorized amount. **Legacy Usage:** *If the Partial Reversal % Tolerance is not zero, then* a lodging, auto rental or mail order transaction is considered over authorized if the total authorized amount minus the final auth amount is greater than the Partial Reversal Tolerance % of the total authorized amount.
63	Card Type Mnemonic	AN 2	This is the two character card type abbreviation used for print and display text to identify the card type.
65	Custom Card Type Indicator	AN 2	This field can be used to define custom (hard coded) processing for a card type. '05' – Private Label '57' – Standalone Loyalty Card '60' – Health Care '70' – EBT '71' – Mobile Payment/tPago (LAC)
67	Cashback Limit (in whole dollars)	N 6	If a cash back amount greater than this amount is entered for this card type, display an error and re-prompt for the cash back amount. *Note: The cash back limit is in whole dollars (no cents) so that a value of '099999' would imply '$99999.00'.*
70	**Options 6**	B 8	Unless otherwise stated, '0'=disabled, '1'=enable
70.1	Force Refund Approval Code	(MSBit 7)	Controls whether approval code prompting is required for force refund transactions. This option only applies If Block Refunds is disabled.
70.2	AVS/Card Not Present	(Bit 6)	Controls whether AVS ZIP and address code prompting applies for manually keyed, card not present (mail/telephone order) sale authorization transactions.
70.3	Credit Plan # (Terms) Prompt	(Bit 5)	'0'=disable, '1'=enable
70.4	Upward Adjustments	(Bit 4)	'0'=Not allowed, '1'=Allowed (relative to total previously authorized transaction amount – not applicable for offline advice transactions)
70.5	Allow Refund Authorization	(Bit 3)	Controls whether an online refund authorization is allowed. Note: This option is used in conjunction with the Allow Force Refund option. If both are enabled, a prompt is used to select auth vs. force (e.g. 'Voice

ID (3)	FIELD	TYPE	COMMENT
			Approved?'). This option only applies If Block Refunds is disabled.
70.6	AVS/Card Present	(Bit 2)	Controls whether AVS ZIP prompting applies for manually keyed, card present (retail) sale authorization transactions.
70.7	Voucher # For Force Transactions	(Bit 1)	Controls whether a voucher # is required for force sale and refund transactions. If enabled, the voucher # is submitted in ISO Field 63, Table 78 (Transaction Reference #).
70.8	Card Code Validation	(LSBit 0)	Controls whether the operator is required to enter the card code (as read by the remote customer from the back of the card) for manually keyed card not present (mail/telephone) sale authorization transactions.
71	Max Transaction Amount Digits	N 2	If the total transaction amount (base amount plus tip, tax, cash back, …) is greater than the Max Transaction Amount Digits, then an error should be displayed and all amounts requested again.
72	Customer Code Prompt Ids	N 4X2	If all zeroes, default customer code prompting applies; otherwise use indicated prompts (up to 4) and input edits from Init Table 15. Input fields are joined into Customer Code field with a '/' separator between each field when submitting to the host in Field 63 Table 69.
76	Swipe Only Transactions	B 8	Unless otherwise stated, '0'=swipe not required, '1'=swipe required (use in conjunction with the card type Manual PAN Allowed option)
76.1	Sale	(MSBit 7)	Controls whether a card swipe is required for sale transactions
76.2	Refund	(Bit 6)	Controls whether a card swipe is required for refund transactions
76.3	Force Sale	(Bit 5)	Controls whether a card swipe is required for force sale transactions
76.4	Force Refund	(Bit 4)	Controls whether a card swipe is required for force refund transactions
76.5	Inquiry	(Bit 3)	Controls whether a card swipe is required for inquiry transactions
76.6	Auth Only Sale	(Bit 2)	Controls whether a card swipe is required for auth only sale transactions
76.7	Unused	(Bit 1)	'0'
76.8	Unused	(LSBit 0)	'0'
77	**Options 7**	B 8	Unless otherwise stated '0' – Disabled and '1' = Enabled
77.1	Allow Force Refunds	(MSBit 7)	Controls whether a force refund advice is allowed. Note: This option is used in conjunction with the Allow Refund Authorization option. If both are enabled, a prompt is used to select auth vs. force (e.g. 'Voice Approved?'). This option only applies If Block Refunds is disabled.
77.2	Existing Debt Payment Prompt	(Bit 6)	'0'-Do not prompt 'Debt Payment? Y/N' '1'-Prompt 'Debt Payment? Y/N'
77.3	ECI Prompt	(Bit 5)	'0'- No special prompting '1'- Prompt 'Email/Website? Y/N' and 'Encrypted?' if YES
77.4	Recurring Payment Prompt	(Bit 4)	'0'- No special prompting '1'- Prompt 'Recurring Trans? Y/N'
77.5	ECA Card Type	(Bit 3)	'0' – Not ECA Card Type '1' – ECA Card Type
77.6	Gift Card Indicator	(Bit 2)	'0' – Not a gift card type '1' – Gift card type
77.7	Deferred Billing Prompt	(Bit 1)	0'- No special prompting '1'- Prompt 'Deferred Billing? Y/N'
77.8	Room Rate/Tax Prompt	(Bit 0)	'0' – Disabled, '1' – Enabled (Prompt for daily room rate/room tax)
78	Alternate Merchant #	A 16	Alternate gift card merchant ID: First 11 digits of the FDMS Internal Merchant #
94	Fast Payment Service Flag	AN 1	Indicates the Fast Payment Service program that applies: 0 = None 1 = Floor Limit (not used) 2 = Visa EPS

ID (3)	FIELD	TYPE	COMMENT
			3 = MC Quick (not used) 4 = Amex QRS (not used) 5 = Custom (not used)
95	FPS Receipt/Signature Floor Limit	N 4	For transactions below the FPS Receipt/Signature Floor Limit, do not print signature line on the receipt and use the FSP Printer Option flag to determine if and how to print the receipt copies. For transactions over the FPS Receipt/Signature Floor Limit, normal receipt printing rules apply
97	Surcharge Amount	N 4	Amount to add sale transactions for this card type – two implied decimal places (e.g. '0350' represents a surcharge amount of '$3.50'.
99	**Options 8**	B 8	Unless otherwise stated '0' – Disabled and '1' = Enabled
99.1	Prompt to Confirm Purchase Card	(MSBit 7)	'0' – Do not prompt '1' – Prompt to confirm purchase card on ***all*** commercial card eligible transaction types (commercial card bin ranges do not apply)
99.2	Print Health Care Totals at Close	(Bit 6)	'0' – Do not print health care totals for health care reset during financial close '1' – Print health care totals for health care reset during financial close
99.3	Rental Class ID/Tax Exempt Prompts	(Bit 5)	Applies for auto rental processing only 0 – Do not prompt 1 – Prompt for rental class ID and tax exempt indicator
99.4	DCC Allowed	(Bit 4)	'0' – Do not allow DCC processing for this card type '1' – Allow DCC processing for this card type
99.5	Partial Approval Allowed	(Bit 3)	'0' – Partial approvals not supported '1' – Partial approvals supported
99.6	Purchase with Balance Allowed	(Bit 2)	'0' – Purchase with balance return not supported '1' – Purchase with balance return supported
99.7	Partial Approval Reversal Required	(Bit 1)	'0' – Reversals not supported for partial approvals rejected at the POS '1' – Reversals supported for partial approvals rejected at the POS
99.8	Prompt for Purchase Card Ship-To-Zip	(Bit 0)	'0' – Do not prompt '1' – Prompt for ship-to-zip on all purchase card transactions
100	Currency/Country Code	N 4	0000h – FDMS Gift Card (country code does not apply) 0840h – US
102	Options 9	B 8	Unless otherwise stated '0' – Disabled and '1' = Enabled
102.1	GST Amount/Invoice #	(MSBit 7)	'0' – Do not prompt for Goods and Services tax for card type and use standard 'Key Invoice Number' option to control invoice **#** prompting '1' – Prompt for Goods and Services Tax for card type and always prompt for invoice **#** (regardless of 'Key Invoice Number' option setting) *(Note: Currently only applies for AgriCard private label.)*
102.2	Fallback Allowed	(Bit 6)	Controls whether fallback to swipe/keyed is allowed for a card type when an error occurs while reading a chip card. '0' – Do not allow fallback '1' – Allow fallback
102.3	Fallback During Reset Only	(Bit 5)	Controls whether the terminal will allow fall back processing only when chip or chip reader failure occurs during EMV 'card reset' processing.
102.4	Block Store and Forward	(Bit 4)	Blocks store and forward processing for the card type '0' – Store and forward is allowed for the card type t if supported for the merchant '1' – Store and forward is not allowed for the card type
102.5	Serial Number Prompt	(Bit 3)	Controls whether the terminal will prompt for the pre-printed receipt serial number for transactions for the card type. '0' – Disabled (do not prompt) '1' – Enabled (prompt)
102.6	Offer Processing Allowed	(Bit 2)	0 – Offer processing not allowed for this card type 1 – Offer processing allowed for this card type
102.7	Print Merchant Issuer	(Bit 1)	0 – Do not print on merchant and customer receipt copies

ID (3)	FIELD	TYPE	COMMENT
	Number		1 – Print on merchant and customer receipt copy *Note: Merchant Issuer Number is Field 60, Table 3, Offset ID 42.*
102.8	Allow PINless POS	(Bit 0)	0 – Do not allow for this card type 1 – Allow for this card type
103	Fallback Expiration Date	N 8 mmddyyyy	Controls whether fallback to swipe is allowed when an error occurs while reading a chip card and the Fallback Allowed option (above) is enabled; if the fallback date is valid but expired, then fallback is not allowed; this field is only used in a fallback scenario when the Fallback Allowed option is enabled; a value of all zeroes implies no expiration date checking
107	Store and Forward Floor Limit	N4	Blocks store and forward processing if the transaction amount is greater than the Store and Forward Floor Limit for the associated card type. Floor limit is whole dollars – no cents (e.g. 0050 represents $50).
109	Options 10	B8	Unless otherwise stated, '0' = disabled and '1' = enabled
109.1	Promotional Data Prompt	(MSBit 7)	**Mexico Option:** Controls whether the terminal will prompt for special promotional data for locally issued cards for the card type. *Local cards identified using 'LOCPVLnnn' and 'LOCBINnnn' files loaded from the Nashville frontend.* '0' – Disabled, '1' – Enabled
109.2	Amex Plan N & DPP Prompt	(Bit 6)	**Mexico Option:** Controls whether the terminal will prompt Amex Plan N data. '0' – Disabled, '1' – Enabled
109.3	Contactless Allowed	(Bit 5)	**Canada Option:** 0 = Do not allow contactless for this card type 1 = Allow contactless for this card type
109.4	DCC Check Box on Merchant Copy	(Bit 4)	0 = Do not print DCC "[ ] Check Box to Accept" on merchant receipt copy 1 = Print DCC "[ ] Check Box to Accept" on merchant receipt copy
109.5	Signature Debit Allowed	(Bit 3)	**US Option:** 0 – Do not allow for this card type 1 – Allow for this card type
109.6	Signature Debit Card Type	(Bit 2)	**US Option:** Controls whether this card type is classified as Signature Debit. Special processing applies for Signature Debit transactions. 0 – Indicates Not Signature Debit card type 1 – Indicates Signature Debit card type
109.7	Unused	(Bit 1)	Unused
109.8	Unused	(LSBit 0)	Unused
110	Unique Card Type Indicator	AN 2	Matches to the 'Unique Card Type Identifier' in Field 60, Table 51 and 53. *Used in multi account solutions to provide a unique tie between a child TID specific card type record and the global parent level AID record.*
112	Surcharge Mode	AN 1	Controls whether surcharge applies or not and if it applies, whether it applies for all debit transactions or only for transactions that are cash back only (with zero base/purchase amount). • 0 = None **(default)** • 1 = Cash Back Only (purchase/base amount is zero) • 2 = All Debit (Purchase only, purchase with cash back, cash back only)
113	Cash Back Surcharge Amount	N4	Amount to add to cashback transaction for this card type – two implied decimal places (e.g. '0350' represents a surcharge amount of '$3.50').

6.5 FIELD 60, TABLE 4 - HOST

One host table is loaded for each applicable host based on merchant setup at the FDC Nashville host. A Nashville host table is always included and other tables may also apply for AMEX PIP, Amex Split dial, or gift card.

ID (4)	FIELD	TYPE	COMMENT
1	Table ID	N 2	'04'
2	Table Length	N 4	'0183' - Total length of data that follows
4	Host Number	N 2	Indicates relative position of this host table relative to other host tables – numbers may not be contiguous
5	Host ID	N 2	Identifier used to match an account # BIN range to a processing host; each entry from the account # BIN table includes a Host ID (or pointer) which must match a Host ID entry in a Host Table 4. '01' – Primary FDMS Nashville host '02' – AMEX PIP (auth/settle to AMEX) '03' – AMEX Split Dial (auth to AMEX/settle to Nashville) '04' – Gift Card '05' – TeleCheck ECA Split Dial 'nn' – Check and/or Private Label Split Dial Hosts
6	Host Protocol	A 10	Defines the protocol to use for non-settlement communication with this processing host: 'HYPERCOM' - Nashville ISO 8583 synchronous 'AMEX' - AMEX PIP ISO 8583 synchronous 'SPLITDIAL' – AMEX Split Dial Visa Protocol asynchronous 'SCANDELUXE' ***FUTURE*** 'JBS' ***FUTURE*** 'TELECHECK1' (old format) ***FUTURE*** 'TELECHECK2' (new format) ***FUTURE*** 'EQUIFAX' (TeleCredit) ***FUTURE*** 'GIFT CARD' – FDMS Gift Card 'TCKSPLDIAL' – TeleCheck ECA Split Dial
16	Host Name	A 10	Defines print and display name text for this host E.g. 'FIRST DATA', 'AMEX', 'AMEXSPLIT', 'GIFT CARD', 'TCKECA SPL', … (others as defined)
26	Primary Auth Phone #	N 24	Defines the phone number to use in the primary dial attempt for all but settlement processing for this processor. The phone number characters supported include: 0-9 Dial digit as specified A Select DTMF/tone dialing mode (default if not specified) B Dial tone pause (2 seconds) C Select pulse dialing mode D Disable PABX dialing (ignore if PABX dialing not supported via local option); *Currently, the 'D' is always pre-pended to disable local PABX codes* EA Treat as '*' dialing digit EB Treat as '#' dialing digit EC Treat as 'A' dialing digit ED Treat as 'B' dialing digit EE Treat as 'C' dialing digit EF Treat as 'D' dialing digit F Filler (ignore)

ID (4)	FIELD	TYPE	COMMENT
38	Primary Connection Time	N 2	The time in seconds allowed to establish connection with the processing host
39	Primary Dial Attempts	N 2	The number of dial attempts allowed for the primary number before rolling over to the alternate phone number
40	Alternate Auth Phone #	N 24	Defines the alternate phone number to use when all attempts using the Primary Auth Phone # fail for the number of attempts defined by Primary Dial Attempts (see valid phone characters above).
52	Alternate Connection Time	N 2	The time in seconds allowed to establish connection with the processing host when using the Alternate Auth Phone #
53	Alternate Dial Attempts	N 2	The number of dial attempts allowed for the Alternate Auth Phone # before giving up
54	Primary Settle Phone #	N 24	Used for settlement processing but otherwise as defined above
66	Primary Connection Time	N 2	Used for settlement processing but otherwise as defined above
67	Primary Dial Attempts	N 2	Used for settlement processing but otherwise as defined above
68	Alternate Settle Phone #	N 24	Used for settlement processing but otherwise as defined above
80	Alternate Connection Time	N 2	Used for settlement processing but otherwise as defined above
81	Alternate Dial Attempts	N 2	Used for settlement processing but otherwise as defined above
82	Modem Mode	N 2	Defines the modem configuration required for all communicating non-settlement processing with this processing host. ‘00’ for Synchronous ‘01’ for Asynchronous/1200 ‘04’ for Asynchronous/300
83	**Options 1**	B 8	Unless otherwise stated, ‘0’=disable, ‘1’=enable
83.1	IP Auth Communication	(MSBit 7)	‘0’ – IP disabled (dial mode) for non-settlement processing ‘1’ – IP enabled for non-settlement processing (online auth, offline advice sent with auth, batch download, check, initialization, and auto download processing)
83.2	IP Settle Communication	(Bit 6)	‘0’ – IP disabled (dial mode) for settlement processing ‘1’ – IP enabled for settlement processing (settlement totals, offline advice at settlement, and batch uploads)
83.3	Health Care Host	(Bit 5)	‘0’ – Do not use this host for health care processing ‘1’ – Use this host for health care processing; this option does not imply entitlement of health care – a health care issuer must be present to entitle health care processing (Field 60, Table 3, Custom Card Type Indicator = ‘60’)
83.4	IP Dial Backup	(Bit 4)	’0’ – Do not roll over to dial if IP connection fails ‘1’ – Roll over to dial if IP connection fails
83.5	Ignore Host Time	(Bit 3)	Indicates that the host time that may be returned on various response messages should be ignored for this host and not used to reset the system clock
83.6	Batch Download Required	(Bit 2)	Controls whether a batch download is required from this host in order to download transactions from an open batch at the host.
83.7	Clear Batch	(Bit 1)	Controls whether the batch should be cleared at the POS device
83.8	AMEX Features/SOC #	(LSBit 0)	Controls whether entry of the SOC # is required.
84	Options 2	B 8	Unless otherwise stated, ‘0’=disable, ‘1’=enable
84.1	Reserved	(MSBit 7)	‘0’
84.2	Reserved	(Bit 6)	‘0’
84.3	Disable Auto	(Bit 5)	Controls whether auto settlement is blocked for issuers

ID (4)	FIELD	TYPE	COMMENT
	Settlement		associated with this host. *Note: This option overrides issuer and terminal level auto settlement options.*
84.4	Fast Batch Upload	(Bit 4)	Controls whether the terminal should perform fast batch uploads to this host – only require a host response on every nth (see '# Fast Batch Upload Requests' indicator below) terminal request. The last digit of the Processing Code is used to indicate whether a host response should be returned by the host or not. *Note: This option is not currently supported and will always be '0'.*
84.5	AVS Permitted?	(Bit 3)	Controls whether AVS is permitted for issuers associated with this host. *Note: If disabled (AVS not permitted), this option overrides AVS options for card types associated with this host..*
84.6	Capture Signature ***(Not currently supported)***	(Bit 2)	Controls whether signature capture is supported by this host.
84.7	Reserved	(Bit 1)	'0'
84.8	Reserved	(LSBit 0)	'0'
85	Options 3	B 8	'00000000'
86	Options 4	B 8	'00000000'
87	Network International ID	N 4	This field is used to populate Field 24 (NII) of all terminal to host ISO 8583 messages. This field is typically set to '0038' for Nashville and '0003' for Amex,
89	Terminal ID	A 8	This is the identifier that identifies the terminal and/or merchant for ISO 8583 hosts (FDMS Nashville Terminal ID or AMEX PIP Terminal ID). This field is used to populate Field 41 of terminal to host messages for ISO 8583 hosts.
97	Merchant ID	A 15	This is the identifier that may be used to populate Field 42 (optional) of terminal to host messages for ISO 8583 hosts.
112	Host Response Time Out	N 2	This is the number of seconds (typically set to '55' seconds) a POS device should wait for a host response before timing out.
113	Current Batch Number	N 6	This is the batch number to use for the current batch. ***Note: '000000' means do not update the current batch #***
116	Next Batch Number	N 6	This is the batch number to use for the next batch. ***Note: '000000' means no batch number specified for the next batch***
119	Settle Time (hhmm)	A 4	This is the time after which auto settlement should be initiated for this host if there is an open batch. Note: '0000'/ignore if auto settle is disabled above.
123	Filler	A 2	'00'
125	Encrypted PIN Key	N 16	This is the encrypted PIN key for Master Session processing for this host. *Note: Currently not supported and will be all zeroes*.
133	Master key index	A 1	This is master key index for Master Session processing for this host. *Note: Currently not supported and will always be '1'.*.
134	Filler	N 16	All zeroes
142	Filler	N 2	'00'.
143	Visa I Split Dial Terminal ID	A 23	This is the terminal ID to use for Visa protocol messages to this host (e.g. AMEX split dial Terminal ID, check split dial ID, …)
166	Settlement Modem Mode '00'-Synchronous	N 2	Defines the modem configuration required for settling transactions to this processing host '00' for Synchronous '01' for Asynchronous/1200 '04' for Asynchronous/300
167	Max Auto Settle Attempts	N 2	The number of auto settlement re-try attempts allowed after which an error message should be displayed and all further

ID (4)	FIELD	TYPE	COMMENT
			attempts aborted until the next occurrence of the auto settlement time. For this host, this option overrides the terminal level option 'Auto Settle Prompt Retry Count'.
168	Filler	A 3	All spaces
171	Settlement Protocol Name	A 10	Defines the protocol to use for settlement communication with this processing host: 'HYPERCOM' - Nashville ISO 8583 synchronous 'AMEX' - AMEX PIP ISO 8583 synchronous
181	Filler	N 12	All spaces
187	*Reserved*	*N 2*	*Reserved – Do not use (formerly documented as # fast batch upload requests but the fast batch upload feature was never implemented for Nashville)*
188	*External Merchant Number*	*A 15*	*Identifies merchant to external entity such as external First Data back-end processing system (i.e. North/Nashville front-end merchant/South back-end merchant). Left justified with trailing spaces.*

6.6 FIELD 60, TABLE 5 - AMEX DESCRIPTOR DATA

This table is included when the merchant is configured for Amex reverse PIP (when 'Amex PIP Descriptors Required' is enabled in the card type table). The operator must be allowed to select the appropriate descriptor code based on the Field 60, Table 5 descriptor data entries. A separate Table 5 is included for each valid descriptor code that applies for the merchant. Currently, FDC Nashville setup only supports two PIP descriptor codes for a single merchant.

ID	FIELD	TYPE	COMMENT
1	Table ID	N 2	'05'
2	Table Length	N 4	'0024' - Total length of data that follows
4	Descriptor Number	N 2	Index/position of the descriptor table entry
5	Selection Key	A 1	Menu option key used to select descriptor
6	Host Descriptor Code	A 2	Actual descriptor code sent to Amex
8	Display/Print Text	A 20	Menu option descriptor code text (POS application should use 'Descriptor nn' if spaces where 'nn' is the Host Descriptor Code above)

6.7 FIELD 60, TABLE 6 – CANADIAN SALES TAX TEXT *(CHECK FOR AVAILABILITY)*

This table is included when a Canadian merchant is configured for AgriCard and the 'Sales Tax Text' TMS feature is configured for the application and revision. This text is used by the terminal to prompt for and print the Canadian sales tax amount for AgriCard transactions. The text included will depend on the province of the merchant location (i.e. 'HST Amt' for Ontario and 'GST Amt' for all other provinces).

ID	FIELD	TYPE	COMMENT
1	Table ID	N 2	'06'
2	Table Length	N 4	'0007' - Total length of data that follows
4	Sales Tax Text	AN 7	Left justified with trailing spaces if less than 7 characters.

6.8 FIELD 60, TABLE 07 – VARIABLE CONFIGURATION *(CHECK FOR AVAILABILITY)*

Additional parameter data can be sent to the terminal in one or more of the following tags which reside in Table 07.

The length attribute field, appearing at the beginning of Table 07, indicates the entire length of the data presented in Table 07. The format of this table is TLD format (Tag-Length-Data).

Note: Terminals must ignore unknown tags as this table is subject to change. Additional tag identifiers may be added at any time. If a tag identifier is not recognized, it should be ignored. Tags may be in any order.

Example:

Field 63, Table 07, Tag 'FI' Firmware Update Interval: '030' (len 3)

Results in the following:

07\ (Table ID)
00\08\ (Table Length)
46\49\ ('FI' Tag)
30\30\33\ (Tag Length '003'
30\33\30\ (Tag Data '030')

Fixed Header for Table 07 (Variable Configuration Table)

Field	Attribute	Length
Table ID	N 2	07 – Variable Configuration
Table Length	N 4	0n nn – Total length of data that follows

Variable Configuration Tags for Table 07

Tag	*Field*	Attribute	Value	Comment
FI	**Tag**	**AN 2**	**'FI'**	
	Data Length	AN 3	'003'	Total length of tag data that follows
	Firmware Update Interval	AN 3	'000' – '999'	Number of days before terminal will check for contactless reader updates. '000' disables firmware update checking. *Only included if firmware updates are supported by the application revision and a contactless capable device is configured.*
FD	**Tag**	**AN 2**	**'FD'**	
	Data Length	AN 3	'024'	Total length of tag data that follows
	Firmware Download Phone #	AN 24	<left justified with trailing spaces>	Phone number to dial for firmware updates if a merchant is setup for dial (phone number must include prefix/suffix characters if configured for merchant auth/settle phone numbers). *Only included if firmware updates are supported by the application revision and a contactless capable device is configured.*

6.9 FIELD 60, TABLE 10 - DISPLAY AND PRINT TEXT

The text in this table can be used to customize the print and display text at the terminal level. Only one Field 60, Table 10 is included in an initialization session.

ID	FIELD	TYPE	COMMENT
1	Table ID	N 2	'10'
2	Table Length	N 4	'0210' - Total length of data that follows
4	Receipt Header Line 1	A 40	Optional Header text or spaces if not defined
44	Receipt Header Line 2	A 40	Optional Header text or spaces if not defined
84	Receipt Footer Line 1	A 40	Optional Footer text or spaces if not defined
124	Receipt Footer Line 2	A 40	Optional Footer text or spaces if not defined
164	Invoice Line Text	A 11	
175	Pre-Tip Line Text	A 20	
195	Tip Line Text	A 10	
205	Server Short Text	A 3	
208	Server Long Text	A 6	

6.10 FIELD 60, TABLE 14 - PACKET DIAL NETWORK (PDN)

This table is used to specify a PDN Table Entry and assign some parameters to it.

ID	FIELD	TYPE	COMMENT
1	Table ID	N 2	'14'
2	Table Length	N 4	'nnnn' - Total length of data that follows
4	PDN Entry Number	N 2	'nn' – Table 13 Sequence #
5	Acquirer ID	N 2	'nn' – Identifies Acquirer that this PDN entry is associate with
6	Primary Transaction Logon String	N60	Logon String used if the terminal has connected using the Acquirer's Primary Transaction Telephone Number.
36	Secondary Transaction Logon String	N60	Logon String used if the terminal has connected using the Acquirer's Secondary Transaction Telephone Number.
66	Primary Settlement Logon String	N60	Logon String used if the terminal has connected using the Acquirer's Primary Settlement Telephone Number.
96	Secondary Settlement Telephone Number	N60	Logon String used if the terminal has connected using the Acquirer's Secondary Settlement Telephone Number.

6.11 FIELD 60, TABLE 15 – CUSTOMER FACING PIN PAD CONFIGURATION

This table is used to specify the configuration parameters for the Everest, Mx830 and 7000LE PIN pads. Only one Field 60, Table 15 can be included in an initialization session. *This table will only be included if the merchant is configured with one of these PIN pads.*

ID	FIELD	TYPE	COMMENT
1	Table ID	N 2	'15'
2	Table Length	N 4	'nnnn' - Total length of data that follows
4	PIN Pad Message 1	ANS 32	PIN pad card swipe prompt *(Always 'Please Swipe Card')*
36	PIN Pad Message 2	ANS 32	PIN pad Enter PIN prompt *(Always 'Enter PIN')*
68	PIN Pad Message 3	ANS 32	PIN pad cancel prompt *(Always 'Trans Cancelled')*
100	PIN Pad Confirm Amount Prompt	ANS 32	PIN pad confirm amount prompt *(Always 'Confirm Amount?')*
132	PIN Pad Cancel Delay	N 4	'nnnn' – Time in milliseconds to display error message (PIN pad Message 3 above) before resetting *(Always 5000)*
134	**PIN Pad Options 1**	B 8	Unless otherwise stated, '0'=disable, '1'=enable
134.1	Allow Credit Card Swipe	(MSBit 7)	Allow credit card swipe at PIN pad. (Always enabled)
134.2	Allow Debit Card Swipe	(Bit 6)	Allow debit card swipe at PIN pad (Always enabled)
134.3	Allow EBT Card Swipe	(Bit 5)	Allow EBT card swipe at PIN pad (Based on EBT entitlement in CMS)
134.4	Remote Mode	(Bit 4)	Indicates whether PIN pad is in remote mode rather than connected to terminal. (Always disabled)
134.5	Confirm Amount	(Bit 3)	Indicates whether terminal should confirm amount (using Confirm Amount Prompt above) (Based on CMS option)
134.6	Allow Gift Card Swipe	(Bit 2)	Allow gift card swipe at PIN pad (Based on gift card entitlement in
134.7	Allow Loyalty Card Swipe	(Bit 1)	Allow loyalty card swipe at PIN pad. (Based on Loyalty entitlement in
134.8	Unused	(LSBit 0)	

6.12 FIELD 60, TABLE 16 – MERCHANT MESSAGE TEXT

This table is used to specify merchant message text to print at the point-of-sale if the Merchant Message Flag is enabled in Field 60, Table 1, Options 10 , Bit 2. This table is not a required table and its absence implies that the merchant message feature is disabled regardless of the value received in the Table 1 Merchant Message Flag. The absence of this table should not cause an error at the POS device. Only one Field 60, Table 16 can be included in an initialization session.

ID	FIELD	TYPE	COMMENT
1	Table ID	N 2	'16'
2	Table Length	N 4	'0128' - Total length of data that follows
4	Merchant Message Line 1	AN 32	Print if Print Merchant Message Flag is enabled and text not all spaces
36	Merchant Message Line 2	AN 32	Print if Print Merchant Message Flag is enabled and text not all spaces
68	Merchant Message Line 3	AN 32	Print if Print Merchant Message Flag is enabled and text not all spaces
100	Merchant Message Line 4	AN 32	Print if Print Merchant Message Flag is enabled and text not all spaces

6.13 FIELD 60, TABLE 17 – HEALTH CARE IN-NETWORK PAYER

One payer table is loaded for each payer ID. There can be as many as 100 payer ID's resulting in up to 100 payer tables (Table 17). The POC terminal will compare the payer ID from Track III with the Payer ID in the in-network payer tables and if a match is found, the payer will be treated as 'in-network'***. Note: Other options may be added in the future to control unique prompting by payer.***

ID	FIELD	TYPE	COMMENT
1	Table ID	N 2	'17'
2	Table Length	N 4	Total length of data that follows
4	Payer ID	AN 10	Payer ID (left justified with trailing spaces)
14	Payer Name	AN 10	Payer name (insurance carrier name)

6.14 FIELD 60, TABLE 18 – PROXIMITY CARD READER OPTIONS

This table is used to specify configuration settings for a proximity card reader if applicable. This table is not a required table and its absence implies that a proximity card reader is not setup for the terminal. The absence of this table should not cause an error at the POS device. Only one Field 60, Table 18 can be included in an initialization session.

ID	FIELD	TYPE	COMMENT
1	Table ID	N 2	'18'
2	Table Length	N 4	'0005' - Total length of data that follows
4	Proximity Card Reader Type	N2	Defines proximity (contactless) card reader type setup in CMS: 00 – None 01 – OTi Saturn 5000 02 – ViVOpay 3000 03 – ViVOpay 4000, 4500, 4500M, DTC, DTM, DTF, Vx810 04 – FD-20
5	Proximity Card Reader Port	AN 1	1 = COM1/RS232 2 = COM2/PIN Pad 3 = USB
6	Proximity Card Reader Baud	AN 1	0 = 300 1 = 600 2 = 1200 3 = 2400 4 = 4800 5 = 9600 6 = 19200 7 = 38400
7	Proximity Card Reader Format	AN 1	0 = A7E1 1 = A7N1 2 = A7O1 3 = A8E1 4 = A8N1 5 = A8O1
8	Proximity Card Reader Handshake	AN 1	0 = None 1 = Software 2 = CTS/RTS

6.15 FIELD 60, TABLE 19 – IP CONFIGURATION (BY IPN TYPE BY HOST)

This table is used to specify configuration settings for IP processing by IPN type and host (including the download host). No Field 60, Table 19 records will be included if IP is disabled for the merchant. If IP is enabled, one record will be loaded for each IPN Type supported for each host that applies. Applicable IP hosts include the FDC Nashville host, the FDMS gift card host and the download host.

Example: If an account is configured for both Apriva and Datawire and supports the Nashville, Gift Card and Download hosts, Field 60, Table 19 records will be loaded for each IPN type (01/Datawire and 03/Apriva) for each host (00/download, 01/Nashville, and 04/Gift Card). That would result in 6 Field 60, Table 19 records being loaded.

ID	Field	Type	Comment
1	Table ID	N 2	'19'
2	Table Length	N 4	Total length of data that follows
4	Host Pointer	N 2	Indicates the host that applies for these IP configuration settings. '00' – Applies for download host (used for automated downloads) '01' – Applies for host with Field 60, Table 04, Host ID = '01' 'nn' – Applies for host with Field 60, Table 04, Host ID = 'nn'
5	IPN Type	N 2	00h – Not applicable 01h – Datawire (default) ***02h – EFSNet (Future)*** *03h – Apriva* *04h – TCPIP*
6	IP Options 1	B 8	
6.1	SSL Encryption	(MSBit 7)	'0' – Disabled, '1' – Enabled (default)
6.2	PPPoE	(Bit 6)	'0' – Disabled, '1' (default) - Enabled
6.3	Unused	(Bit 5)	'0'
6.4	Unused	(Bit 4)	'0'
6.5	Unused	(Bit 3)	'0'
6.6	Unused	(Bit 2)	'0'
6.7	Unused	(Bit 1)	'0'
6.8	Unused	(LSBit 0)	'0'
7	Service ID or Username	AN 50	Used to route to the correct FDMS host/server (production, certification or test) for transactions and init.
57	Primary URL or IP Address	AN 60	Primary URL/Address to use for all ISO Dual processing
117	Primary Port	AN 5	Primary port to use for all ISO Dual processing
122	Secondary URL or IP Address	AN 60	Secondary URL/Address to use for all ISO Dual processing
182	Secondary Port	AN 5	Secondary port to use for all ISO Dual processing
187	OPN Server Name	AN 50	Used to route to the correct gateway host/server.
237	OPN Service ID or Username	AN 50	Used to route to the correct gateway host/server.
287	Physical Connection Type	N 2	00=Ethernet (default) ***01=WiFi (Future)*** ***02=CDMA*** ***03=GPRS*** ***04=Dial Modem/IP (Future)***

6.16 FIELD 60, TABLE 20 – EXTENDED DOWNLOAD INFORMATION *(FUTURE)*

This table is used to specify additional configuration settings for auto downloads. Basic schedule download information is included in Field 63, Table 42.

ID	Field	Type	Comment
1	Table ID	N 2	'20'
2	Table Length	N 4	Total length of data that follows
4	Application Type	AN 2	'01' – Financial application '02' – Firmware for Contactless Capable Device ***(FUTURE)***
6	Application Name	AN 30	Download system application identifier (e.g. TMS application name (*ZA); package name for GDS). Left justified with trailing spaces.
36	Download ID	AN 16	Download system terminal identifier (e.g. Nashville Terminal ID (*ZT) for VeriCentre; global DLDID for GDS). Left justified with trailing spaces.

6.17 FIELD 60, TABLE 22 – DCC RECEIPT TEXT

This table is used to specify optional receipt text to print at the point-of-sale for DCC transactions. The POS device should support loading a minimum of 4 receipt text tables. If the table is missing for a card type when DCC applies, then no special receipt text should be printed for that card type. The receipt data will be formatted for 40 character lines. The line feed character (hex 0A) will be inserted as needed to force a new line. The assumption is that the printer will wrap to the next line after printing 40 characters or when it encounters a line feed character. Therefore, 40 character lines do not need to be terminated with a line feed but lines that are less than 40 characters must be terminated with the line feed character. Notice that in the example data below, a line feed is not required between the word 'international' and 'currency' since the line 'exchange rate plus a 3.15% international' consists of exactly 40 characters.

ID	Field	Type	Comment
1	Table ID	N 2	'22'
2	Table Length	N 4	Total length of data that follows
4	Card Type Pointer	N2	Indicates card type for which the text applies. 'nn' – Corresponds to Field 60, Table 3, Card Type ID
5	DCC Receipt Text	AN …800	Line feed characters (hex 0A) may be included to force a new line.

DCC Receipt Text Data for MasterCard ('¶' represents hex 0A line feed character):

'Please debit my account for the total¶amount of this sale in the Transaction¶Currency shown above. I acknowledge I¶have a choice to pay in US Dollars and¶my currency choice is final. I have¶chosen not to use the MasterCard¶Currency conversion process and agree¶that I will have no recourse against¶MasterCard concerning the currency¶conversion or its disclosure. ¶¶* The exchange rate used for this sale¶is the Reuters wholesale interbank¶exchange rate plus a 3.15% international currency selection fee.¶'

DCC Receipt Text Data for Visa ('¶' represents hex 0A line feed character):

'Please debit my account for the total¶amount of this sale in the Transaction¶Currency shown above. I acknowledge¶that I had a choice to pay in US¶Dollars and my currency choice is¶final. Currency conversion will not be¶conducted by Visa. ¶¶* The exchange rate used for this sale¶is the Reuters wholesale interbank¶exchange rate plus a 3.15% international currency selection fee. ¶'

Formatted MC Receipt Data	Formatted Visa Receipt Data
Please debit my account for the total amount of this sale in the Transaction Currency shown above. I acknowledge I have a choice to pay in US Dollars and my currency choice is final. I have chosen not to use the MasterCard Currency conversion process and agree that I will have no recourse against MasterCard concerning the currency conversion or its disclosure. * The exchange rate used for this sale is the Reuters wholesale interbank exchange rate plus a 3.15% international currency selection fee.	Please debit my account for the total amount of this sale in the Transaction Currency shown above. I acknowledge that I had a choice to pay in US Dollars and my currency choice is final. Currency conversion will not be conducted by Visa. * The exchange rate used for this sale is the Reuters wholesale interbank exchange rate plus a 3.15% international currency selection fee.

6.18 FIELD 60, TABLE 23 – DCC CURRENCY CODE TABLE

This table is used by the POS device to define supported currencies for Dynamic Currency Conversion processing. A separate table will be loaded for each supported currency. The POS device should support loading of at least 50 currencies.

ID (23)	FIELD	TYPE	COMMENT
1	Table ID	N 2	'23'
2	Table Length	N 4	Total length of data that follows
4	Currency Name	AN 25	Name of the Currency (see examples below – names are left justified with trailing spaces to 25 characters) 'Australian Dollar ' 'Japanese Yen ' 'Kuwaiti Dinar '
29	ISO Alpha Currency Code	AN 3	3 character ISO alpha currency code (see examples below): 'AUD' - Australian Dollar 'JPY' – Japanese Yen 'KWD' – Kuwaiti Dinar
32	ISO Numeric Currency Code	N3	3 digit ISO numeric currency code (see examples below): 00 36 - Australian Dollar 03 92 - Japanese Yen 04 14 - Kuwaiti Dinar
34	Decimal Position Subdivision Indicator	N6	Divisor used to calculate the number of decimals places that apply for the currency (see examples below): 00 01 00 - Australian Dollar (2 decimal places) 00 00 00 - Japanese Yen (no decimal places) 00 10 00 - Kuwaiti Dinar (3 decimal places)

6.19 FIELD 60, TABLE 24 – MULTI MERCHANT TID LIST TABLE

This table is used by the POS device to specify what additional terminal ID's are configured in a multi-merchant environment (e.g. hair salon, clinic, etc.). One record is loaded for the parent and all child terminals during an initialization for a parent terminal. Only the child record will be loaded during an initialization for a child terminal.

ID (24)	FIELD	TYPE	COMMENT
1	Table ID	N 2	'24'
2	Table Length	N 4	Total length of data that follows
4	Nashville Terminal ID	AN 8	
12	Nashville Merchant ID	AN 15	
27	Alias Name	AN 20	Short name used to select correct merchant at the terminal (e.g. 'Dr. Smith', 'Dr. Jones', 'Clinic', …).

6.20 FIELD 60, TABLE 25 – STORE AND FORWARD TABLE

This table is used to control store and forward processing. ***The table is only included in the initialization when the 'Store&Forward Allowed' application/revision level flag is enabled in TMS.***

ID (25)	FIELD	TYPE	COMMENT
1	Table ID	N 2	'25'
2	Table Length	N 4	Total length of data that follows
4	Store&Forward Mode	N2	Controls if or how the merchant supports store and forward processing. 00 – Not allowed 01 – Stay Off-line (even when coverage is available) 02 – Off-line on Demand (when coverage is not available)
5	Store&Forward Report Type	N2	Controls what type of report is printed after an attempt to authorize the transactions in the pending queue. 00 – No report 01 – All transactions (approved, failed, and not processed) 02 – Approved transactions only (Field 39=00) 03 – Failed and not processed (all that didn't receive approval)
6	Store&Forward Receipt Type	N2	Controls when a status receipt is printed after an attempt to authorize the transactions in the pending queue. 00 – No receipt 01 – All transactions (approved and failed) 02 – Approved transactions (Field 39 equal to 00) 03 – Failed only (Field 39 received but not equal to 00)
7	Store&Forward Max Pending	N4	Controls how many transactions are allowed in the pending queue at any point in time (0000 – 9999 transactions).
9	Store&Forward Max Queue Total	N4	Controls the max total allowed for all transactions in the pending queue at any point in time (00000 – 99999 whole dollars).
11	Store&Forward Failed Age Limit	N2	Controls how many days a failed transaction can remain in the pending queue before it is removed (00 – 99 days).

6.21 FIELD 60, TABLE 26 – STAR CONTACTLESS TABLE

This table is used to for parameters that control special processing for Star contactless transactions. The table should only be loaded to terminals (TIDs) that have debit entitled, have a contactless reader setup and have an application that is Star contactless capable.

ID (26)	FIELD	TYPE	COMMENT
1	Table ID	N 2	'26'
2	Table Length	N 4	Total length of data that follows
4	Dual Card Preference	N2	Defines the merchant preference for contactless chips that have more than one application and when one application is Star. 00 – Star Last 01 – Star First
5	Number of BINs	N2	Number of BINs/floor limits to follow ('00' – '99')
6	Star Contactless BIN	N6	BIN used to identify Star contactless cards. Default is 50 28 07 (BCD packed).
9	BIN No-PIN Required Floor Limit	N4	Controls whether the terminal will prompt for PIN on Star debit contactless transactions starting with the BIN in the above. The floor limit amount is in whole dollars with no implied decimal places. For example, '0025' represents $25.00.

6.23 FIELD 60, TABLE 27 – SECURITY TABLE

This table is used to control special security processing at the terminal including encryption and tokenization for credit and debit transactions.

This table should only be sent to the terminal if the terminal application supports encryption and tokenization and the Security Level is '01' in TMS. The terminal will assume the Security Level is '00' if this table is not present.

The special security features *will not apply* for the following at this time - support may be added in the future.

Security Exclusions:

- Transactions sent to the Amex host (security can apply for subsequent offline advice)
- Loyalty account numbers
- Check account numbers sent to First Data or TeleCheck
- Gift card account numbers sent to the First Data host

ID (27)	FIELD	TYPE	COMMENT
1	Table ID	N 2	'27'
2	Table Length	N 4	Total length of data that follows
4	Security Level	N2	Controls the level of security that applies: '00' – Neither encryption nor tokenization supported '01' – Encryption and tokenization *'02' – Encryption only (Reserved for Future)* *'03' – Tokenization only (Reserved for Future)*
Table May End Here if Multi Pay token is not supported			
5	Token Type	AN 4	Defines the Token Type Value (used for Multi Pay tokens)e.g. 1234

6.24 FIELD 60, TABLE 30 – LAC REGION OPTIONS

This table is used to for terminal level parameters that control special processing for the LAC region.

ID (30)	FIELD	TYPE	COMMENT
1	Table ID	N 2	'30'
2	Table Length	N 4	Total length of data that follows
4	LAC Options 1	B 8	'0' – Disabled, '1' – Enabled (default)
4.1	Installment Payment Indicator	(MSBit 7)	Controls whether the terminal will allow Installment Payment transactions.
4.2	Prompt for Decline Receipt	(Bit 6)	0 = Do not prompt for printing of declined receipt, receipt will print. 1 = Prompt for printing of declined receipt.
4.3	LAC Bank Logo	(Bit 5)	0 = Do not print or display LAC Bank Logo. 1 = LAC Bank Logo will be printed and displayed.
4.4	Force/Offline Transactions	(Bit 4)	0 = Do not allow Force or Offline Transactions 1 = Allow Force or Offline Transactions
4.5	Manual ITBIS	(Bit 3)	0 = Disable (Automatic Calculation of ITBIS Tax) 1 = Enable (ITBIS Tax manually entered at terminal)
4.6	Print Taxes	(Bit 2)	Controls whether terminal will print taxes on the receipt '0' – Do not print Taxes in the receipt '1' – Print Taxes in the receipt
4.7	Confirm Total Amount	(Bit 1)	Controls whether terminal will display the total amount confirmation prompt during all transaction s '0' – Disabled '1' – Enabled
4.8	Debit EMV Allowed	(LSBit 0)	Controls whether terminal will allow Debit EMV Transactions '0' – Disabled '1' – Enabled
5	ITBIS Tax Rate	N6	Defines the ITBIS tax rate for the country of the merchant (two implied decimal places). *For example, a rate of 001600 represents a tax rate of 0016.00 or 16%. An ITBIS Tax Rate of zero means the ITBIS Tax is disabled.*
8	MCC Tax Rate	N6	Defines the MCC tax (e.g. Server rate based on the MCC code of the merchant (two implied decimal places). *For example, a rate of 001600 represents a tax rate of 0012.00 or 12%. An MCC Tax Rate of zero means the MCC Tax is disabled.*
11	LAC Logo Indicator	AN2	LAC Logo Indicator values will be as shown below: 01 – Servicios Digitales Popular 02 – Scotia Bank 03 – ButterField Bank 04 through 50 – RF04 through RF50

6.25 FIELD 60, TABLE 31 – MEXICO REGION OPTIONS

This table is used to for terminal level parameters that control special processing for the Mexico region.

ID (31)	FIELD	TYPE	COMMENT
1	Table ID	N 2	'31'
2	Table Length	N 4	Total length of data that follows
4	Mexico Options 1	B 8	'0' – Disabled, '1' – Enabled (default)
4.1	Unused	(Bit 5)	'0'
4.2	Unused	(Bit 5)	'0'
4.3	Unused	(Bit 5)	'0'
4.4	Unused	(Bit 4)	'0'
4.5	Unused	(Bit 3)	'0'
4.6	Unused	(Bit 2)	'0'
4.7	Unused	(Bit 1)	'0'
4.8	Unused	(LSBit 0)	'0'
5	Bank Logo Identifier	AN2	Defines the bank logo that the terminal will display at idle. 01 – Banca Mifel Acquiring 02 – FD Mexico BIN Sponsorship 03 – ScotiaPOS Bank
7	BDU Number	AN16	eGlobal ID for Banca Mifel (the Mexico local authority) or Prosa ID for ScotiaPos Bank. *Left justified with trailing spaces.*

6.26 FIELD 60, TABLE 32 – CANADA REGION OPTIONS

This table is used to for terminal level parameters that control special processing for the Canada region.

ID (31)	FIELD	TYPE	COMMENT
1	Table ID	N 2	'32'
2	Table Length	N 4	Total length of data that follows
4	Canada Options 1	B 8	'0' – Disabled, '1' – Enabled (default)
4.1	Debit Refund Transaction Limit	(MSBit 7)	'1' Controls whether the terminal will allow 'Debit Refund Transaction Limit' logic.
4.2	Debit Purchase Transaction Batch Limit	(Bit 6)	'1' Controls whether the terminal will allow 'Debit Purchase Transaction Limit' logic
4.3	Unused	(Bit 5)	'0'
4.4	Unused	(Bit 4)	'0'
4.5	Unused	(Bit 3)	'0'
4.6	Unused	(Bit 2)	'0'
4.7	Unused	(Bit 1)	'0'
4.8	Unused	(LSBit 0)	'0'
5	Debit Refund Maximum Threshold Amount	AN7	Defines the Debit Refund maximum allowed amount per batch. (Right justified with leading zeros - two implied decimal positions e.g.9999999 represents 99,999.99 or 0050000 represents 500.00).

6.27 FIELD 60, TABLE 33 – DCC OPTIONS

This table is used for terminal level parameters that control special processing for DCC Transactions.

ID (31)	FIELD	TYPE	COMMENT
1	Table ID	N 2	'33'
2	Table Length	N 4	Total length of data that follows
4	Card Type Pointer	N 2	Indicates card type to which the following DCC options apply 'nn' – Corresponds to Field 60, Table 3, Card Type ID
6	DCC Options 1	B 8	'0' – Disabled, '1' – Enabled (default)
6.1	Display DCC Percentage Margin	(MSBit 7)	'1' Controls whether the terminal will display DCC Percenatge Margin on the terminal display screen
6.2	Print DCC Percentage Margin	(Bit 6)	'1' Controls whether the terminal will print DCC Percenatge Margin on the receipts
6.3	Unused	(Bit 5)	'0'
6.4	Unused	(Bit 4)	'0'
6.5	Unused	(Bit 3)	'0'
6.6	Unused	(Bit 2)	'0'
6.7	Unused	(Bit 1)	'0'
6.8	Unused	(LSBit 0)	'0'
7	DCC Percentage Margin Text	AN…30	Int'l Margin 3%

6.28 FIELD 60, TABLE 34 – SIGNATURE THRESHOLD LIMIT

This table is used for printing a Signature line on the Reciept for transaction amounts above the Signature threshold limit.

ID (34)	FIELD	TYPE	COMMENT
1	Table ID	N 2	'34'
2	Table Length	N 4	Total length of data that follows
4	Signature Threshold Limit	N 4	Controls the Signature printing Threshold amount(implied decimal) for Transactions routed to Signature Debit Network or PINless POS network: 5000 default amount = $50.00

6.29 FIELD 60, TABLE 50 – EMV TERMINAL CONFIGURATION

Only one EMV terminal configuration table is downloaded during an initialization session. This table defines global terminal configuration parameters. ***This table is only loaded for EMV capable merchants (merchants loaded with a EMV capable terminal application)***. ***Note: This table is currently not being loaded for the Canadian Vx810 application - the fall back prompt timeout is hardcoded to 60 seconds.***

ID (50)	FIELD	TYPE	COMMENT
1	Table ID	N 2	'50'
2	Table Length	N 4	Total length of data that follows
4	Prompt Timeout	N 2	Length of time (in seconds) fallback card swipe prompt may be displayed by the terminal. Defaults to 60 seconds.
5			

6.30 FIELD 60, TABLE 51 – EMV CONTACT APPLICATION ID (AID) CONFIGURATION

This table defines EMV contact AID specific configuration parameters as well as the card type and host to which the program belongs. ***One EMV Contact Application (AID) Configuration table is loaded for each supported AID. POS devices should support up to 10 EMV contact applications.***

ID (51)	FIELD	TYPE	COMMENT
1	Table ID	N 2	'51'
2	Table Length	N 4	Total length of data that follows
4	Card Type Pointer	N 2	Indicates the card type that applies for this AID (e.g. Visa, MC, …); this field must match the Card Type ID in the associated Field 60, Card Type Table 03 record.
5	AID Name	AN 16	First Data assigned AID name used in AID selection (e.g. 'MC Credit' or 'VS Credit'); ~~*Variable length field preceded by length indicator (number of bytes to follow);*~~ *left justified with trailing spaces*
22	Application Identifier (AID)	AN 32	Issuer assigned AID (e.g. 'A0000000031010' – Visa Credit/Debit, 'A0000000041010' = MC Credit/Debit); left justified with trailing spaces
38	Application Version #	AN 4	Used to determine if the application versions of the terminal and the card match; *right justified with lead zeroes in hexadecimal format (e.g. '008C' for Visa Version '140', '0002' for MC Version '02').*
40	EMV Terminal Limit Amount	N 8	Floor limit used for forcing above the floor limit chip transactions online; *right justified with lead zeroes – two implied decimal positions (e.g. '00000500' means '$5.00). If the amount is greater than or equal to the Terminal Floor Limit, the terminal shall set the 'Transaction exceeds floor limit' bit in the TVR to 1.*[1]
44	Threshold Amount	N 8	Used to control the number of transactions that may be undertaken by a chip card before it is required to seek authorization online; *right justified with lead zeroes – two implied decimal positions (e.g. '00000500' means '$5.00).*
48	Target Percentage	N 2	Used for Biased Random Selection – percentage (00 to 99) of transactions less than threshold amount that must be sent online; *right justified with lead zeroes*
49	Maximum Target Percentage	N 2	Used for Biased Random Selection – max percentage (00 to 99) of transactions less than threshold amount that must be sent online – must be greater than or equal to 'Target Percentage'; *right justified with lead zeroes*
50	Terminal Risk Management Data	AN 16	Application specific value used by the card for risk management purposes; *left justified with trailing spaces*
58	Terminal Action Code Default	AN 10	Acquirer's conditions that cause a transaction to be rejected if it might have been approved online but the terminal is unable to process it online; *left justified with trailing spaces*
63	Terminal Action Code Denial	AN 10	Acquirer's conditions that cause a transaction to be denied without going online; *left justified with trailing spaces*
38	Terminal Action Code Online	AN 10	Acquirer's conditions that cause a transaction to be authorized online; *left justified with trailing spaces*

[1] *EMV v4.2, Book 3, Section 10.5.1, pp 114.*

ID (51)	FIELD	TYPE	COMMENT
73	Default Dynamic Data Authentication Data Object List (DDOL)	ANSB …999	Used to construct the Internal Authenticate command if card DDOL is not present. *Variable length field preceded by length indicator (number of hex nibbles to follow). For example, a DDOL of '9F3704' would be represented as: Hex 00 06 9F 37 04.*
203	Default Transaction Certificate Data Object List (TDOL)	ANSB …999	List of data objects (tag and length) used by terminal in generating the TC Hash Value if the card TDOL is not present. *Variable length field preceded by length indicator (number of hex nibbles to follow). For example, a DDOL of '9F3704' would be represented as: Hex 00 06 9F 37 04.*
333	AID Options 1	B 8	'0' – Disabled, '1' – Enabled
333.1	AID Partial Selection Allowed	(MSBit 7)	Controls whether the terminal's AID must match exactly the card AID or whether partial matching on the first digits (RID only) is allowed. '0' – Exact match required '1' – Partial match allowed
333.2	PIN Bypass Allowed	(Bit 6)	'0' – Bypass of PIN not allowed '1' – Bypass of PIN allowed
333.3	Unused	(Bit 5)	
333.4	Allow Signature CVM	(Bit 4)	Controls whether the signature CVM option is supported for the AID.
333.5	Issuer Script Results on Advice	(Bit 3)	Controls whether the terminal should include the issuer script results (Tag 9F5B) on 0220 advice messages.[2]
333.6	Full EMV for Refund	(Bit 2)	Controls whether the terminal will perform full EMV processing for refunds (cardholder verification/PIN, terminal risk management, …).
333.7	Include Tag 5F24 in Field 55	(Bit 1)	Controls whether the terminal include application expiration date Tag 5F24 in Field 55.
333.8	Upload Final EMV Values for Settlement	(Bit 0)	Controls whether the terminal should send a 0220 advice to show the final value of the EMV fields when the transaction was approved online (values that could have been changed subsequently by the card).
334	Acquirer ID	AN 12	Unique Canada Acquirer ID – uniquely identifies the acquirer within each payment system. *Left justified with trailing spaces*[3] *Used to configure the EMV kernel using Tag 9F01 – Acquirer Identifier.*
346	*Contactless Transaction Limit (N/A)*	*AN 4*	*Filler – not applicable for contact chip*
350	*Terminal CVM Required Limit (N/A)*	*AN 4*	*Filler – not applicable for contact chip*
354	*Interac Merchant Type Indicator (MTI) (N/A)*	*AN 1*	*Filler – not applicable for contact chip or for US region*
355	AID Options 2	B 8	'0' – Disabled, '1' – Enabled
355.1	Block Cash Back	(MSBit 7)	Controls whether cash back is blocked for the AID for contact chip. ***(Currently, used for US only)*** 0 – Not blocked for contactless 1 – Blocked for contactless
355.2	Online PIN Required for Cash Back	(Bit 6)	Controls whether online PIN is required for cash back transactions. 0 – Not required 1 – Required
355.3	Common AID	(Bit 5)	Used to distinguish Common AIDs from Global AIDs. 0 – Global AID 1 – Common AID

[2] [2] *5/22/2013: FD Hal solutions are not using this setting and never send in Tag 9F5B on an advice or batch upload message.*

[3] Confirmed with VeriFone that the Acquirer ID is not used by the Canadian Vx810 application (2/28/2012)

ID (51)	FIELD	TYPE	COMMENT
355.4	Online PIN Allowed	(Bit 4)	Used to determine if online PIN entry is allowed for the AID for contact chip processing: 0 – Not allowed 1 – Allowed
355.5	Credit Indicator Allowed	(Bit 3)	Used to determine if Credit Indicator is allowed for the AID 0 – Not allowed 1 – Allowed
355.6	Zero Fill Tag 9F03 for Cash Back Amount	(Bit 2)	Used to determine if Tag 9F03 will be Zero filled when cash back applies 0 – Not allowed 1 – Allowed
355.7	Include Tag 5F24 Value in Field 14	(Bit 1)	Used to determine if Tag 5F24 value will be included in Field 14 0 – Not allowed 1 – Allowed
355.8	CAID Online PIN for Credit Route	(Bit 0)	Used along with 'Online PIN Allowed' to determine if Online PIN can be selected on a Common AID transaction that is pre-disposed to route to Credit Network eg; Open Tab, Pre-Auth, S&F 0 – Not allowed 1 – Allowed Visa CAID will always be 0. All other AIDs will be 1
356	Unique Card Type Indicator	AN 2	Matches the 'Unique Card Type Identifier' in Field 60, Table 3. Used in multi account solutions to provide a unique tie between a child TID specific card type record and the global parent level AID record.

6.31 -FIELD 60, TABLE 53 – EMV CONTACTLESS APPLICATION ID (AID) CONFIGURATION *(CHECK FOR AVAILABILITY)*

This table defines EMV contactless AID specific configuration parameters as well as the card type and host to which the program belongs. ***One EMV Contactless Application (AID) Configuration table is loaded for each supported AID that supports contactless EMV. POS devices should support up to 10 EMV contactless applications.***

ID (53)	FIELD	TYPE	COMMENT
1	Table ID	N 2	'53'
2	Table Length	N 4	Total length of data that follows
4	Card Type Pointer	N 2	Indicates the card type that applies for this AID (e.g. Visa, MC, …); this field must match the Card Type ID in the associated Field 60, Card Type Table 03 record.
5	AID Name	AN 16	First Data assigned AID name used in AID selection (e.g. 'MC Credit' or 'VS Credit'); ~~*Variable length field preceded by length indicator (number of bytes to follow);*~~ *left justified with trailing spaces*
22	Application Identifier (AID)	AN 32	Issuer assigned AID (e.g. 'A0000000031010' – Visa Credit/Debit, 'A0000000041010' = MC Credit/Debit); left justified with trailing spaces
38	Application Version #	AN 4	Used to determine if the application versions of the terminal and the card match; *right justified with lead zeroes in hexadecimal format (e.g. '008C' for Visa Version '140', '0002' for MC Version '02').*
40	EMV Contactless Terminal Limit Amount[4]	N 8	Floor limit used for forcing above the floor limit chip transactions online; *right justified with lead zeroes – two implied decimal positions (e.g. '00000500' means '$5.00). If the amount is greater than or equal to the Terminal Floor Limit, the terminal shall set the 'Transaction exceeds floor limit' bit in the TVR to 1.*[5]
44	Threshold Amount	N 8	Used to control the number of transactions that may be undertaken by a chip card before it is required to seek authorization online; *right justified with lead zeroes – two implied decimal positions (e.g. '00000500' means '$5.00).*
48	Target Percentage	N 2	Used for Biased Random Selection – percentage (00 to 99) of transactions less than threshold amount that must be sent online; *right justified with lead zeroes*
49	Maximum Target Percentage	N 2	Used for Biased Random Selection – max percentage (00 to 99) of transactions less than threshold amount that must be sent online – must be greater than or equal to 'Target Percentage'; *right justified with lead zeroes*
50	Terminal Risk Management Data	AN 16	Application specific value used by the card for risk management purposes; *left justified with trailing spaces*
58	Terminal Action Code Default	AN 10	Acquirer's conditions that cause a transaction to be rejected if it might have been approved online but the terminal is unable to process it online; *left justified with trailing spaces*
63	Terminal Action Code Denial	AN 10	Acquirer's conditions that cause a transaction to be denied without going online; *left justified with trailing spaces*
38	Terminal Action Code Online	AN 10	Acquirer's conditions that cause a transaction to be authorized online; *left justified with trailing spaces*

[4] William confirmed EMV Contactless Terminal Limit Amount of zero for requires online authorization for all three AIDs. (4/25/2011)
[5] *EMV v4.2, Book 3, Section 10.5.1, pp 114.*

ID (53)	FIELD	TYPE	COMMENT
73	Default Dynamic Data Authentication Data Object List (DDOL)	ANSB …999	Used to construct the Internal Authenticate command if card DDOL is not present. *Variable length field preceded by length indicator (number of hex nibbles to follow). For example, a DDOL of '9F3704' would be represented as: Hex 00 06 9F 37 04.*
203	Default Transaction Certificate Data Object List (TDOL)	ANSB …999	List of data objects (tag and length) used by terminal in generating the TC Hash Value if the card TDOL is not present. *Variable length field preceded by length indicator (number of hex nibbles to follow). For example, a DDOL of '9F3704' would be represented as: Hex 00 06 9F 37 04.*
333	AID Options 1	B 8	'0' – Disabled, '1' – Enabled
333.1	AID Partial Selection Allowed	(MSBit 7)	Controls whether the terminal's AID must match exactly the card AID or whether partial matching on the first digits (RID only) is allowed. '0' – Exact match required '1' – Partial match allowed
333.2	PIN Bypass Allowed	(Bit 6)	'0' – Bypass of PIN not allowed '1' – Bypass of PIN allowed
333.3	Unused	(Bit 5)	
333.4	Allow Signature CVM	(Bit 4)	Controls whether the signature CVM option is supported for the AID.
333.5	Issuer Script Results on Advice	(Bit 3)	Controls whether the terminal should include the issuer script results (Tag 9F5B) on 0220 advice messages.[6]
333.6	Full EMV for Refund	(Bit 2)	Controls whether the terminal will perform full EMV processing for refunds (cardholder verification/PIN, terminal risk management, …).
333.7	Include Tag 5F24 in Field 55	(Bit 1)	Controls whether the terminal include application expiration date Tag 5F24 in Field 55.
333.8	Upload Final EMV Values for Settlement	(Bit 0)	Controls whether the terminal should send a 0220 advice to show the final value of the EMV fields when the transaction was approved online (values that could have been changed subsequently by the card).
334	Acquirer ID	AN 12	Unique Canada Acquirer *Left justified with trailing spaces* ID – uniquely identifies the acquirer within each payment system.[7] *Used to configure the EMV kernel using Tag 9F01 – Acquirer Identifier.*
346	Contactless Transaction Limit	N 8	The Contactless Transaction Limit is a maximum transaction amount above which a contactless transaction must not be performed for a chip card application (AID). *Right justified to 8 with lead zeroes and two implied decimal places.*
350	Terminal CVM Required Limit	N 8	Transactions equal to, or under the Terminal CVM Required Limit, do not require either cardholder verification or a receipt; however, a cardholder may still request a receipt. *Right justified to 8 with lead zeroes and two implied decimal places.*
354	Interac Merchant Type Indicator (MTI)	N2	Interac MTI value associated with Interac MCC code configured for merchant in TMS. ***(Currently, used for Canada only – added for Interac contactless)*** 00 – Not applicable 01 – Default 02 – Petroleum 03 – Grocery 04 – Undefined 05 – Undefined
355	AID Options 2	B 8	0 – Disabled, 1 – Enabled

[6] *5/22/2013: FD Hal solutions are not using this setting and never send in Tag 9F5B on an advice or batch upload message.*
[7] Confirmed with VeriFone that the Acquirer ID is not used by the Canadian Vx810 application (2/28/2012)

ID (53)	FIELD	TYPE	COMMENT
355.1	Block Cash Back	(MSBit 7)	Controls whether cash back is blocked for the AID for contactless. ***(Currently, used for US only)*** 0 – Not blocked for contactless 1 – Blocked for contactless
355.2	Online PIN Required for Cash Back	(Bit 6)	Controls whether online PIN is required for cash back transactions. 0 – Not required 1 – Required
355.3	Common AID	(Bit 5)	Used to distinguish Common AIDs from Global AIDs. 0 – Global AID 1 – Common AID
355.4	Online PIN Allowed	(Bit 4)	Used to determine if online PIN entry is allowed for the AID for contactless chip processing: 0 – Not allowed 1 – Allowed
355.5	Credit Indicator Allowed	(Bit 3)	Used to determine if Credit Indicator is allwed fpr the AID 0 – Not allowed 1 – Allowed
355.6	Zero Fill Tag 9F03 for Cash Back Amount	(Bit 2)	Used to determine if Tag 9F03 will be Zero filled when cash back applies 0 – Not allowed 1 – Allowed
355.7	Include Tag 5F24 Value in Field 14	(Bit 1)	Used to determine if Tag 5F24 value will be included in Field 14 0 – Not allowed 1 – Allowed
355.8	CAID Online PIN for Credit Route	(Bit 0)	Used along with 'Online PIN Allowed' to determine if Online PIN can be selected on a Common AID transaction that is pre-disposed to route to Credit Network eg; Open Tab, Pre-Auth, S&F 0 – Not allowed 1 – Allowed Visa CAID will always be 0. All other AIDs will be 1
356	Unique Card Type Indicator	AN 2	Matches the 'Unique Card Type Identifier' in Field 60, Table 3. *Used in multi account solutions to provide a unique tie between a child TID specific card type record and the global parent level AID record.*

Note from VeriFone on Canadian Vx810 Implementation:	The following parameters which come over from the contact EMV table (Field 60, Table 53) cannot be used for contactless: • Application version number – we use the same version number as Contact EMV • Threshold Amount – cannot be configured for contactless • Target Percentage – cannot be configured for contactless • Maximum Target Percentage – cannot be configured for contactless • Default DDOL – cannot be configured for contactless • Default TDOL – cannot be configured for contactless • PIN Bypass Allowed – cannot be configured for contactless • Allow Signature CVM – this is controlled by the 'CVM Required Limit' • Issuer Script results on Advice – scripts cannot be applied since card is gone • Full EMV for Refund – we use the same version number as Contact EMV • Upload Final EMV Values for Settlement – data cannot change from the card – CTLS is all done in one time. • Acquirer ID – we typically use Contact EMV value (only printed on EMV report, not sent to reader/chip) • AID Partial Selection Allowed is not used - for Contactless EMV processing Partial Selection is configured to be always allowed

7 APPENDIX A: PHONE NUMBER SYMBOLS

Symbols	Comment
0-9	Dial digit as specified
A	Select DTMF/tone dialing mode (default if not specified)
B	Dial tone pause (2 seconds)
C	Select pulse dialing mode
D	Disable PABX dialing (ignore if PABX dialing not supported via local option) *Currently, the 'D' is always 'pre-pended' to disable the local PABX code.*
EA	Treat as '*' dialing digit
EB	Treat as '#' dialing digit
EC	Treat as 'A' dialing digit
ED	Treat as 'B' dialing digit
EE	Treat as 'C' dialing digit
EF	Treat as 'D' dialing digit
F	Filler (ignore)

8 APPENDIX B - CARD TYPE IDENTIFICATION (BIN RANGES)

The standards organizations, which determine and publish the account numbering schemes, assign ranges of numbers to various card issuers to facilitate the identification of the type of card represented by any given card account number. In addition, the issuers themselves follow certain conventions that allow for further edit checks on the validity of a number.

Note	For a complete list of BIN ranges, please contact your Relationship Manager for information on the Global BIN File.