



4 Batch Server Function

The batch module performs various batch tasks, like processing of transaction files transferred from ftp and various payment end-points.

4.1 FTP Batch

The FTP Batch processes the settlement files containing offline transactions uploaded via FTP. The offline transactions includes purchase, grace period fee, and ATU. For each Settlement File, there must be a corresponding OK file, which is used to indicate that the settlement file has been transferred successfully. The OK file has the exact same name as the settlement file, except the suffix is ".OK" instead of ".TXT". The content of the OK file may be empty.

For each settlement file received, an acknowledgement file will be generated at the FTP server. This allows the sender to retrieve and check if the previously sent files have been received and if the files have errors.

4.1.1 Settlement File Name Format

No	Pos	Length	Field	Remarks
1	1-15	15	MID	
2	16-23	8	TID	
3	24-31	8	Date	YYYYMMDD
4	32-37	6	Time	HHMMSS
5	38-41	4	suffix	.TXT

4.1.2 Settlement File Header Format

No	Pos	Length	Field	Remarks
1	1	1	Header Indicator	H
2	2-3	2	Version	01
3	4-18	15	MID	
4	19-26	8	TID	

4.1.3 Settlement File Trailer Format

No	Pos	Length	Field	Remarks
1	1	1	Trailer Indicator	T
2	2-7	6	Number of records	'000001' for 1 data records. The number of records excludes the header line and trailer line.
3	8-15	8	CRC-32	



4.1.4 Settlement File Data Format

No	Pos	Length	Field	Remarks
1	1	1	Record Indicator	D
2	2-3	2	Trans Type	01 = debit 02 = blacklist
3	4-19	16	CAN	
4	20-35	16	Trans Header	Hexadecimal of: 0x01 + Amt (3 bytes) + Txn Date Time (4 bytes, secs since 1 Jan 1995)
5	36-43	8	TRP	Hexa of Transaction Reference Parameter (4 bytes)
6	44-45	2	Debit Option	00 = normal debit
7	46-51	6	Purse Before Balance	Hexa of 3-byte amt
8	52-57	6	Purse Balance	Hexa of 3-byte amt
9	58-73	16	Counter Data	Hexa of Purse Txn Counter (3 bytes) + Add Value Counter (3 bytes) + Modify Purse Counter (2 bytes)
10	74-89	16	Signed Cert	
11	90-97	8	Last Credit Trans TRP	
12	98-113	16	Last Credit Trans Header	
13	114-121	8	Last Trans TRP	
14	122-153	32	Last Trans Record	
15	154-155	2	Last Trans Debit Option	
16	156-171	16	Last Trans Signed Cert	
17	172-187	16	Last Trans Counter Data	
18	188-203	16	SAMID	
19	204-218	15	Invoice Reference	Filled with spaces if not used

Note:

- Items 11 to 17 are the information read from card using Secure Read Purse command prior to performing the transaction.
- Item 16 and 17 are the decrypted results from Verify Read Purse command from SAM
- For unconfirmed debit purse, the following fields will be filled with zeroes: (8) Purse Balance, (9) Counter Data, and (10) Signed Cert.
- Item 19 is used to tag a reference to a transaction (such as bill number)



4.1.5 Ack File Name Format

The file name before the prefix will be identical to the FTP file name.

No	Pos	Length	Field	Remarks
1	1-15	15	MID	
2	16-23	8	TID	
3	24-31	8	Date	YYYYMMDD
4	32-37	6	Time	HHMMSS
5	38-41	4	suffix	.ACK

4.1.6 Ack File Header Format

No	Pos	Length	Field	Remarks
1	1	1	Header Indicator	H
2	2-3	2	Version	01
3	4-18	15	MID	
4	19-26	8	TID	

4.1.7 Ack File Trailer Format

No	Pos	Length	Field	Remarks
1	1	1	Trailer Indicator	T
3	2-9	8	CRC-32	

4.1.8 Ack File Data Format

No	Pos	Length	Field	Remarks
1	1	1	Record Indicator	S
2	2-7	6	Number of records received	'000001' for 1 data records. The number of records excludes the header line and trailer line.
3		2	Status	00 - accepted 01 - CRC error 02 - invalid format 03 - duplicate file 04 - invalid records count



4.2 Settlement Batch

The Settlement Batch performs general end-of-day processing:

- record all valid online transactions for the business day in settle_txn_log table
- performs card expiration for cards that have expired
- generates Merchant Reconciliation Files

For each of the valid settlement files processed, a Merchant Reconciliation file is generated.

4.2.1 Merchant Reconciliation File Name Format

No	Pos	Length	Field	Remarks
1	1-15	15	MID	
2	16-23	10	TID	pad on left with _
3	24-31	8	Date	YYYYMMDD
4	32-37	6	Time	HHMMSS
5	38-43	6	suffix	.RECON

4.2.2 Merchant Reconciliation File Header Format

No	Pos	Length	Field	Remarks
1	1	1	Header Indicator	H
2	2-3	2	Version	01
3	4-18	15	MID	
4	19-26	8	TID	
5	27-34	8	Settlement Date	YYYYMMDD

4.2.3 Merchant Reconciliation File Trailer Format

No	Pos	Length	Field	Remarks
1	1	1	Trailer Indicator	T
2	2-7	6	Number of records	'000001' for 1 data records. The number of records excludes the header line and trailer line.
3	8-11	10	Total amount in file	
4	12-17	6	Num of records settled	
5	18-27	10	Total amount settled	
6	28-33	6	Num of records rejeted	
7	34-43	10	Total amount rejected	
8	44-51	8	CRC-32	



4.2.4 Merchant Reconciliation File Data Format

No	Pos	Length	Field	Remarks
1	1	1	Record Indicator	D
2	2-3	2	Trans Type	01 = debit 02 = blacklist
3	4-19	16	CAN	
4	20-27	8	Trans Header	
5	28-31	4	TRP	Transaction Reference Parameter
6	32	1	Debit Option	
7	33-35	3	Purse Before Balance	
8	36-38	3	Purse Balance	
9	39-46	8	Counter Data	
10	47-54	8	Signed Cert	
11	55-62	2	Settlement Status	00 - settled 01 - card not found 02 - card not active 03 - invalid MID or TID 04 - card blacklisted 99 - invalid trans
12	63-82	20	Remarks	
13	83-97	15	Invoice Reference	Filled with spaces if not used.

4.3 Card Request Batch

The Card Request batch performs 2 functions:

1. Generates emboss file for card requests and SAM requests. The file will be sent to Card Personalization Machine.
2. Processes Personalization files received from Card Personalization Machine.