

Display Left Panel

This command will direct the device to optionally display text, image, offer data selection, charity donation selection, buttons, and maskable numeric input fields on left panel of the Line Item screen during a payment session, replacing any other display residing on the left panel. SCA will continue to receive new line items and display them during this time.

The left panel display can be formatted into three distinct sections for customer engagement and value added services.

- **Top:** Image Display or Text Display. The coverage areas are:

Resolution Device

427x78 px M400
488x78 px M440
376x53 px M424
500x90 px M425
500x98 px M450

- **Middle:** Image Display or Offer Data Selection or Charity Donation. The coverage areas are:

Resolution Device

427x282 px M400
488x362 px M440
376x247 px M424
500x384 px M425
500x442 px M450

- **Bottom:** Image Display or Numeric Input or Buttons or Pre-swipe (when enabled). The coverage areas are:

Resolution Device

427x120 px M400
488x147 px M440
376x100 px M424
500x206 px M425
500x220 px M450

Rules

1. The coverage area details are applicable for image display only.
2. Custom Buttons sizes are:

Resolution Device

80x80 px	M400
90x90 px	M440
69x61 px	M424
80x80 px	M425
80x80 px	M450

3. This sizes can be set through SCA media bundle or VHQ content management by replacing LPCustomButton1.png and LPCustomButton2.png under:

File Path	Device
/flash/www/854x480C15T/Images/	M400
/flash/www/976x587C15T/Images/	M440
/flash/www/753x400C15T/Images/	M424
/flash/www/Images/	M425 and M450

4. The DISPLAY_LEFTPANEL command will only be honored on the Line Item screen.
5. Display Left Panel command will work only if fullldisplayenabled parameter is set to 0 (Disabled) and lineitemdisplay parameter is set to 1 (Enabled).

Configuration Parameters

Following are the configuration parameters which affect the operation. Refer to [Application Parameters](#) for details on these parameters.

- FULLLDISPLAYENABLED
- LINEITEMDISPLAY

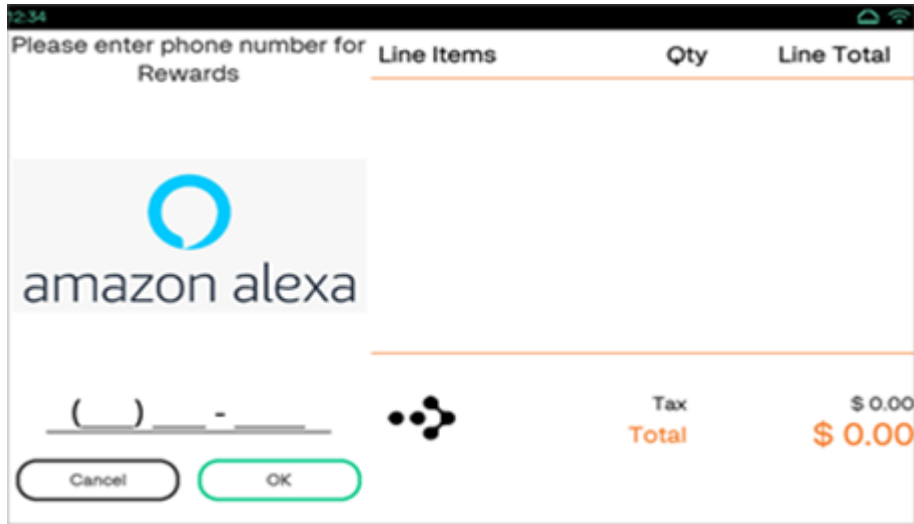
DISPLAY_LEFTPANEL (Message Interface)

The following tables provide corresponding device UI interactions, detailed protocol information, including field descriptions and examples.

Device UI Required

Note

Neo device (M450) is being used to capture screenshots for the Device UI Requirement section.

Display	User Action	Terminal Action
	No action	The device displays the left panel screen.

Request Packet

Field	Rule	Type	Minimum	Maximum	Value(s)	Description
FUNCTION_TYPE	Required	Static value	N/A	N/A	DEVICE	Type of function
COMMAND	Required	Static value	N/A	N/A	DISPLAY_LEFTPANEL	Command name
POS_RECON	Optional	Character	1	30		POS reconciliation. POS Reconciliation field to be echoed back in response to POS. Example: RetailPOS1
COUNTER	Required	Numeric	1	10		COUNTER is used for a given MAC label. Each COUNTER should be higher than the last one. This is used to authenticate the POS. Example: 100

Field	Rule	Type	Minimum	Maximum	Value(s)	Description
MAC	Required	Base64 Encoded Data	N/A	N/A	N/A	Message Authentication Code. This is used to authenticate the POS.
MAC_LABEL	Required	Character	1	50		Associated label that tells the device which MAC_KEY to use to decrypt the value of MAC. This is used to authenticate the POS. Example: REG1

Top Section

Field	Rule	Type	Minimum	Maximum	Value(s)	Description
LEFTPANEL_TEXT	Optional	Character	1	50	DEVICE	Top section. Message or instructions to display to customer on top of left panel. Example: Ask us about upcoming sales!
LEFTPANEL_IMG_TOP	Optional	Base64 Encoded Data				Top section. Base64 encoded string (maximum 30,000) to be converted to an image. Displays on top of left panel.

Note

In Top section, user needs to send either LEFTPANEL_TEXT or LEFTPANEL_IMG_TOP field.

Middle Section

Field	Rule	Type	Minimum	Maximum	Value(s)	Description
LEFTPANEL_IMG_TOP	Optional	Base64 Encoded Data				Middle section. Base64 encoded string (maximum 30,000) to be converted to an image. Displays in middle of left panel.

Or Offer Data

Note

With respect to the combination of TOP section Image field and Middle section Offer data fields, POS_IP and POS_PORT fields must be specified in Start Session command, and this will return an unsolicited response. Refer to [Top Image and Middle Offer Data](#) for the sample request and [Unsolicited Response - Top Image and Middle Offer Data](#) for the sample response. Also refer to [Display Left Panel - Offers](#) for the screen display example.

Field	Rule	Type	Minimum	Maximum	Value(s)	Description
LEFTPANEL_OFFER_ROW_1	Optional	Character	1	22		Left panel offer text row 1 display.
LEFTPANEL_OFFER_ROW_2	Optional	Character	1	22		Left panel offer text row 2 display.
LEFTPANEL_OFFER_ROW_3	Optional	Character	1	22		Left panel offer text row 3 display.
LEFTPANEL_OFFER_ROW_4	Optional	Character	1	22		Left panel offer text row 4 display.
LEFTPANEL_OFFER_ROW_5	Optional	Character	1	22		Left panel offer text row 5 display.
LEFTPANEL_OFFER_ROW_6	Optional	Character	1	22		Left panel offer text row 6 display.
LEFTPANEL_OFFER_ROW_7	Optional	Character	1	22		Left panel offer text row 7 display.
LEFTPANEL_OFFER_ROW_8	Optional	Character	1	22		Left panel offer text row 8 display.
LEFTPANEL_OFFER_ROW_9	Optional	Character	1	22		Left panel offer text row 9 display.
LEFTPANEL_OFFER_ROW_10	Optional	Character	1	22		Left panel offer text row 10 display.

Or Charity Amount Data Capture

Note

POS_IP and POS_PORT must be specified in Start Session command. Refer to [Display Left Panel - Charity](#) for example.

Field	Rule	Type	Minimum	Maximum	Value(s)	Description
DISPLAY_TEXT1	Optional	Character	1	26		Charity amount capture text label 1.
DISPLAY_TEXT2	Optional	Character	1	26		Charity amount capture text label 2.
DISPLAY_TEXT3	Optional	Character	1	26		Charity amount capture text label 3.
DISPLAY_TEXT4	Optional	Character	1	26		Charity amount capture text label 4.

Field	Rule	Type	Minimum	Maximum	Value(s)	Description
DISPLAY_TEXT5	Optional	Character	1	26		Charity amount capture text label 5.
AMOUNT1	Optional	Character	1	10		Amount text display 1.
AMOUNT2	Optional	Character	1	10		Amount text display 2.
AMOUNT3	Optional	Character	1	10		Amount text display 3.
AMOUNT4	Optional	Character	1	10		Amount text display 4.
AMOUNT5	Optional	Character	1	10		Amount text display 5.

Bottom Section

Field	Rule	Type	Minimum	Maximum	Value(s)	Description
LEFTPANEL_IMG_BOTTOM	Optional	Base64 Encoded Data				Base64 encoded string (maximum 30,000) to be converted to an image. Displays on bottom of left panel.

Or Numeric Input

Note

Refer to [Display Left Panel - Numeric Input](#) for example.

Field	Rule	Type	Minimum	Maximum	Value(s)	Description
REQUEST_NUMERIC_INPUT	Optional	Boolean	N/A	N/A	• True • False	TRUE will request SCA to display a numeric input field. NOTE: Two unlabeled buttons (red + green) will display by default.
NUMERIC_INPUT_FORMAT	Optional	Character	1	19		N indicates numeric. Allowed literals: /, -, \$, , ., #, (,), %, (Space). Example: • \$NNN.NN • #(NNN)- NNNNNN

Field	Rule	Type	Minimum	Maximum	Value(s)	Description
NUMERIC_INPUT_MASK	Optional	List			- FALSE - No masking - TRUE - Full password entry masking - TRAILING - Trailing masking (default)	Numeric entry to be masked.

Or Display Buttons

Note

Refer to [Display Left Panel - Numeric Input](#) for example.

Field	Rule	Type	Minimum	Maximum	Value(s)	Description
REQUEST_BTNS	Optional	List			0 - No buttons 1 - Display 1 button 2 - Display 1 buttons	Requesting for displaying buttons. Any other value will display 1 button. This cannot be used with REQUEST_NUMERIC_INPUT. POS_IP and POS_PORT must be specified in START command.
BUTTON_LABEL1	Optional	Character	1	15		Label for Button 1. Space dependent on combination of input to left panel. As of this publication, Button 1 is on the right. This is used also with Offer Data or Charity Data Capture.

Field	Rule	Type	Minimum	Maximum	Value(s)	Description
BUTTON_LABEL2	Optional List		1	15		Space dependent on combination of input to left panel. As of this publication, Button 2 is on the left. This is used also with Offer Data or Charity Data Capture.

Example

Following is an example of request packet

```
<TRANSACTION>
  <FUNCTION_TYPE>DEVICE</FUNCTION_TYPE>
  <COMMAND>DISPLAY_LEFTPANEL</COMMAND>
  <LEFTPANEL_TEXT>Ask us about upcoming sales!</LEFTPANEL_TEXT>
  <COUNTER>1</COUNTER>
  <MAC> ... </MAC>
  <MAC_LABEL>REG2</MAC_LABEL>
</TRANSACTION>
```

Example - Top Image and Middle Offer Data

```
<TRANSACTION>
  <FUNCTION_TYPE>DEVICE</FUNCTION_TYPE>
  <COMMAND>DISPLAY_LEFTPANEL</COMMAND>
  <LEFTPANEL_IMG_TOP>iVBORw0KGgoAAAANSUhe..... </LEFTPANEL_IMG_TOP>
  <LEFTPANEL_OFFER_ROW_1>Buy 1 Get 1 on Pizzas</LEFTPANEL_OFFER_ROW_1>
>
  <LEFTPANEL_OFFER_ROW_2>Get 30% Discount</LEFTPANEL_OFFER_ROW_2>
  <LEFTPANEL_OFFER_ROW_3>Pay using Visa Card</LEFTPANEL_OFFER_ROW_3>
  <LEFTPANEL_OFFER_ROW_4>Sunday Special</LEFTPANEL_OFFER_ROW_4>
  <LEFTPANEL_OFFER_ROW_5>Holiday Gift</LEFTPANEL_OFFER_ROW_5>
  <LEFTPANEL_OFFER_ROW_6>Special Snacks</LEFTPANEL_OFFER_ROW_6>
  <LEFTPANEL_OFFER_ROW_7>Offers on Cookies</LEFTPANEL_OFFER_ROW_7>
  <LEFTPANEL_OFFER_ROW_8>Pay using Private Card</
LEFTPANEL_OFFER_ROW_8>
  <LEFTPANEL_OFFER_ROW_9>Sleepwell Beds</LEFTPANEL_OFFER_ROW_9>
  <LEFTPANEL_OFFER_ROW_10>Get Pedigrees for Free</
LEFTPANEL_OFFER_ROW_10>
  <BUTTON_LABEL1>CANCEL</BUTTON_LABEL1>
  <BUTTON_LABEL2>APPLY</BUTTON_LABEL2>
</TRANSACTION>
```

Response Packet

Field	Type	Value	Description
RESPONSE_TEXT	Character		Processor response text. Example: Operation SUCCESSFUL

Field	Type	Value	Description
RESULT	Character		Commonly TIP MODIFIED or DECLINED or CAPTURED. Example: OK
RESULT_CODE	Numeric	Expected result code: - 1, 59001, 59006	This indicates the result code. Refer to Result/Error Codes for details.
TERMINATION_STATUS	Character	SUCCESS or FAILURE	This indicates the transaction termination status. This is the overall status of the transaction irrespective of approved or declined. Like, if the output is generated then the status is SUCCESS and if no output is generated then the status will be FAILURE.
CUST_BUTTON_DATA	Character		Represents button selected information. Example: 3
CUST_NUMERIC_DATA	Numeric		This field will be sent to POS via unsolicited response, not via primary port. Contains numeric data selected. If Numeric Input is not entered and pressed OK, then another unsolicited response will be sent as “Numeric Data Input Skipped”. Refer to Unsolicited Response to POS (If Numeric Input is not entered) for example below. Example: 1
LEFTPANEL_OFFER_ROW_DATA	Numeric		This field will be sent to POS via unsolicited response, not via primary port. Contains offer row data selected. If any of the Offer data is not selected and pressed OK, then another unsolicited response will be sent as “No Offer Selected”. Refer to Unsolicited Response to POS (If Offer Data is not selected) for example below. Example: 2 3 6
AMOUNT_DATA	Numeric		This field will be sent to POS via unsolicited response, not via primary port. Contains charity selection. Example: 4
POS_RECON	Character		POS reconciliation field echoed back if sent in request. Example: RetailPOS1
COUNTER	Numeric		Echoes counter sent in the request. Example: 100

Transaction Performance Metric

Note

These fields are returned, if SCAPERFMETRIC parameter ([Application Parameters](#)) is enabled.

Field	Type	Value	Description
UI_TIME	Time		This indicates the time duration, for which the device screen is displayed (like error message, prompt screen, remove card screen) till any user action is performed in the command execution flow. This field is not applicable to capture the time for the Processing, Authorizing and transaction status screen. The format of the returned value would be S.sss, where S is seconds (this can be 0 to any positive integer) and sss is milliseconds. In case of any insignificant time or 0.000 value, will not be returned in the response. Example: <UI_TIME>44.028</UI_TIME>
HOST_TIME	Time		This indicates the time taken for the Connection to the host, sending request and receives data from the host. This field also take the cumulative time for multiple requests which may sent to the host during the transaction including two legged transactions, timeout requests, Auto Last Tran requests, DCC, Credit app proxy. The format of the returned value would be S.sss, where S is seconds (this can be 0 to any positive integer) and sss is milliseconds. In case of any insignificant time or 0.000 value, will not be returned in the response. Example: <HOST_TIME>1.389</HOST_TIME>
CMD_TIME	Time		This field indicates the total amount of time for a command, which is executed by the application from request received to the response sent. The format of the returned value would be S.sss, where S is seconds (this can be 0 to any positive integer) and sss is milliseconds. In case of any insignificant time or 0.000 value, will not be returned in the response. Example: <CMD_TIME>70.765</CMD_TIME>

Example

Following is an example of response packet

```
<RESPONSE>
  <RESPONSE_TEXT>Operation SUCCESSFUL</RESPONSE_TEXT>
  <RESULT>OK</RESULT>
  <RESULT_CODE>-1</RESULT_CODE>
  <TERMINATION_STATUS>SUCCESS</TERMINATION_STATUS>
  <COUNTER>59</COUNTER>
</RESPONSE>
```

Example - Unsolicited Response to POS IP and Port – Top Image and Middle Offer Data

```
Message Received: <?xml version="1.0"?>
  <RESPONSE>
    <RESPONSE_TEXT>INPUT FROM OFFER DATA</RESPONSE_TEXT>
    <RESULT>OK</RESULT>
    <RESULT_CODE>-1</RESULT_CODE>
    <TERMINATION_STATUS>SUCCESS</TERMINATION_STATUS>
    <LEFTPANEL_OFFER_ROW_DATA>2|3|6</LEFTPANEL_OFFER_ROW_DATA>
  //If 2, 3 and 6 are selected
  </RESPONSE>
```

Example - Unsolicited Response to POS (If Offer Data is not selected)

Message Received: <?xml version="1.0"?>
 <RESPONSE>
 <RESPONSE_TEXT>No Offer Selected</RESPONSE_TEXT>
 <RESULT>OK</RESULT>
 <RESULT_CODE>-1</RESULT_CODE>
 <TERMINATION_STATUS>SUCCESS</TERMINATION_STATUS>
</RESPONSE>

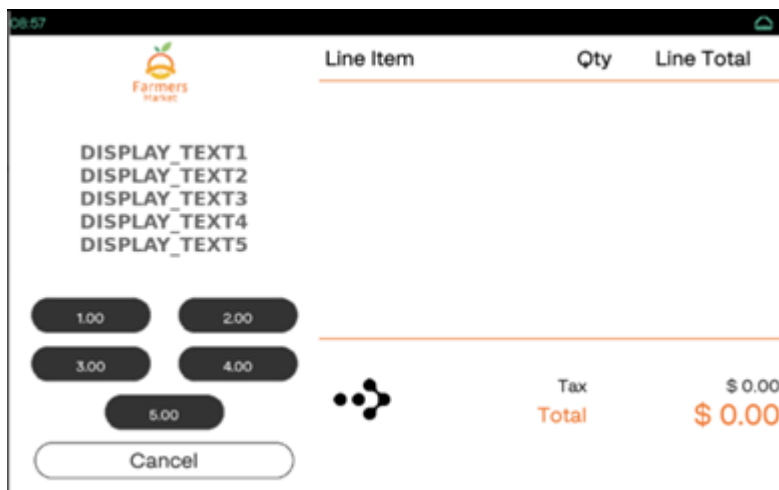
Example - Unsolicited Response to POS (If Numeric Input is not entered)

Message Received: <?xml version="1.0"?>
 <RESPONSE>
 <RESPONSE_TEXT>Numeric Data Input Skipped</RESPONSE_TEXT>
 <RESULT>OK</RESULT>
 <RESULT_CODE>-1</RESULT_CODE>
 <TERMINATION_STATUS>SUCCESS</TERMINATION_STATUS>
</RESPONSE>

Display Left Panel Sample Categories

Display Left Panel - Charity

Display Screen



```
<TRANSACTION>
  <FUNCTION_TYPE>DEVICE</FUNCTION_TYPE>
  <COMMAND>DISPLAY_LEFTPANEL</COMMAND>
  <LEFTPANEL_IMG_TOP> /*some img
  <DISPLAY_TEXT1>DISPLAY_TEXT1</DISPLAY_TEXT1>
  <DISPLAY_TEXT2>DISPLAY_TEXT2</DISPLAY_TEXT2>
  <DISPLAY_TEXT3>DISPLAY_TEXT3</DISPLAY_TEXT3>
  <DISPLAY_TEXT4>DISPLAY_TEXT4</DISPLAY_TEXT4>
  <DISPLAY_TEXT5>DISPLAY_TEXT5</DISPLAY_TEXT5>
  <AMOUNT1>1.00</AMOUNT1>
  <AMOUNT2>2.00</AMOUNT2>
  <AMOUNT3>3.00</AMOUNT3>
  <AMOUNT4>4.00</AMOUNT4>
  <AMOUNT5>5.00</AMOUNT5>
</TRANSACTION>
```

Display Left Panel - Custom Buttons

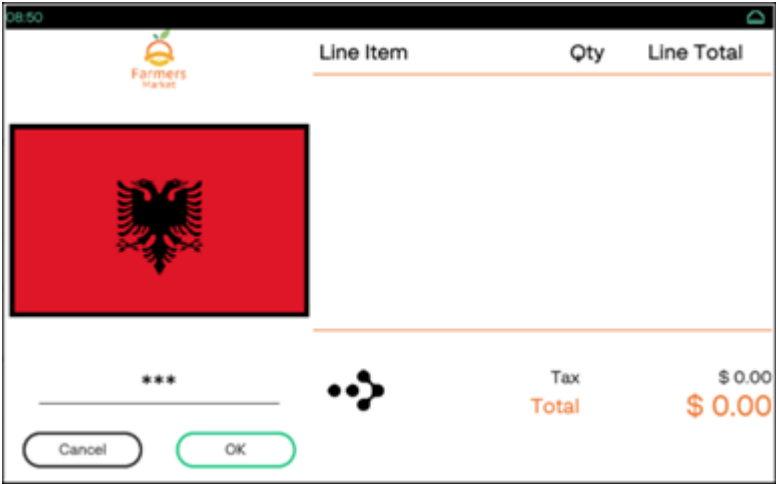
Display Screen



```
<TRANSACTION>
  <FUNCTION_TYPE>DEVICE</FUNCTION_TYPE>
  <COMMAND>DISPLAY_LEFTPANEL</COMMAND>
  <LEFTPANEL_TEXT>Ask us about upcoming sales!</LEFTPANEL_TEXT>
  <LEFTPANEL_IMG> /*some img data*/ </LEFTPANEL_IMG>
  <REQUEST_BTNS>2</REQUEST_BTNS>
  <BUTTON_LABEL1>button 1</BUTTON_LABEL1>
  <BUTTON_LABEL2>button 2</BUTTON_LABEL2>
</TRANSACTION>
```

Display Left Panel - Numeric Input

Display Screen



```
<TRANSACTION>
  <FUNCTION_TYPE>DEVICE</FUNCTION_TYPE>
  <COMMAND>DISPLAY_LEFTPANEL</COMMAND>
  <LEFTPANEL_IMG_TOP> /*some img data*/ </LEFTPANEL_IMG_TOP>
  <LEFTPANEL_IMG> /*some img data*/ </LEFTPANEL_IMG>
  <REQUEST_NUMERIC_INPUT>TRUE</REQUEST_NUMERIC_INPUT>
</TRANSACTION>
```

Display Left Panel - No User Input

Display Screen



```
<TRANSACTION>
  <FUNCTION_TYPE>DEVICE</FUNCTION_TYPE>
  <COMMAND>DISPLAY_LEFTPANEL</COMMAND>
  <LEFTPANEL_TEXT>Ask us about upcoming sales!</LEFTPANEL_TEXT>
  <LEFTPANEL_IMG> /* some img data*/ </LEFTPANEL_IMG>
  <LEFTPANEL_IMG_BOTTOM> /* some img data*/ </LEFTPANEL_IMG_BOTTOM>
</TRANSACTION>
```

Display Left Panel - Offers

Display Screen

09:02

AAA

	Line Item	Qty	Line Total
☐	Buy 1 Get 1 on Pizzas		
☐	Get 30% Discount		
☐	Pay using Visa Card		
☒	Sunday Special		
☒	Holiday Gift		
☐	Special Snacks		
☐	Offers on Cookies		
		Tax	\$ 0.00
		Total	\$ 0.00

Cancel

APPLY

```
<TRANSACTION>
  <FUNCTION_TYPE>DEVICE</FUNCTION_TYPE>
  <COMMAND>DISPLAY_LEFTPANEL</COMMAND>
  <LEFTPANEL_IMG_TOP> /*some img
  <LEFTPANEL_OFFER_ROW_1>Buy 1 Ge
  <LEFTPANEL_OFFER_ROW_2>Get 30%
  <LEFTPANEL_OFFER_ROW_3>Pay usin
  <LEFTPANEL_OFFER_ROW_4>Sunday S
  <LEFTPANEL_OFFER_ROW_5>Holiday
  <LEFTPANEL_OFFER_ROW_6>Special
  <LEFTPANEL_OFFER_ROW_7>Offers o
  <LEFTPANEL_OFFER_ROW_8>Pay usin
  <LEFTPANEL_OFFER_ROW_9>Sleepwel
  <LEFTPANEL_OFFER_ROW_10>Get Ped
  <BUTTON_LABEL1>CANCEL</BUTTON_LABEL1>
  <BUTTON_LABEL2>APPLY</BUTTON_LABEL2>
</TRANSACTION>
```