



## **HalalaH Quick Response Code Standard (HalalaH QR) Merchant-Presented Mode**

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# **Version 1.2**

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## 1.0 Introduction

### 1.1 Purpose

This document provides:

Brief description of the merchant presented QR Code payment flow.

Requirements for the QR Code displayed by the merchant, including format and content.

The processing of the QR Code by a mobile application and the network messages as a result of this processing are out of scope of this document.

### 1.2 Scope

This document includes:

- The format of the merchant presented QR Code

This document excludes:

- The consumer presented QR Code;
- QR Code transactions, message & settlement requirements; and
- QR application & terminal requirements

The requirements for the QR Code displayed by the Merchant, including its format and content, are described in the EMV® QR Code Specification for Payment Systems (EMV QRCPS) Merchant-Presented Mode.

### 1.3 Reference

The HalalaH QR Code Standard is referenced to the following publications:

- EMV® QR Code Specification for Payment Systems (EMV QRCPS) Merchant-Presented Mode
- EMV Book 4 Version 4.3 - EMV Integrated Circuit Card Specifications for Payment Systems - Book 4
  - Cardholder, Attendant, and Acquirer Interface Requirements
    - ISO3166 – Codes for the representation of names of countries and their subdivisions—Part 1: Country codes, using two-letter country codes
    - ISO4217 - Codes for the representation of currencies and funds
    - ISO18245 - Retail financial services - Merchant category codes

Any later versions of these publications will be applied in this document unless specified.

## 1.4 Abbreviations

Abbreviations	Description
ANS	Alphanumeric with Special Character
BLE	Bluetooth Low Energy
C	Conditional
CRC	Cyclic Redundancy Check
NFC	Near Field Communication
M	Mandatory
ID	Identifier of the Data Object
Issuer	Entity that opens a saving account, current account or e-money account for a Consumer
N	Numeric
O	Optional
QR	Quick Response
S	String

**Table 1: Abbreviations**

## 1.5 Presence of Data Objects

For the presence of data objects, the following notation is used:

M: Mandatory—shall always be present

C: Conditional—shall be present under certain conditions

O: Optional—may be present

## 1.6 Format Conventions

The value of a data object encoded in the EMV® Merchant-Presented QR Code has one of the formats as listed in **Table 2**.

Format	Meaning
Numeric (N)	Values can be represented by all digits, from "0" to "9". The numeric includes ten (10) characters in total.
Alphanumeric Special (ANS)	Values can be represented by the Common Character Set as defined in EMV Book 4. The Alphanumeric Special alphabet includes ninety-six (96) characters in total and includes the numeric alphabet and punctuation.
String (S)	Values represented by any precomposed character(s) defined in [Unicode]

**Table 2: Format Convention**

## 2.0 Overview

A merchant presented QR Code payment transaction enables consumers to make payment for purchases using a merchant generated and displayed QR Code based on the merchant's details. For example, it can be used to transfer funds to a merchant account designated by the Merchant Account Information over a payment network in exchange for goods and services provided by the merchant.

Consumer may download an Issuer mobile application on their mobile phones that has the capability to scan a merchant presented QR Code and initiate a payment transaction. This mobile application may be an existing mobile banking application from an Issuer. In both cases, the request to process the payment transaction will be directed to the Issuer managing the account from which the funds will be debited.

### Merchant Account Information (IDs "33")

#### 2.1 HalalaH QR Data Object

Name	ID	Format	Length (Dec)	Presence	Description
<b>Payload Format Indicator</b>	"00"	N	02	M	Version "01"
<b>Point of Initiation Method</b>	"01"	N	02	M	12 – QR Dynamic Code
<b>Merchant Account Information</b>	"33"	ANS	up to 99	M	Please see Table 5 for details
<b>Merchant Category Code</b>	"52"	N	04	M	As defined in ISO 18245 part of the EMV Co original document (example 5812 Eating places and restaurants)
<b>Transaction Currency Code</b>	"53"	N	03	M	Always 682 (Saudi Riyal)
<b>Transaction Amount</b>	"54"	ANS	up to 13	M	Ex: "100.00" Or "95.50" (please make sure that you use 2 numbers after the decimal point)
<b>Country Code</b>	"58"	ANS	02	M	Always SA (Saudi Arabia)
<b>Merchant Name</b>	"59"	ANS	up to 25	M	Name of the merchant
<b>Merchant City</b>	"60"	ANS	up to 15	M	Ex: "Riyadh"
<b>Postal Code</b>	"61"	ANS	up to 5	M	In Saudi Arabia 5 digits
<b>Additional Data Field Template</b>	"62"	S	Up to 99	M	Please see Table 3 for Data Object
<b>Merchant Information –Language Template</b>	"64"	S	Up to 99	M	Please see Table 4 for Data Object
<b>Cyclic Redundancy Check (CRC)</b>	"63"	ANS	04	M	Checksum

### 2.1.1 Additional Data Field Template (IDs “62”)

2.1.1.1 This Additional Data Field Template must contain 3 data object as highlighted in **Bold** below.

2.1.1.2 The content of the data object value for ID "01" shall be a value defined by the merchant.

Name	ID	Format	Length	Presence	Description
<b>Bill Number</b>	“01”	ANS	up to 25	M	Invoice number or bill number
<b>Reference Label</b>	“05”	ANS	up to 25	M	Any value as defined by merchant or Acquirer in order to identify the Transaction <b><i>An OrderID must be pass here</i></b>
<b>Terminal Label</b>	“07”	ANS	up to 25	M	To be used to identify a specific terminal <b>Merchant Prefix + Terminal ID</b>

**Table 3: Additional Data Field Template for ID “62”**

### 2.1.2 Merchant Information – Language Template (IDs “64”)

2.1.2.1 The Merchant Information— Language Template includes merchant information in an alternate language and may use a character set different from the Common Character Set.

Name	ID	Format	Length	Presence	Description
Language Preference	“00”	S	up to 99	M	
Merchant Name – Alternate Language	“01”	S	up to 99	M	
Merchant City – Alternate Language	“02”	S	up to 99	M	

**Table 4: Merchant Information – Language Template for ID “64”**

### 2.1.3 Merchant Account Information (IDs “33”)

2.1.3.1 The Merchant Account Information template shall be used to specify the globally unique identifier

Name	ID	Format	Length	Presence	Description
Globally Unique Identifier	“00”	ANS	up to 25	M	Inversed Domain: <b>sa.halalah</b>

**Table 5: Merchant Account Information for ID “33”**

### 3.0 Example

ID	Input Character		Meaning
Payload Format Indicator	"000201"	Fixed	Version 01
Point of Initiation Method	"010212"	Fixed	Dynamic QR Code
<b>Merchant Account Information</b>	"3314"		
- 00 Globally Unique Identifier	"0010sa.halalah"	Fixed	Inversed Domain: sa.halalah
Merchant Category Code	"52045812"	Fixed	Merchant Category Code: 5812
Country Code	"5802SA"	Fixed	SA (Saudi Arabia)
Merchant Name	"5915HalalaH Grocery"	Fixed	Merchant Name: HalalaH Grocery
Merchant City	"6006Riyadh"	Fixed	Riyadh
Postal Code	"610512345"	Fixed	Postal Code: 12345
<b>Merchant Information—Language Template</b>	"6424"		
- 00 Language Preference	"0002ar"	Fixed	Arabic : ar
- 01 Merchant Name—Alternate Language	"0104هلالة"	Fixed	Merchant name in Arabic: هلالة
- 02 Merchant City—Alternate Language	"0206الرياض"	Fixed	Merchant city in Arabic: الرياض
Transaction Amount	"5403.50"	Variable	Amount: 0.50
Transaction Currency Code	"5303682"	Fixed	682 (Saudi Riyal)
<b>Additional Data Field Template</b>	"6241"		
- Bill Number	"01071233111"	Variable	Invoice/Bill Number
- Reference Label	"0515Unique_Order_ID"	Variable	Unique Order ID
- Terminal Label	"0707HG00001"	Fixed	Terminal ID
Cyclic Redundancy Check	"63042012"	Variable	Checksum

00020101021233140010sa.halalah520458125802SA5915Halalah  
 Grocery6006Riyadh61051234564240002ar0104هلالة0206الرياض  
 5403.5053036826241010712331110521  
 PREFIXUnique\_Order\_ID0707HG0000163042012

