The GS1 Barcodes

2D Barcodes

Data Matrix, QR Code, GS1 DataMatrix, GS1 QR Code and GS1 DotCode are two-dimensional (2D) barcodes that can carry all GS1 keys and attributes. They can be applied to hold trade item information such as the item expiry date, serial number or batch/lot number.

**Note 1:** For regulated healthcare trade items GS1 DataMatrix is the only allowed 2D barcode.

**Note 2:** GS1 Digital Link URI is the only allowed syntax for Data Matrix and QR Code.

**Note 3:** GS1 DotCode SHALL only be used to meet the requirements of the EU tobacco traceability regulation EU 2018/574.

<table>
<thead>
<tr>
<th>2D Barcode with encoded data</th>
<th>QR Code (GS1 Digital Link URI)</th>
<th>Data Matrix (GS1 Digital Link URI)</th>
<th>GS1 Data Matrix</th>
<th>GS1 QR Code</th>
<th>GS1 DotCode</th>
</tr>
</thead>
<tbody>
<tr>
<td><a href="https://example.com/01/095260000134367">https://example.com/01/095260000134367</a></td>
<td><a href="https://example.com/01/095260000134367">https://example.com/01/095260000134367</a></td>
<td>(01)09521101530001 (17)210119(10)AB-123</td>
<td>(01)09521101530001 (17)210119(10)AB-123</td>
<td>(235)5vBXIF%!&lt;B;?oa% (01)09521101530001 (8008)1905200114</td>
<td></td>
</tr>
</tbody>
</table>

**Symbology Identifier**
- JQ1
- Jd1
- Jd2
- JQ3
- J1

**Capacity**
- Up to 7089 numeric capacity or 4296 alphanumeric capacity depending on the encoded data
- Up to 3116 numeric capacity or 2335 alphanumeric capacity depending on the encoded data
- Up to 3116 numeric capacity or 2335 alphanumeric capacity depending on the encoded data
- Up to 7089 numeric capacity or 4296 alphanumeric capacity depending on the encoded data
- There is no fundamental maximum capacity though an application will encounter practical limits.

**GS1 Keys**
- All GS1 keys per approved application
- All GS1 keys per approved application
- All GS1 keys per approved application
- All GS1 keys per approved application
- All GS1 keys per approved application

**Attributes**
- Yes – Example includes expiry date 19-January-2021 (AI 17) and batch/lot AB-123 (AI 10)
- Yes – Example includes expiry date 19-January-2021 (AI 17), batch/lot AB-123 (AI 10)
- Yes – Example includes expiry date 19-January-2021 (AI 17), batch/lot AB-123 (AI 10)
- Yes – Example includes expiry date 19-January-2021 (AI 17) and batch/lot AB-123 (AI 10)
- Yes – Example includes GS1 TPX Algorithm output, GTIN and timestamp (to hourly precision)

Please refer to the GS1 General Specifications “Application Standards” for standardised use of the barcodes - [https://www.gs1.org/standards/barcodes-epcrfid-id-keys/gs1-general-specifications](https://www.gs1.org/standards/barcodes-epcrfid-id-keys/gs1-general-specifications)