

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

	QR Code (GS1 Digital Link URI)	Data Matrix (GS1 Digital Link URI)	GS1 Data Matrix	GS1 QR Code	GS1 DotCode
2D Barcode with encoded data	 https://example.com/01/09526000134367	 https://example.com/01/09526000134367	 (01)09521101530001 (17)210119(10)AB-123	 (01)09521101530001 (17)210119(10)AB-123	 (235)5vBXIF%! <b;?oa% </b;?oa% (01)09521101530001 (8008)1905200114
Symbology Identifier]Q1]d1]d2]Q3]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 encoded data	Up to 3116 numeric capacity or 2335 alphanumeric capacity depending on 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>