Format and Version String Tables

A QR code uses error correction encoding and mask patterns. The QR code's size is represented by a number, called a version number. To ensure that a QR code scanner accurately decodes what it scans, the QR code specification requires that each code include a format information string, which tells the QR code scanner which error correction level and mask pattern the QR code is using. In addition, for version 7 and larger, the QR code specification requires that each code include a version information string, which tells the QR code scanner which version the code is. This page lists all the possible format and version strings.

About Format Information Strings

QR Codes use error correction encoding. This is a way of generating redundant data that QR code scanners can use to detect and fix errors in the scanned code.

QR codes also use mask patterns. A mask pattern is an algorithm for changing the color (dark to light or light to dark) of a certain pattern of pixels in the code in order to make it easier for scanners to read accurately.

QR codes must include a format string that contains the information about which level of error correction coding and which mask pattern are in use in the code. This page lists all 28 possible format strings. For a detailed explanation of how these strings are generated, please visit the Format and Version Information (format-version-information) page.

List of all Format Information Strings

ECC Level	Mask Pattern	Type Information Bits
L	0	111011111000100
L	1	111001011110011
L	2	111110110101010
L	3	111100010011101
L	4	110011000101111
L	5	110001100011000
L	6	110110001000001
L	7	110100101110110
M	0	101010000010010

M	1	101000100100101
M	2	101111001111100
M	3	101101101001011
M	4	100010111111001
M	5	100000011001110
M	6	100111110010111
M	7	100101010100000
Q	0	011010101011111
Q	1	011000001101000
Q	2	011111100110001
Q	3	011101000000110
Q	4	010010010110100
Q	5	010000110000011
Q	6	010111011011010
Q	7	010101111101101
H	0	001011010001001
H	1	001001110111110
H	2	001110011100111
H	3	001100111010000
H	4	000011101100010
H	5	000001001010101
H	6	000110100001100
H	7	000100000111011

About Version Information Strings

The size of a QR code is represented by a number called the version number. Codes that are version 7 and larger must include two 6x3 rectangular blocks that contain the version information string. For details on how these version information strings are calculated and where they should be placed in the QR code, please see the Format and Version Information (format-version-information) page.

Version	Version Information String
7	000111110010010100
8	001000010110111100
9	001001101010011001
10	001010010011010011
11	001011101111110110
12	001100011101100010
13	001101100001000111
14	001110011000001101
15	001111100100101000
16	010000101101111000
17	010001010001011101
18	010010101000010111
19	010011010100110010
20	010100100110100110
21	010101011010000011
22	010110100011001001
23	010111011111101100
24	011000111011000100
25	011001000111100001
26	011010111110101011
27	011011000010001110
28	011100110000011010
29	011101001100111111

30	0111101101011101 01
31	0111110010010100 00
32	1000001001110101 01
33	1000010110111100 00
34	1000101000101110 10
35	1000110111100111 11
36	1001001011000010 11
37	1001010100001011 10
38	1001101010011001 00
39	1001110101010000 01
40	1010001100011010 01

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