

# Calculating QAM Bandwidth Gains

Multiplier	Scheme	Number of Bits	Bits per Symbol	Symbol Example
1x	On-Off Keying	$2^1$	1	0
2x	QPSK	$2^2$	2	01
4x	16 QAM	$2^3$	4	0101
5x	32 QAM	$2^4$	5	01010
6x	64 QAM	$2^5$	6	010101
7x	128 QAM	$2^6$	7	0101010
8x	256 QAM	$2^7$	8	01010101
9x	512 QAM	$2^8$	9	010101010
10x	1024 QAM	$2^9$	10	0101010101