Υπολογισμός data rate στο στάνταρτ 802.11n

Ευαισθησία δέκτη, MCS index, Modulation & Coding Rate, Guard Interval and Data Rate (Wireless Link Rate)

802.11 n								
Minimum Sensitivity (dBm) (20MHz Channel spacing)	Minimum Sensitivity (dBm) (40MHz Channel spacing)	MCS index	Supported Modulation	Coding Rate (R)	Data Rate* (Mb/s) Guard Interval GI=800ns		Data rate* (Mb/s) Guard Interval GI=400ns	
					20MHz Channel	40MHz channel	20MHz channel	40MHz channel
-82	-79	0	BPSK	1/2	6.5	13.5	7.2	15.0
-79	-76	1	QPSK	1/2	13.0	27.0	14.4	30.0
-77	-74	2	QPSK	3/4	19.5	40.5	21.7	45.0
-74	-71	3	16-QAM	1/2	26.0	54.0	28.9	60.0
-70	-67	4	16-QAM	3/4	39.0	81.0	43.3	90.0
-66	-63	5	64-QAM	2/3	52.0	108.0	57.8	120.0
-65	-62	6	64-QAM	3/4	58.5	121.5	65.0	135.0
-64	-61	7	64-QAM	5/6	65.0	135.0	72.2	150.0

*Data Rate for 1 Spatial Stream (MCS index 0-7).

Υπολογισμός data rate

- 802.11n supports up to 4 spatial streams and 77 MCS indexes (MCS index 0-76).
- To calculate 802.11n data rate you need to consider
  - the channel spacing / bandwidth in use (20MHz or 40MHz),
  - the Guard Interval (800ns or 400ns)
  - the number of antennas / spatial streams (up to 4)
  - the received signal level at each antenna from each spatial stream
  - if an EQM (Equal Modulation Schemes) or a UEQM (Unequal Modulation Schemes) scheme applies.
- With the above information, one can select the theoretical data rate from the MCS index table (MCS index table 0-76).

Note: Minimum sensitivity criterion applies to similar modulation schemes regardless the MCS index number (MCS index table 0-76)