

**IEEE P802.11**  
**Wireless Access Methods and Physical Layer Specifications**

**Specification and Template of the IEEE802.11 Infrared PHY**  
**EXIRLAN / FQPSK-based Modulation and Baseband, Draft 1**

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Topic	Val	Parameter	Specification	Comments
1	G	Number of carried channels	8	
2	N	Frequency range	6...30 MHz	
3	N	Bandwidth per carried channel	3 MHz	
4	N1	Modulation	FQPSK	
5	N2	Modulation	multistate FQPSK (4*4)\(8*8)	linearized diodes required
6	N1	Data rate/channel	1, 1.4, 2.8, 4.2 Mb/s	selectable (no hopping!)
7	N2	Data rate/channel	1, 1.4, 2.8, 4.2, 5.6, 8.4, 10, 12.6 Mb/s	selectable (no hopping!), 2nd compatible generation
8	N	Eb/ No. for BER = 10 exp-5	10...23 dB	
9	N	Spectral Suppression (PSD)	-20 dB	at edge of band
10	N	IR-wave length	880 nm	

Topic	Val	Parameter	Specification	Comments
11	B1	Modulation	PPM	
12	B2	Modulation	16PPM	
13	B	IR-wave length	880 nm	
14	B1	Data rate	19.2, 115.2 kb/s	with PPM
15	B2	Data rate	1 Mb/s	with 16PPM
16	B	Eb/No. for BER = 10 exp-5	normalized to bit rate bandwidth	
17	B	receiver bandwidth	max. 0.5...5.5 MHz	
18	B	transmitted spectrum	< 5.5 MHz	at 20 dB

## Legend for Val (=validity):

G General  
 N Narrowband part  
 B Baseband part  
 1 1st generation  
 2 compatible 2nd generation