

		Through-hole Modules				Surface-mount Modules			
		RF200P81	RF200PU1	RF220UF1	RF220SU	RF220SU-EU	SM200P81	SM200PU1	SM220UF1
Performance	Antenna	Chip	U.FL	U.FL or compact F	U.FL or RP-SMA	U.FL or RP-SMA	Chip	U.FL	U.FL or compact F
	Range ¹	1500 feet	2500 feet	.5 mile (F) 3 miles (U.FL)	3 miles	3 miles	1500 feet	2500 feet	.5 mile (F) 3 miles (U.FL)
	Transmit Power	+3 dBm	+3 dBm	+20 dBm	+20 dBm	+15 dBm	+3dBm	+3dBm	+20 dBm
	RF Data Rate	250Kbps, 500Kbps, 1Mbps, 2Mbps							
Power (Typ@3.3V)	Receiver Sensitivity ²	-100 dBm	-100 dBm	-103 dBm	-103 dBm	-103 dBm	-100dBm	-100dBm	-103 dBm
	Supply Voltage	1.8 - 3.6 V	1.8 - 3.6 V	2.0 - 3.6 V	2.0 - 3.6 V	2.0 - 3.6 V	2.0 – 3.6V	2.0 – 3.6V	2.0 - 3.6 V
	Transmit Current	22.5 mA	22.5 mA	at +20 dBm: 150 mA at +6 dBm: 55 mA	at +20 dBm: 150 mA at +6 dBm: 55 mA	at +20 dBm: 150 mA at +6 dBm: 55 mA	22.5mA	22.5mA	at +20 dBm: 150 mA at +6 dBm: 55 mA
	Idle/Receive On	20.5 mA	20.5 mA	22mA	22mA	22mA	20.5mA	20.5mA	22mA
	Idle/Receive Off	?	?	7.8 mA	7.8 mA	7.8 mA	?	?	7.8 mA
Sleep Mode Current	0.37 µA	0.37 µA	1.27 µA timed 390 nA untimed	1.27 µA timed 390 nA untimed	1.27 µA timed 390 nA untimed	0.37µA	0.37µA	1.27 µA timed 390 nA untimed	
Physical	Frequency	ISM 2.4 GHz							
	Package	Through-hole				Pad Grid Array			
	Spreading Method	Direct Sequence (DSSS)							
	Modulation	O-QPSK							
	Dimensions	33.86mm x 33.86mm				29.80mm x 19.00mm			
	Operating Temp	-40 to 85 deg C.							
I/O	Weight	6 grams		9 grams		3 grams			
	UARTS ³	2 ports – 8 total I/O							
	GPIO	20 total	20 total	20 Total	20 Total	20 Total	34 Total	34 Total	32 Total
Networking		7 analog-in, 10bit ADC							
	Topology	SNAP							
	Error Handling	Retries and Acknowledgement							
	Channels	16	16	15 ⁴	15 ⁴	15 ⁴	16	16	15 ⁴
Certifications	FCC, IC, CE	FCC, IC, CE	FCC, IC	FCC, IC	CE	FCC, IC, CE	FCC, IC, CE	FCC, IC	

All measurements at 23° C and 3.3V unless otherwise noted

1 Outdoor line-of-sight at 250Kbps

2 1% PER, 250Kbps

3 Optional hardware flow control

4 Fully operational channels, and channel 15 operates in a receive only state