

Sub-GHz Product Comparison

Quick Reference Guide

Microcontrollers

	Core	Device Type	Modulation	Data Rate (Kbps)	Frequency Range	Sleep Mode Current Consumption (µA)	TX Output Power (dBm)	RX Sensitivity (dBm)	Link Budget	Operating Voltage (V)	Operating Temp (°C)	Package Size (mm)
Transceivers												
ATA8510	8-bit AVR	SoC	ASK, FSK	120	310 to 956	0.15	14.5	-125	139.5	1.9 to 3.6 and 2.4 to 5.5	-40 to +85	5 × 5
ATSAMR30E18A	Arm® Cortex® M0+	SiP	BPSK, O-QPSK	1024	769 to 935	0.2	11	-110	121	1.8 to 3.6	-40 to +85	7 × 7, 5 × 5
ATSAMR30G18A	Arm Cortex M0+	SiP	BPSK, O-QPSK	1024	769 to 935	0.2	11	-110	121	1.8 to 3.6	-40 to +85	7 × 7, 5 × 5
ATSAMR30M18	Arm Cortex M0+	Module	BPSK, O-QPSK	1024	863 to 928	0.77	8.7	-105	115.7	1.8 to 3.6	-40 to +85	12.7 × 11
Transmitters												
PIC12LF1840T39A	8-bit RISC	SiP	FSK/OOK	100	310 to 915	0.17	10	-	-	1.8 to 3.6	-40 to +85	4.4 × 5
PIC16LF1824T39A	8-bit RISC	SiP	FSK/OOK	100	311 to 915	0.175	10	-	-	1.8 to 3.6	-40 to +85	4.4 × 6.5

Controllers

	Core	Device Type	Modulation	Data Rate (Kbps)	Frequency Range	Sleep Mode Current Consumption (µA)	TX Output Power (dBm)	RX Sensitivity (dBm)	Link Budget	Operating Voltage (V)	Operating Temp (°C)
Transceivers											
AT86RF212B	–	SoC	BPSK, O-QPSK	1024	769 to 935	0.2	11	–110	121	1.8 to 3.6	–40 to +85
AT86RF215	–	SoC	MR-FSK, MR-OQPSK, MR-OFDM	2048	389.5 to 510, 779 to 1020, 2400 to 2483.5	0.03	16.5	–123	139.5	1.8 to 3.6	–40 to +85
AT86RF215M	–	SoC	MR-FSK, MR-OQPSK, MR-OFDM	2048	389.5 to 1020	0.03	16.5	–123	139.5	1.8 to 3.6	–40 to +85
ATA8515	8-bit AVR	SoC	ASK, FSK	120	310 to 956	0.15	14.5	–125	139.5	1.9 to 5.5	–40 to +85
MRF89XA	–	SoC	FSK, OOK	40	863 to 960	0.1	12.5	–113	125.5	2.1 to 3.6	–40 to +85
MRF89XAM9A	–	Module	FSK, OOK	40	902 to 928	0.1	12.5	–113	125.5	2.1 to 3.6	–40 to +85
MRF89XAM8A	–	Module	FSK, OOK	40	863 to 870	0.1	12.5	–113	125.5	2.1 to 3.6	–40 to +85
Transmitters											
ATA8710	AVR	SoC	ASK, FSK	120	310 to 956	0.005	14.5	–	–	1.9 to 3.6	–40 to +85
MICRF112	–	SoC	ASK/FSK	50	300 to 450	0.05	10	–	–	1.8 to 3.6	–40 to +85
MICRF113	–	SoC	ASK	20	300 to 450	0.05	10	–	–	1.8 to 3.6	–40 to +85
MICRF114	–	SoC	OOK	115.2	285 to 445	0.2	13	–	–	1.8 to 3.6	–40 to +85
Receivers											
ATA8210	8-bit AVR	SoC	OOK/ASK/FSK	120	310 to 956	0.15	–	–125	–	1.9 to 3.6	–40 to +85
ATA8215	8-bit AVR	SoC	OOK/ASK/FSK	120	311 to 956	0.15	–	–125	–	1.9 to 3.6	–40 to +85
MICRF219A	–	SoC	ASK/OOK	20	300 to 450	0.1	–	–110	–	3 to 3.6	–40 to +105
MICRF220	–	SoC	ASK/OOK	20	300 to 450	0.1	–	–110	–	3 to 3.6	–40 to +105
MICRF221	–	SoC	ASK/OOK	10	850 to 950	0.05	–	–109	–	3 to 3.6	–40 to +105
MICRF230	–	SoC	ASK/OOK	20	400 to 450	0.5	–	–112	–	3.5 to 5.5	–40 to +105
MICRF229	–	SoC	ASK/OOK	20	400 to 450	0.5	–	–112	–	3.5 to 5.5	–40 to +105