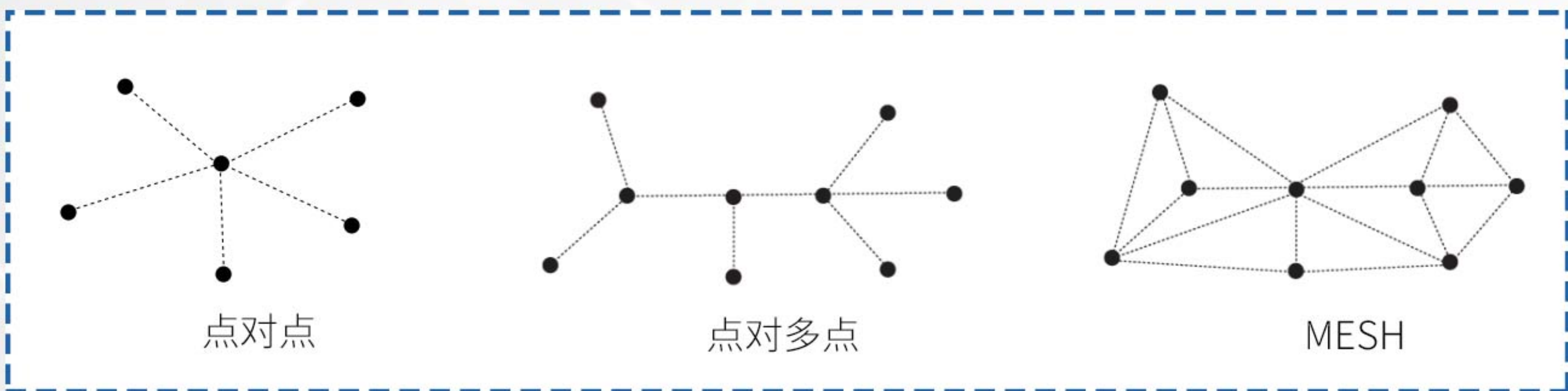
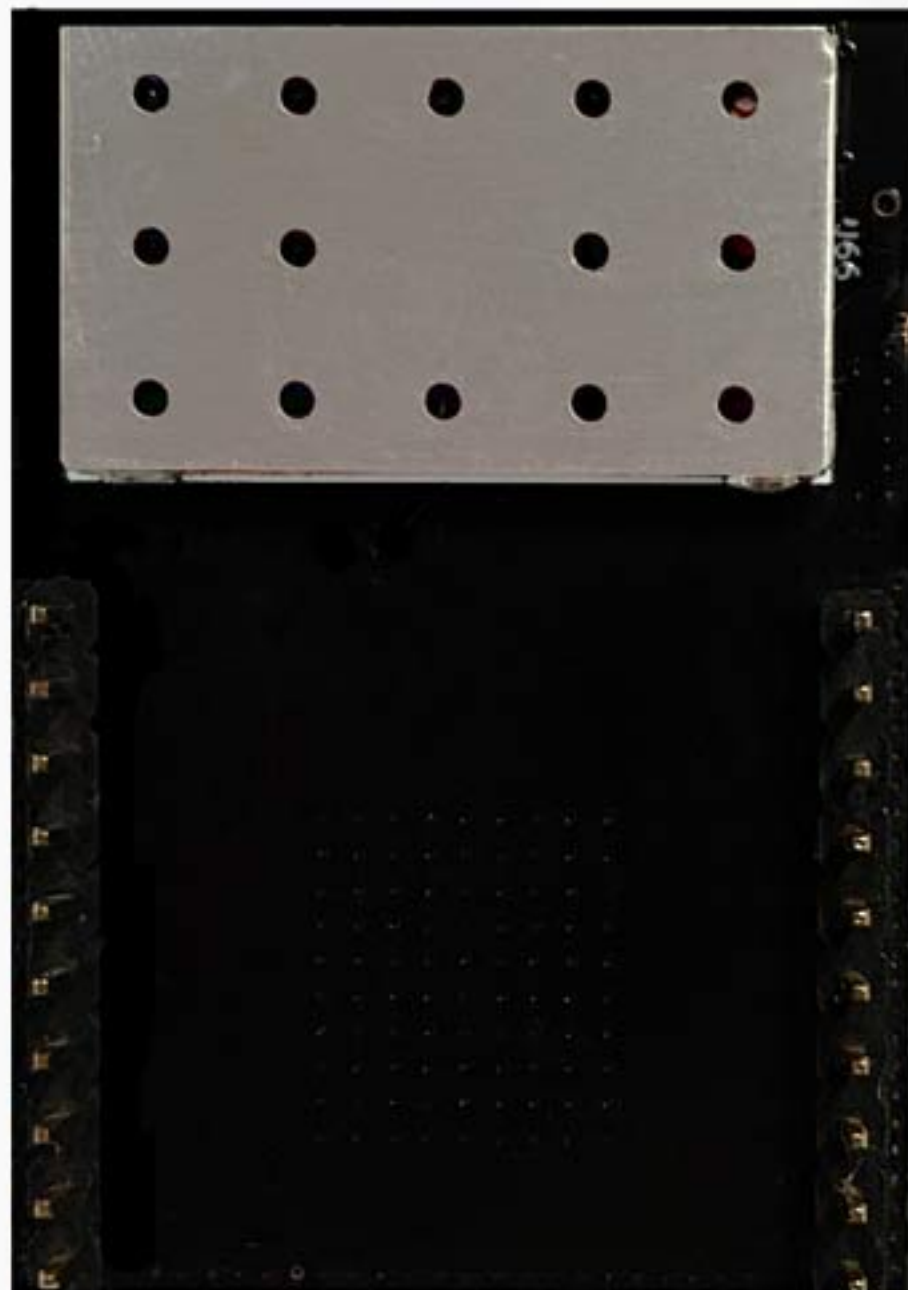
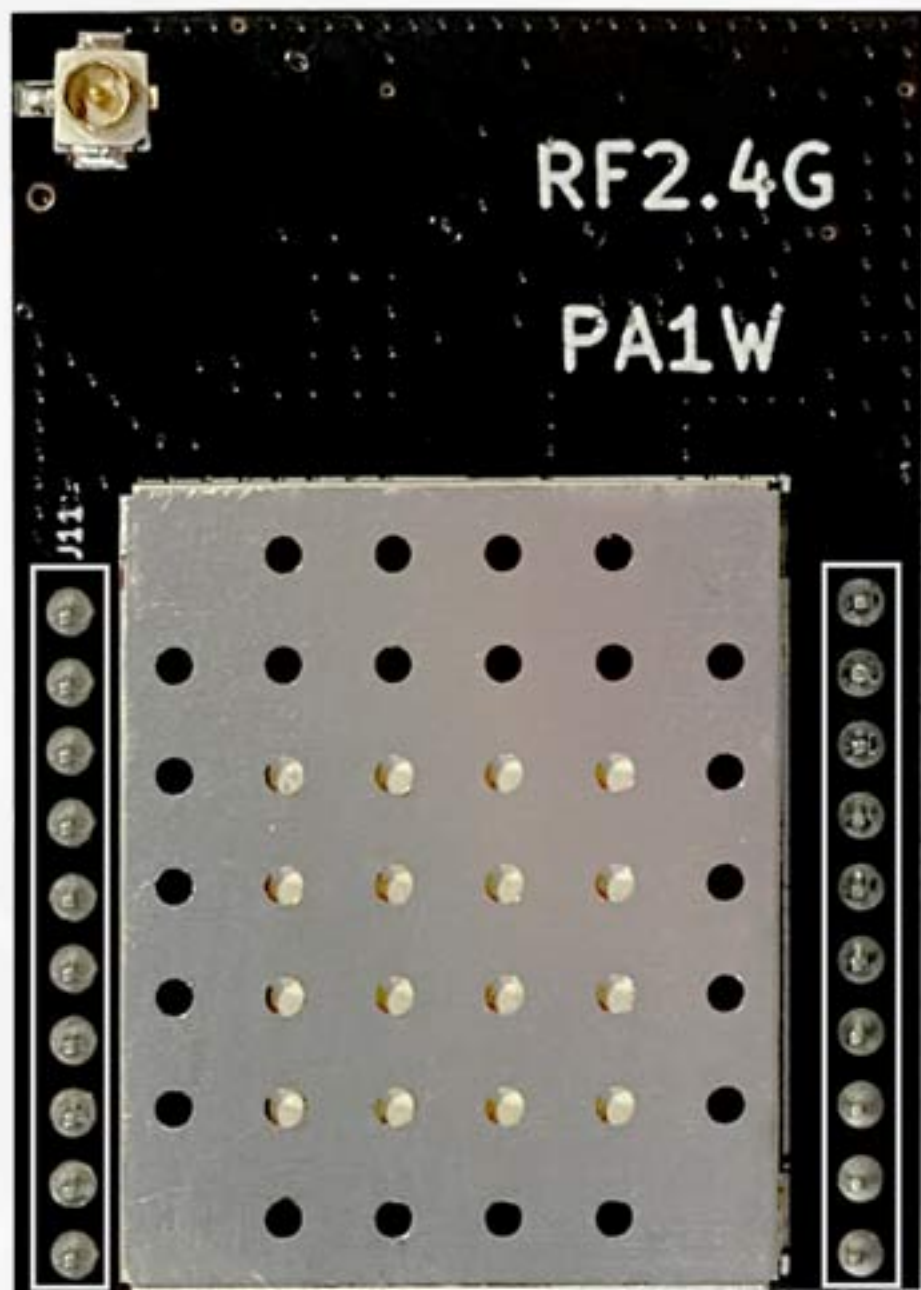


ZF2400-P1A

ZF2400-P1A是一个高功率、长距离型设备，模块尺寸较小，设计灵活。建筑自动化、军民融合、远程抄表、污水处理、智能电网、工业制造、智慧农业等多个行业均可使用。

产品特点:

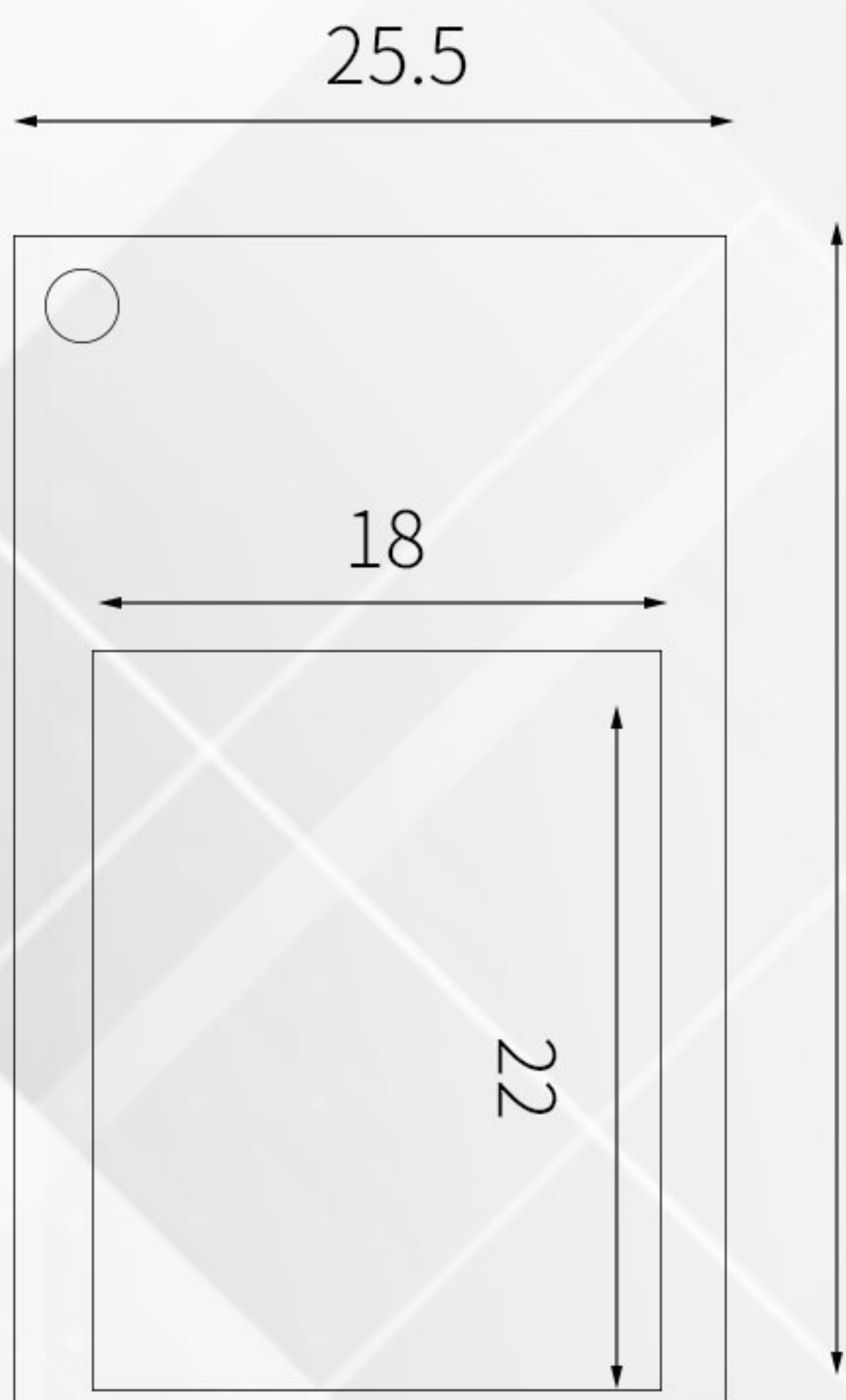
- 支持点对点、点对多点、MESH
- 2.4G定频模块
- 发射功率高达1W
- 工业级宽温（-40℃至+85℃）
- 支持BLE
- 128/256位AES加密算法



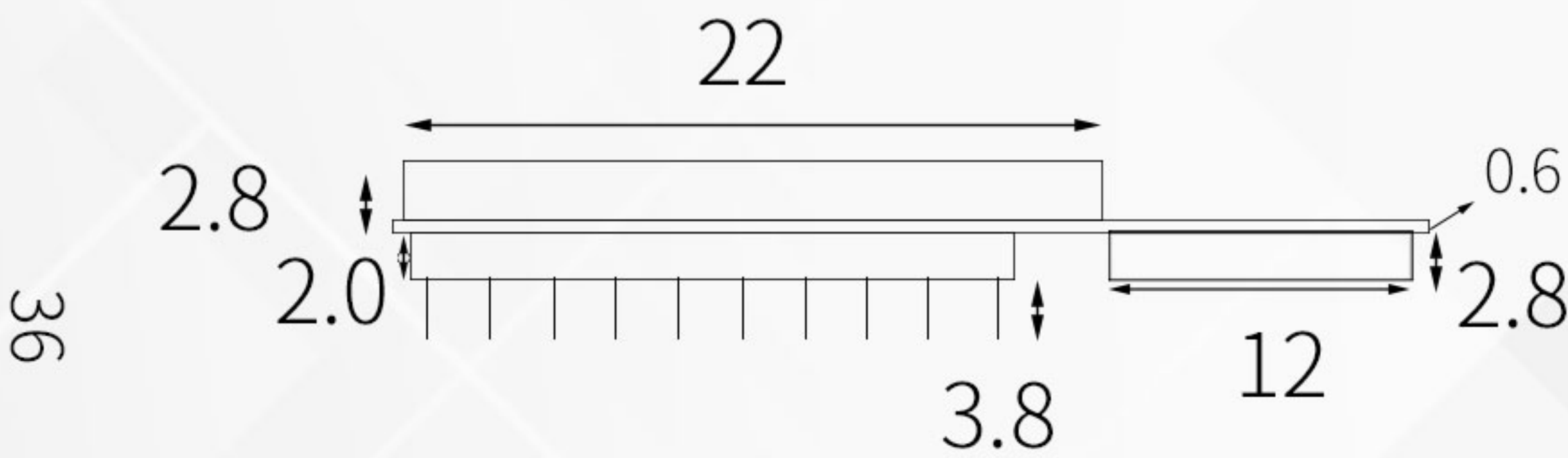
性能	ZF2400-P1A
数据传输速率	RF 250 Kbps, 串行速率高达1 Mbps
户外/射频视距范围*	50KM
功率	1W(≥30dbm)
接收灵敏度	-103 dBm / 250kbps
特征	
串行数据接口	UART, SPI, I2C
配置方法	API或AT命令，本地或无线（OTA）
频带	ISM 2.4 GHz
外形	Through-Hole, Surface Mount(定制版)
抗干扰性	DSSS
ADC输入	(4) 10-bit ADC inputs
数字 I/O	15
天线选项	U.FL、RPSMA、PCB
工作温度	-40℃至+85℃
可编程	
内存	1MB/128KB内存（32位可用于MicroPython）
cpu /时钟速度	MicroPython编程环境/最高40 MHz
网络和安全	
协议	ZigBee® 3.0
加密	128/256位AES加密算法
数据传输	重试/确认
ID	PAN ID and addresses, cluster IDs and endpoints (optional)
信道	16
功耗	
电源电压	3.0V-3.6V
发送电流	峰值1.2A @ 30dBm
接收电流	25mA
物理尺寸	36mm x 25.5mmx 9.2mm（含针高度）

产品尺寸图

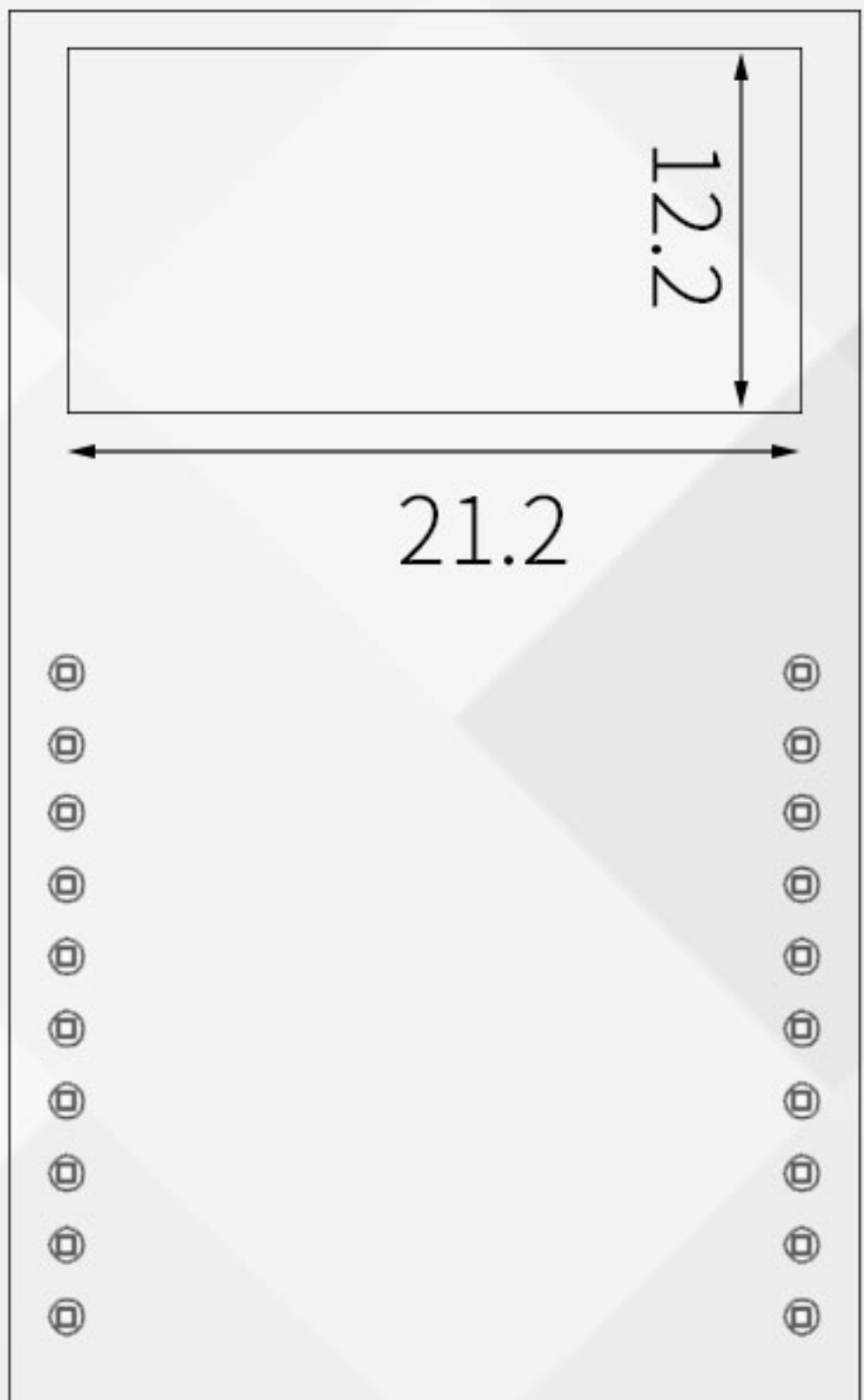
注：板厚0.6 mm
单位：mm



正面

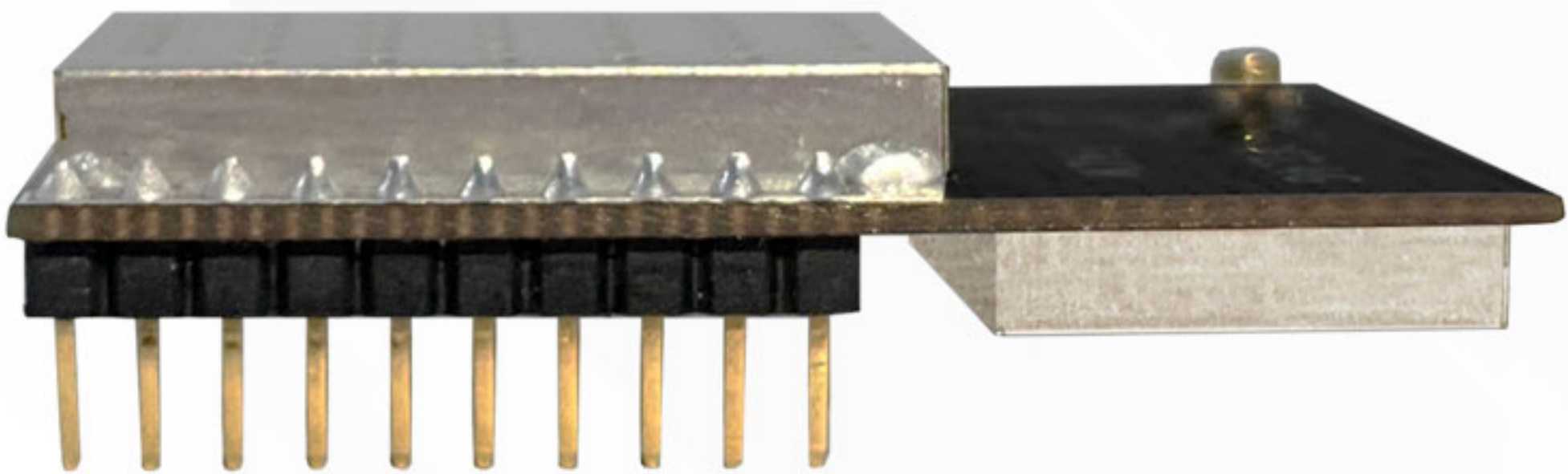
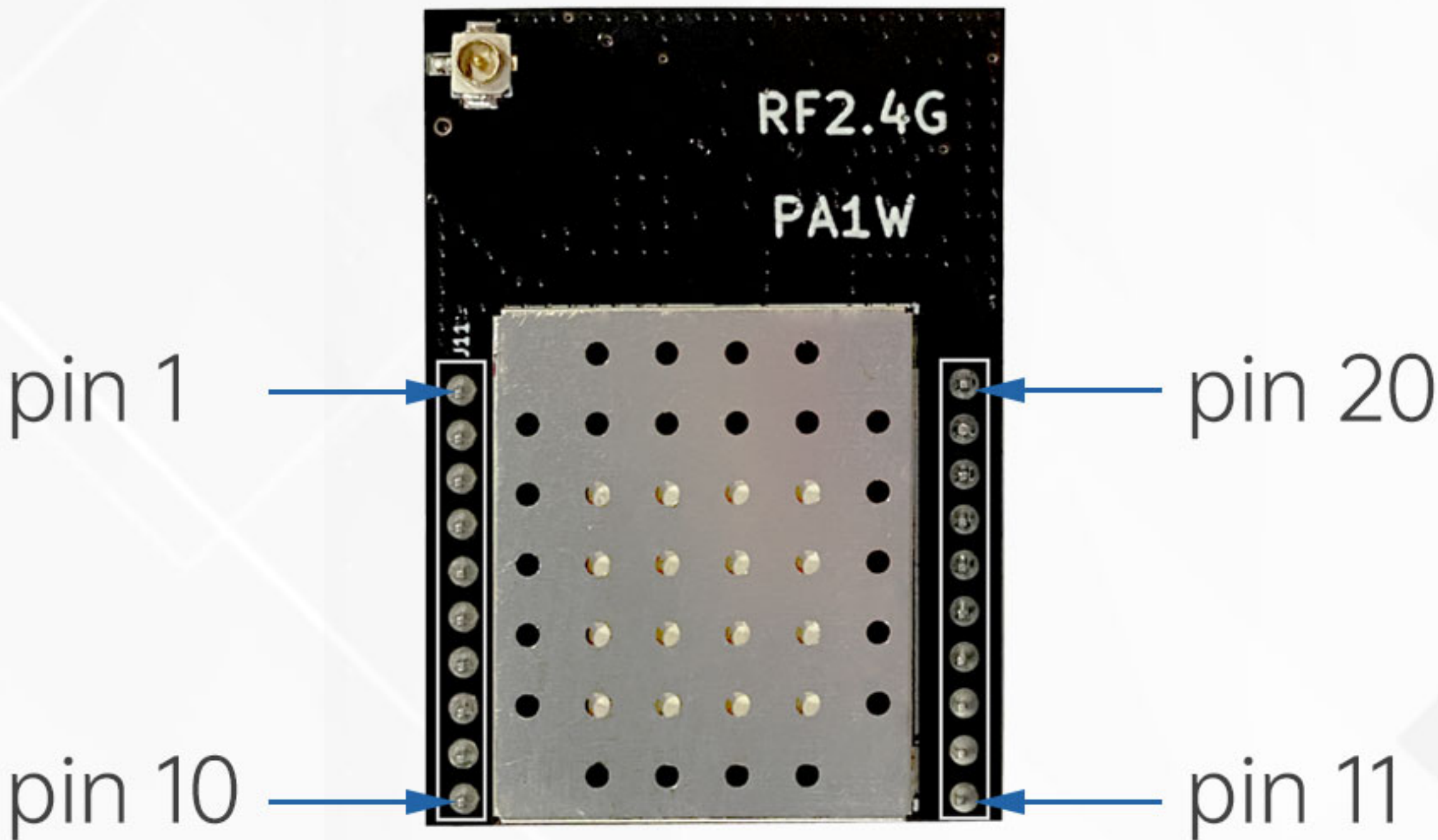


侧面



反面

针脚定义



针脚	名称	方向	状态	描述
1	VCC	—	—	电源
2	DOUT/DIO13	Both	Output	UART dataout/GPIO
3	DIN/CONFIG/DIO14	Both	Input	UART data in/GPIO
4	DIO12/SPI_MISO	Both	—	GPIO/SPI data out
5	RESET	Input	—	Device reset.
6	RSSI PWM/DIO10	Both	Output	RX signal Indicatorstrength/GPIO
7	PWM1/DIO11/I2C SDA	Both	Disabled	Pulse widthmodulator/GPIO/I2CSDA
8	[reserved]	—	Disabled	Do not connect
9	DTR/SLEEP_RQ/DIO8	Both	Input	Pin sleep controlLine/GPIO
10	GND	—	—	Ground
11	DIO4/SPI_MOSI	Both	Disabled	GPIO/Serialperipheral interfacedata in
12	CTS/DIO7	Both	Output	Clear to send flowcontrol/GPIO
13	ON/SLEEP/DIO9	Both	Output	Device statusindicator/GPIO
14	[reserved]	—	Disabled	Do not connect orconnect to Ground
15	ASSOCIATE/DIO5	Both	Output	AssociateIndicator/GPIO
16	RTS/DIO6	Both	Input	Request to sendflow control/GPIO
17	AD3/DIO3/SPI_SSEL	Both	Disabled	Analoginput/GPIO/SPI notselect
18	AD2/DIO2/SPI_CLK	Both	Disabled	Analoginput/GPIO/SPIclock
19	AD1/DIO1/SPI_ATTEN/I2C SCL	Both	Disabled	Analoginput/GPIO/SPIattention/I2C SCL
20	AD0 /DIO0	Both	Input	Analog input/GPIO/Commissioningbutton