





Environmental specifications

Temperature Operating	-30 to +60 °C (-22 to 140 °F)	
Storage	-40 to +65 °C (-40 to 149 °F)	
Battery charging	0 to +45 °C (32 to 113 °F)	
Battery discharging	-20 to +60 °C (-4 to 140 °F)	
Battery storage	-20 to +60 °C (-4 to 140 °F)	
Relative humidity 5% to 95% non-condensing		

Electrical specifications

Power supply range 8 – 30 V DC			
Protections Battery short circuit protection			
Reverse polarity protection			
Electrostatic discharge protection on USB			
Charging protection			
2 A fuse on the power line			
Average power consumption @12 V DC			
Operating Idle mode (battery fully charged)	33 mA*		
Active mode (peak)	~230 mA		
Sleep mode (lowest)	~3.5 mA * – configuration dependent value		

Connectivity

Cellular Modem	Quectel Quad-band GSM/GPRS Module	
Antenna	Internal	
GSM quad-band	850/900/1800/1900MHz	
Max. data rate	85.6 Kbps	
Multi navigation constellation	GPS/GLONASS/Galileo/BeiDou/QZSS	
GNSS receiver channels	99 acquisition/33 tracking channels	
Built-in LNA for better GNSS sensitivity (-167 dBm @Tracking)		

Features

Frequency 865-868MHz(EU),902-928MHz (US)
Protocol ISO18000-6C9EPC GEN2
RF power 30dbm (adjustable)
Inventory speed 200pcs/s
Read distance 0-15m(depends on antenna and tag)
RFID Storage
Interface RS232(3.3V TTL level)
Antenna ports With four antenna poets
Connector for antenna SMA
GPIO 2 input and 2 outputs
Device management Monitor, manage, upgrade firmware, configure and troubleshoot devices remotely
Whitelist – up to 1000 ld's
RFID inventory filter
SIM card Multi SIM

Interfaces

4 x Digital inputs insolated
4 x Digital outputs insolated
Configurable outputs signal length
IP65 power connectors
SMA Antenna Connectors

