Base

Weight and Dimensions	1.15kg (231 mm x 173 mm x 97 mm)
Battery	3.7V, 37Whr Li-ion (Option for 2nd battery)
LCD Screen	Capacitive Touch LCD 880 Nits
USB	USB-C PD max 12V, 1.5A (18W)
Clock	Temperature compensated Crystal 5PPM (±0.432 sec per day)
Frequency	125khz/2.4Ghz BLE
Battery Life	5hrs full LCD brightness, 9hrs LCD screen power save
Charge Time	3-4hrs
Connectivity	Ethernet port DHCP or static IP
Trigger Loop	3-12m long, 0.3-0.8m wide
Memory	28,000 records flash RAM
Read gating	4 seconds
Operating Temperature	-25 to +50 degrees C
Read Rate	80 transponders per second
Optional Modem	Quectel 4G LTE (future upgradeable to 5G)
Warranty	2 years
Firmware Upgrades	Free for the life of the product. Semi-automatic
Waterproofness	IP65 lid open, IP67 lid closed

Transponder

Weight and dimensions	15g, 39mm x 32mm x 12mm
Battery	3.0V CR2032 220mAh
Battery Life/Warranty	Guaranteed 6 years[1], expected 8 years
Memory	Up to 40 records in flash RAM. Automatically overwritten after 72hrs
Wakeup receiver	3 axis/3 channel 125khz ASK
Frequency	2.4Ghz BLE
Time source	From Base time sync (+/- 100 microseconds)
Firmware	Upgrades via OTA DFU
BT mode	1 second periodic BLE advertisement
Precision in normal mode	5 milliseconds
Precision in BT mode	1 second
Maximum capture speed	150km/hr
Waterproofness	Waterproof to 10m depth
Construction	UV stable, impact resistant polycarbonate and epoxy encapsulation

Nano

Weight and Dimensions	300g (40x47x80mm)
Battery	3.7V, 16.5Whr Li-ion
Timekeeping	Mobile network and/or GPS
Frequency	2.4Ghz BLE
Charge Time	3hrs
USB	USB-C 5V 1A with COM port
Memory	3000 records flash RAM
Read Gating	Variable 10 – 45 seconds
Battery Life	Minimum 24hrs depending on 4G transmissions
Modem	Quectel 4G LTE (future upgradeable to 5G)
Minimum receive sensitivity	-95dBm
Firmware	Upgrades via OTA DFU
Warranty	1 Year
Waterproofness	IP65

[1]Guarantee is based on less than 3000 reads and/or 100hrs in Bluetooth mode per year. The transponder keeps track of these two values over the lifetime. Warranty is pro-rata basis. If the transponder fails prior to 6 years then the next purchase will be discounted using the formula; discount (in %) = ((6 – years) / 6) x 100. For example, failure after 4 years will result in a 33% discount on a new transponder replacement. Full warranty on transponders up to 1 year.

[2]The following precise current measurement over time of an EchoActive Transponder operating V8 firmware;

Function	Amount	Length	Charge used (mC)	
BT Mode	100	hrs	13680	
Read	3000	reads	11880	
Sleep (full power)	30	days	15163	
Sleep (low power)	335	days	46889	% of 220mAHr battery used
			87612	**11%**