

<b>Eggtimer Altimeter Comparison</b>							
	<b>Apogee</b>	<b>Quark</b>	<b>ION</b>	<b>Classic</b>	<b>Quantum</b>	<b>Proton</b>	<b>TRS</b>
<b>Cost</b>	<b>\$15</b>	<b>\$20</b>	<b>\$20</b>	<b>\$35</b>	<b>\$40</b>	<b>\$70</b>	<b>\$90</b>
Type	Single-output deployment controller	Dual-deployment controller	Flight Data Logger	Flight computer	Dual-deployment Flight computer with WiFi I/F	Advanced Flight computer with WiFi I/F	GPS Tracking Transmitter and Flight Computer Combo
No. of outputs	1 (@Apogee)	2	0	2 + 3 logic-level AUX	2	6	2
Altitude Rating	60,000'	60,000'	60,000'	32,000'	60,000'	60,000'	60,000'
Mach-Safe?	Automatic	Automatic	Automatic	Automatic	Automatic	Automatic	Automatic
Accelerometer	None	None	None	None	None	120G	None
Programming I/F	None	Jumpers	WiFi/Browser	Serial terminal	WiFi/Browser	WiFi/Browser	Serial Terminal, RF LCD Receiver
Post-flight data	Apogee beep-out	Apogee beep-out	Flight milestones and measurements via WiFi/browser	Apogee beep-out	Flight milestones and measurements via WiFi/browser	Flight milestones and measurements via WiFi/browser	Apogee on LCD receiver
Data recording	Apogee beep-out	Apogee beep-out	Altitude, velocity, (raw & filtered), flight events	Altitude, velocity, (raw & filtered), flight events	Altitude, velocity, (raw & filtered), flight events	Altitude, velocity, acceleration, (raw & filtered), flight events	Altitude, velocity, (raw & filtered), flight events
No. of flights saved	1	1	15	32	15	15	16
Telemetry Support	None	With ETM: R/T altitude, flight status, channel status, apogee	With ETM: R/T altitude, velocity, flight status, apogee, max velocity	Serial, altitude	With ETM: R/T altitude, velocity, flight status, channel status, apogee, max velocity	With ETM: R/T altitude, velocity, acceleration, flight status, channel status, apogee, max velocity, max acceleration	GPS coordinates, altitude, channel status, via 900 MHz RF
Backup Drogue Settings	0	1	n/a	9	9	9	9
Main Channel Range	n/a	300'-1000' 4 settings	n/a	100-2000'	100'-2000'	100-2000'	100-1200'
Lawn-Dart ("Failsafe") detection?	n/a	No	n/a	No	Yes	Yes	No
Channel "On" Time	2 secs fixed	2 secs fixed	n/a	1-9 secs, cont.	1-9 secs, cont.	1-9 secs	2 secs fixed
Servo Support	None	None	n/a	Yes Main/Drog.	Yes, Main/Drog.	Yes, Ch 1-3 on descent	None
Airstart Support	No	No	n/a	Yes (1 channel)	Yes (2 channels)	Yes (6 channels)	No

Airstart Safeties	n/a	n/a	n/a	Altitude,Velocity, Breakwire	Altitude,Velocity, Breakwire	Altitude,Velocity, Breakwire, Baro/Accel Deviation (tilt detect)	n/a
Airstart triggers	n/a	n/a	n/a	time after LDA	time after calculated start-of- flight	time after LDA, time after burnout (6 burnouts supported)	n/a
Cluster Mode?	n/a	n/a	n/a	No	No	Yes	n/a
Arming	Screw Switch (built- in), at Power-on (after last flight apogee beep out and continuity check)	At Power-on (after last flight apogee beep out and continuity check)	Remote via WiFi, auto-arm after 60 secs (selectable), built-in power switch	At Power-on (after last flight apogee beep out and continuity check)	Remote via WiFi, auto-arm after 60 secs (selectable)	Remote via WiFi, auto- arm after 60 secs (selectable)	At Power-on, Remote via RF if paired with LCD receiver
LDA Settings	Fixed (200')	Fixed (200')	50'-500'	50'-500'	50'-500'	100'-500'; acceleration G's for time	Fixed (200')
Samples on Ascent	20/sec	20/sec	10-33/sec	10-33/sec	10-33/sec	10-33/sec	20/sec
Samples on Descent	2/sec	2/sec	1-10/sec	1-10/sec	1-10/sec	1-10/sec	2/sec
Battery, Recommended size	1S LiPo (built-in JST- PH connector), 100 mAH+	2S LiPo, 100 mAH+	1S LiPo (built-in JST-PH connector), 300 mAH+	1S-3S LiPo, 100 mAH+	2S-3S LiPo, 300 mAH+	2S-3S LiPo, 300 mAH+	2S LiPo, 300 mAH+
Reverse-polarity protected?	Yes	Yes	Yes	No	Yes	Yes	Yes
Supports Separate Deployment Battery?	No	No	n/a	Yes, for each channel; 1S-6S	Yes; 2S-4S	Yes ; 2S-6S	Yes; 2S-4S
Channel Current Rating	8A	8A	n/a	20A	8A	10A	8A
Total Current Rating	8A	8A	n/a	20A	16A	30A	8A
Dual-switched?	No	No	n/a	No	Yes	Yes	No
Outputs opto-isolated?	Yes	Uses advanced automotive-type drivers with overcurrent, overvoltage, reverse polarity, temperature protection	n/a	Yes	Yes	Uses advanced automotive-type drivers with overcurrent, overvoltage, reverse polarity, temperature protection	Yes
Assembly Type	All through-hole	Mostly SMT	Mostly SMT	All through-hole	Mostly SMT	Mostly SMT	Mostly SMT
Difficulty (1-5)	1	3	2	2	3	4	5

Assembly Notes	Relatively few parts, all through-hole	Small SMT parts	Large SMT parts, relatively easy build	All through-hole, lots of parts, but easy to solder	Large SMT parts, but a fair amount of them	Large SMT parts, but lots of them	Lots of small SMT parts
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