Eggtimer Altimeter Comparison

	Apogee	Quark	ION	Quantum	Proton	Quasar
Cost	**$15**	**$20**	**$20**	**$40**	**$80**	**$100**
Type	Single-output deployment controller	Dual-deployment controller	Flight Data Logger	Dual-deployment Flight computer with WiFi I/F	Advanced Flight computer with WiFi I/F	GPS Tracking Transmitter and WiFi-Enabled Flight Computer Combo
No. of outputs	1 (@Apogee)	2	0	2	6	3
Altitude Rating	60,000'	60,000'	60,000'	60,000'	60,000'	60,000'
Mach-Safe?	Automatic	Automatic	Automatic	Automatic	Automatic	Automatic
Accelerometer	None	None	None	None	200G	None
Programming I/F	None	Jumpers	WiFi/Browser	WiFi/Browser	WiFi/Browser	WiFi/Browser
Immediate Post-flight data	Apogee beep-out	Apogee beep-out	Flight milestones and measurements via WiFi/browser	Flight milestones and measurements via WiFi/browser	Flight milestones and measurements via WiFi/browser	Flight milestones and measurements via WiFi/browser
Data recording	Apogee beep-out	Apogee beep-out	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	14	14	14	14
Telemetry Support	None	With ETM: R/T altitude, flight status, channel status, apogee	With ETM: R/T altitude, velocity, flight status, apogee, max velocity	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	Built in: GPS coordinates, altitude, channel status, apogee
Backup Drogue Settings	0	1	n/a	9	9	9
Main Channel Range	n/a	300'-1000' 4 settings	n/a	100'-2000'	100-2000'	100-2000'
Lawn-Dart ("Failsafe") detection?	n/a	No	n/a	Yes	Yes	Yes
Channel "On" Time	2 secs fixed	2 secs fixed	n/a	1-9 secs, cont.	1-9 secs	1-9 secs
Servo Support	None	None	n/a	Yes, Main/Drog.	Yes, Ch 1-3 on descent	Yes, all 3 channels

Airstart Support	No	No	n/a	Yes (2 channels)	Yes (6 channels)	Yes
Airstart Safeties	n/a	n/a	n/a	Altitude,Velocity, Breakwire	Altitude,Velocity, Breakwire, Baro/Accel Deviation (tilt detect)	Altitude, Velocity
Airstart triggers	n/a	n/a	n/a	time after calculated start-of-flight	time after LDA, time after burnout (6 burnouts supported)	time after calculated start-of-flight
Cluster Mode?	n/a	n/a	n/a	No	Yes	No
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	Remote via WiFi, auto-arm after 60 secs (selectable)	Remote via WiFi, auto-arm after 60 secs (selectable)	Remote via WiFi, auto-arm after 60 secs (selectable)
LDA Settings	Fixed (200')	Fixed (200')	50'-500'	50'-500'	100'-500'; acceleration G's for time	50'-500'
Samples on Ascent	20/sec	20/sec	10-33/sec	10-33/sec	10-33/sec	10-33/sec
Samples on Descent	2/sec	2/sec	1-10/sec	1-10/sec	1-10/sec	1-10/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+	2S-3S LiPo, 300 mAH+	2S-3S LiPo, 300 mAH+	2S LiPo, 500 mAH+
Reverse-polarity protected?	Yes	Yes	Yes	Yes	Yes	Yes
Supports Separate Deployment Battery?	No	No	n/a	Yes; 2S-4S	Yes ; 2S-6S	No
Channel Current Rating	8A	8A	n/a	8A	10A	10A
Total Current Rating	8A	8A	n/a	16A	30A	20A
Dual-switched?	No	No	n/a	Yes	Yes	Yes

Outputs opto-isolated?	Yes	Uses advanced automotive-type drivers with overcurrent, overvoltage, reverse polarity, temperature protection	n/a	Yes	Uses advanced automotive-type drivers with overcurrent, overvoltage, reverse polarity, temperature protection	Uses advanced automotive-type drivers with overcurrent, overvoltage, reverse polarity, temperature protection
Assembly Type	All through-hole	Mostly SMT	Mostly SMT	Mostly SMT	Mostly SMT	Mostly SMT
Difficulty (1-5)	1	3	2	3	5	5
Assembly Notes	Relatively few parts, all through-hole	Small SMT parts	Large SMT parts, relatively easy build	Large SMT parts, but a fair amount of them	Large SMT parts, but lots of them	GPS module pre-mounted; large SMT parts, but lots of them