

Engineering Specifications (Updated 1/11/2010)

Engr. Spec. #	Importance	Source	Specification (description)	Unit of Measure	Marginal Value	Ideal Value	Comments/Status
1	3	CN12	Sensors should fit within area of bottom of standard key.	Area (cm ²)	5	3.64	
2	3	CN6	Individual keys will be able to withstand at least 10N of force (2.25lbs)	Max force (N)	6	10	
3	3	CN11	Total component costs (not including spending on research)	Dollars (\$)	1100	<900	
4	2	CN12	Top physical dimensions of a single key	Area(cm ²)	2.1	1.81	
5	1	CN8	Portability measured in terms of total weight	Weight (lb.)	5	2	
6	2	CN19	Keyboard Cables Required	Cable Quantity	2	1	
7	3	CN4	Force Response Range	Force (N)	0-3	0-10	Respond to 0N to 10N of force (0 to 2.25lb)
8	2	CN2	Powered via USB	Voltage (V) Current (mA)	+5.00V 500mA	+5.00V 200mA	
10	2	CN4	Resolution of Output	bits	3	5	
11	3	CN4	Precision of force sensor	%error	±10%	±5%	Sensor repeatability
12	1	CN3	Minimum duration detection	ms	30	5	At 120 WPM
13	1	CN3	Minimum frequency detection	Hz	5	10	Less than 10ms assumes simultaneous key strikes
14	1	CN12	Overall Keyboard thickness	cm	7.5	4	
15	1	CN2	Minimum Cable Length	m	1	1.5	
16	1	CN7	Water Resistant	-	-	-	Resists Moisture
17	2	CN6	Keyboard Durability	Years	1	3	Average use
18	1	CN4	Signal to Noise	Ratio	10:1	100:1	
19	3	CN2	Keyboard drivers	-	New	Original	