THE SWITCH EV SPEC SHEET

The Switch EV	Standard Equipment	Optional Equipment
Seating	Two Racing Style Bucket Seats	1, 2, 3 bucket seats or combination with bench seat
Safety Belts	Combination over the shoulder lab belts	5 Point racing harness for bucket seats, lab belts for bench
Instrumentation	Speedometer, voltage meter 12 volt and traction battery, Amp meter, State of Charge (Fuel gauge)	For Lithium Battery Packs ATI - **Android Tablet interface provides detailed data about vehicle**
Brakes	Front Disc Brakes Rear Combination Disc Brake parking brake	
Steering	Rack and Pinion	Power Assist
Headlights	Left, Right and Center LED low and high beam	
Tail Lights, License Plate	LED	
Indicator Lights	Normal conditions Charging Parking Brake engaged Battery Error Condition with buzzer	
Speedometer	Electronic Hall Effect Sensor – pre-programmed	Retro GPS Speedometer/Odometer ATI GPS tablet Based
Wheels	Solid High Polished Steel Wheels	Various
Tires	205/50 - 15	
Transmission	Direct Drive – Dual Chain	Direct Drive - Belt
Ratio	14-1	Options available
Motors	Permanent Magnet Brushless DC	D&D 6 Inch DC Netgain Warp 9 DC HPEVS AC motors Generic – You Pick
Controllers	Motor Brand Specific	
RPM Limits	Netgain Hyper/9 PM D&D 6 Inch DC Netgain Warp 9 DC HPEVS AC motors	8,000 RPM 2,500 RPM 3,500 RPM 8,000 RPM

Spec Sheet Continued

The Switch EV	Standard Equipment	Optional Equipment
Torque	Netgain Hyper/9	173 Ft-lbs. at 0 RPM
Horsepower	Netgain Hyper/9 108 Horsepower	
Traction Battery	108 Volts 556 AMPs 80 Horsepower	72 Volt PB 450 AMPs 40 HP 108 volt 11KwHr LI 60 HP 144 volt 15KwHr LI 108 HP 144 volt 30KwHr LI 108 HP
Vehicle Dimensions		
Ground Clearance	5 Inches	3.5 Inches 6.5 Inches
Curb Weight	1,350 Pounds 615KG – Varies by battery type	
Maximum Weight	2,050 Pounds 930KG	
Switch Height	54.2 inches	
Switch Overall Length	144.3 Inches	
Switch Track Width	78.1 Inches	
Switch Overall Width	79 Inches	
Ignition	Two Ignition Keys Standard	Keyless Start with Fob
Features and Warranty		
Color / Graphics	Delivered unpainted with protective seal	Powder Coating Priming

Frequently Asked Questions

1) Seat Configurations
    a. We offer 2, 3 and 4 passenger versions
        i. 2 is left or right hand drive, 2 seats in front
        ii. 3 is 1 seat in front center drive and two seats in rear
        iii. 4 is 2 in front left or right had drive and either 2 in back or bench seats
2) Battery Options
    a. We offer a variety of power (battery) options
        i. Starting with a small lead acid sealed AGM 72 volt battery – 15 mile range
        ii. 108 volt 7.2KwHr Lithium Manganese battery – 40 mile range
        iii. 108 volt 11KwHr Lithium Manganese – 60 mile range
        iv. 144 volt 15KwHr Lithium Manganese – 85 mile range

    All ranges are estimates. Driving speeds and styles significantly effect range.

3) Top Speed
        i. Lead acid vehicle 40 MPH
        ii. Lithium Vehicles 80+ MPH

4) 0-60 MPH
        i. Lead acid – 0-40 in 8 seconds
        ii. Lithium 0-60 in 6 seconds or less

5) Charging
        i. 110 to 240 volts
        ii. 110 volts charge at the rate of 10-12 miles per hour of charge
        iii. 240 volts depend on amperage of circuit
            1. 25 amp circuit charges at about 25 miles per hour of charge
            2. 50 amp circuit charges at about 35 miles per hour of charge
        iv. Charging can use standard J1772 outlet for lithium batteries
        v. Charging uses standard 110/240 NEMA inlet for charging

6) The vehicle is designed for several sub-assemblies to be constructed simultaneously, so as many as 20 – 25 students can work on a vehicle, or 1-8 students can work on a vehicle.

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