

Product
Images



MSRP

\$1,799

Product
Overview

A Base Model That’s Anything But Basic

The redesigned, supercharged CrossCurrent S2 features the industry-leading 52 Volt and 13.0 Ah down-tube battery fueling a powerful 750 Watt geared hub motor with class 3 capable (28 mph) and a stunning 100 mile riding range. A generously engineered dual torque and cadence sensing pedal assist system provide a super smooth and responsive ride. LCD display with advanced features designed for commuters. Comes fully-loaded with premium features, like Kenda K1088 tires, a rack, fenders, a 1,050 lumen front head light and more.

Features
Overview

Standard Features

- 750 W Bafang Geared Hub Motor
- 28 MPH Top Speed / Class 3
- 52 Volts Advanced Battery System
- 13.0 Ah Extended Range Battery
- 25 Amp Peak Controller
- Race Track Mode Setting
- Tektro Hydraulic Disc Brakes
- LCD Advanced Matrix Display
- Torque and Cadence Pedal Sensor
- Thumb Throttle Included
- 9 Speed Shimano Cassette Transmission
- LED Front and Rear Lights
- Ergonomic Grips

Frame
Sizes

- M: 16.5"
- L: 18.0"
- XL: 20.0"



Motor

750 Watts / Bafang Motor (8Fun)

- 1,300 Watts peak power @ 25A
- Geared hub motor for higher torque
- Super high speed winding
- Low-drag freewheeling clutch
- Shimano cassette standard

Included
Battery Pack

52V / 13.0 Ah Hyper Extended Range Battery

- 52 Volts system (14S5P Configuration)
- 673 Wh Capacity
- LG Chem (Korea)
- 45 Amp High rate BMS
- 70 Cells / 18650 Type
- 11.6 lbs
- Custom designed wide format inclosure
- Lockable and removable from the bike
- On-bike and off-bike charging capable
- 8 Amp chargeing capable
- 3-Pin XLR Charge Port
- Dual fuse setup
- IP 67 Illuminated power button
- 3C Discharge rating
- 600 Charge cycles to 60%

Controller

9 Transistor / 25 Amp Peak

- Sine wave FOC
- Customized tuning algorithm
- Thermally managed
- 48V LED light output
- Overboost function
- Fully potted resistant construction
- Cruise control function
- Walk function
- XT60 connectors
- Firmware upgradable

E-Bike Class

Class 3 Capable: 28 mph (45 km/h)

- Default Configuration: Class 2 E-Bike
- Optional Configuration: Class 3 and Class 1 E-Bike

Performance

Classification	Power Limit	Pedal Assist	Throttle Operation
USA Class 2 / 750W (Default Configuration)	Set NDW to 4	20 mph (32 km/h)	20 mph (32 km/h)
USA Class 3 / 750W	Set NDW to 4	28 mph (45 km/h)	20 mph (32 km/h)
USA Class 1 / 750W	Set NDW to 4	20 mph (32 km/h)	Not allowed
Europe 250W / 25 km/h	Set NDW to 1	15 mph (25 km/h)	Not Allowed
Europe S-Pedelec / 45 km/h	Set NDW to 4	28 mph (45 km/h)	Not Allowed
Race Track Mode	Set NDW to 5	~ 33 mph (52 km/h) @52 V	20 mph (32 km/h)
Default configuration is Class 2 (20 mph and 750 Watts) Road and bike path legal in most states. The power system is user-settable to any of the other modes from the LCD Display. Check with local regulations before operating your e-bike on public roads or paths.			

Throttle
Control

Thumb Throttle (included)

- Right or left side mountable
- Throttle can be removed if desired
- Throttle set to 20 mph per e-bike regulations



Pedal
Sensors

Advanced Dual Input Torque and Cadence Sensors

Torque sensor (included)

Rear Drop-out frame-mounted strain gauge
1,000 samples per second

Cadence sensor (included)

104 poles per crank revolution (maximum)
Digitally filtered output

Controller Software

Athletically tuned assist software using the torque sensor, cadence sensor, speed measurement, voltage and controller temperature to modulate motor output. Intelligent pedal assist and throttle blending algorithms.

Display
Interface

LCD Matrix Display (included)

Matrix Display with 120 x 64 Pixels
Customized interface with 3-button layout
7 Levels assist: 0, ECO, 1, 2, 3, SPORT (28 mph), RACE (Unlimited)
Basic and Advanced display modes
Water resistant IP65
Backlit illuminated display
5 Pin quick-connect cable with brass lock-ring



Assist System's Functions

Advanced Display Mode

Toggle Advanced Display Mode to see following real-time metrics:

Speed	Trip Distance	Volts	Wh/mi Efficiency
Amps	Watts	Controller Temperature	Odometer
Amp-Hours	Watt-Hours	Assist Level Setting	

Throttle-Assist Boost® (TAB)

Instantly add up to 1,000 Watts (20 Amps) of boost when pedaling and simultaneously holding down the throttle. TAB available in any assist setting from 0 mph up to 20 mph.

Active Cruise Control Function

Locks in any speed below 20 mph. Speed will be maintained without pedaling or using the throttle until: the brake is applied, pushing any button or giving additional throttle input. Pedaling can increase the speed, but the e-bike will return to the pre-set speed if pedaling stops.

Walk Function

Push-button throttle limited to 6 kmh to assist when pushing or walking the e-bike.

LED Head Light Control

Turn on the LED headlight from the display console. Option to allow the headlight to always stay on.

Display Backlight Control

Turn on the display's backlight to see the screen at night. Option to allow the headlight to always stay on.

Torque Sensor Deactivation Function

Turn off the torque sensor signal. The pedal assist will only use the cadence sensor input.

Speed Limiter

Set the maximum speed limit of the throttle or pedal assist system.

Assist Level Limiter

Set the maximum assist level that can be selected: ECO, 1, 2, 3, Sport or Race

Low Voltage Limiter

Set the lowest voltage allowed by the electric drive system. This is used to control how deeply the battery is allowed to discharge.

Display Brightness level

Set the brightness level of the display

Wheel Circumference input

Set the precise wheel circumference in mm.

Race Track Mode

Pedal assist is set to the most aggressive setting. The bike is not electronically speed limited. The top speed will be limited only by the power available to the motor. Use this setting on non-public roads only.

Power Off Delay

Set the inactivity duration before the bike automatically turns off.



CrossCurrent S2

Detailed Specifications

Charger

- **52V / 2 Amps Standard charger (included)**
 - 2 Amps max charge rate
 - 3 Pin XLR Connector
 - UL Certified
 - On-bike and off-bike charging
- **52V / 8 Amps Advanced fast charger (optional)**
 - Grin Tech / Cycle Satiator
 - 8 Amp max charge rate
 - 3 Pin XLR connector
 - UL Certified
 - 80% Charge setting
 - Storage charge setting
 - Fully programmable
 - Water resistant
 - On-bike and off bike charging

Range

CrossCurrent S2 Real World Battery Range Testing	Battery Voltage		52 Volts
	Amp-Hours Capacity		13.0 Ah
	Cells		70 Cells
	Energy Capacity		673 Watt-Hours
	Weight (lbs)		11.6 lbs
	Weight (kg)		5.3 kg
Recharge Time to 80%	2 Amp Standard Charger		5.2 Hours
	8 Amp Optional Charger		1.3 Hours
Throttle Only No Pedaling Throttle Only Test Conditions <ul style="list-style-type: none">● Speed limit set to desired speed● Stock tires at 60 psi● Rider + payload 190 lbs (86.3 kg)● Level ground● Continuous riding● Little to no wind● Warm and dry weather Note: Throttle-only mode is limited to 20 mph	Target Speed	Efficiency	Estimated Range
	10 mph	9.0 Wh/mi	69 Miles
	12 mph	10.9 Wh/mi	57 Miles
	14 mph	12.8 Wh/mi	49 Miles
	16 mph	14.7 Wh/mi	42 Miles
	18 mph	16.6 Wh/mi	38 Miles
	20 mph	18.5 Wh/mi	34 Miles
Assist Level 3 Normal Pedaling Normal Pedaling Test Conditions <ul style="list-style-type: none">● Speed limit set to desired speed● Stock tires at 60 psi● Rider + payload 190 lbs (86.3 kg)● Level ground● Continuous riding● Little to no wind● Warm and dry weather	Speed	Efficiency	Estimated Range
	10 mph	5.5 Wh/mi	114 Miles
	12 mph	7.6 Wh/mi	82 Miles
	14 mph	9.7 Wh/mi	64 Miles
	16 mph	11.8 Wh/mi	53 Miles
	18 mph	13.9 Wh/mi	45 Miles
	20 mph	16.0 Wh/mi	39 Miles
	22 mph	18.2 Wh/mi	34 Miles
	24 mph	20.3 Wh/mi	31 Miles

Wire Harness

- **Wire harness (standard)**
 - 1-to-4 Quick connect cable
 - Brass lock-ring
 - Water resistant



Frame	6061 Aluminum Heat Treated Frame Integrated & removable down-tube battery Custom Designed Hidden cable channel system CNC battery compartment Hydroformed top tube Dual water bottle cage mount Rear pannier rack mount Fender stay mounts Dual kickstand mounts 275 lbs (120 kg) total payload rating
Wheels	Double walled aluminum alloy 36 Hole 19mm inner wheel width 12G / 13G brass grommets High pressure rim strip Flat Black
Spokes	Front: 13G Black / 230.5 mm Rear: 13G Heavy duty / SAPIM / Stainless / Black / 275.5 mm
Tires	Kenda K1088 Tire 700C x 45C (45-622) E-bike rated
Brakes	Tektro HD-E350 Hydraulic Disc Rotors: Front: 180 mm / Rear: 180 mm Pad: High performance metal ceramic compound / B01S Style
Transmission Derailleur	Shimano Altus 9 Speed 11-32T / Cassette / Trigger shifter
Transmission Chain Ring	Pro Wheel 52T Aluminum CNC / 170 mm Outside chain guide Inside chain catcher to eliminate chain drops
Chain	KMC K99 BR Rust Buster 9 Speed Compatible 128 links
Fork	Suntour NCX Suspension Fork Hydraulic lockout Adjustable spring rate 1-1/8 Threadless Fender stay mounts Standard quick release
Grips	Velo / Ergonomic lock-on grips
Handle Bar & Stem	Handle Bar: Promax Stem DA-247 / 80 mm +7 / DEG rise / 31.8 mm clamp Stem: Promax Handle Bar / 680 mm width / 31.8 mm



CrossCurrent S2

Detailed Specifications

Seat Post & Seat	<p>Seat: Selle Royal</p> <p>Seat Post: Promax 31.6 mm seat post</p> <p>Seat Post Clamp: Promax quick release seat post clamp</p>
LED Head Light	<p>Front LED Light (included)</p> <p>1,050 Lum</p> <p>CREE 10W</p> <p>10-60V input</p> <p>Aluminum body design</p> <p>Powered by main battery</p> <p>Waterproof design IP69</p> <p>Display controlled on/off function</p>
Pedals	<p>Platform Pedals</p> <p>Wellgo B249DU</p> <p>Polymer bearing</p>
Weight	<p>Total: 55.6 lbs (26.6 kg)</p> <p>Bike: 44.0 lbs (20.9 kg)</p> <p>Battery: 11.6 lbs (5.7 kg)</p> <p>Bike Weight Limits: 275 lbs (125 kg) total payload rating</p> <p>Rack Weight Limits: 50 lb (25 kg) rack payload</p>
Warranty	<p>1 Year</p>
Packing Dimensions	<p>71" x 12" x 33" (L x W x H)</p> <p>Packaging is optimized for minimal damage and fast setup</p> <p>Front wheel and pedals removed</p> <p>Handle bars shipped installed on bike</p> <p>Includes all necessary assembly tools</p> <p>Bike + Box: 70 lbs (31.8 kg)</p>