Dimensions	Front	Rear
Overall Length [mm]	3065	
Overall Width [mm]	1442	
Overall Height [mm]	1178	
Wheelbase [mm]	1580	
Track [mm]	1220	1200
Weight with 68kg driver [kg]	144	158

Suspension Parameters	Front	Rear
Suspension type	Double unequal length A-arm ,pull rod actuated	Double unequal length A-arm , push rod actuated
Design ride height (chassis to ground) [mm]	38.1	50.8
Center of gravity design height [mm]	280mm	
Suspension design travel - jounce [mm]	32.791	32.385
Suspension design travel - rebound [mm]	32.791	32.385
Wheel rate (chassis to wheel center) [N/mm]	23.313 N/mm ;adjustable between 23.313 N/mm to 25.904 N/mm	28.018 N/mm ;adjustable between 28.018 N/mm to 33.621 N/mm
Roll rate (chassis to wheel center) [degrees/g]	0.9 degrees/g	
Jounce damping (chassis to wheel center) [Ns/mm]	2.2	2
Rebound damping (chassis to wheel center) [Ns/mm]	1.8	1.6
Sprung mass (incl. 68 kg driver) natural frequency [Hz]	3.2 (adjustable between 2.9 to 3.3)	3.1726 (adjustable between 2.9 to 3.3)
Motion type	linear	linear
Motion ratio (spring travel/wheel center travel) [mm/mm]	.7692	0.8
Camber coefficient in bump [deg/mm]	0.08	0.056
Camber coefficient in roll [deg/deg]	0.24	0.25
Static toe [degrees]	0.6 degrees toe out	0.6 degrees toe in
Static toe adjustment method	adjustable steering links	adjustable toe links
Static camber [degrees]	-2.3 degrees	-1.5 degrees
Static camber adjustment method	Shim plates on uprights	Shim plates on uprights
Front caster angle [degrees]	3.5 degrees	
Front caster angle adjustment method	non adjustable	
Front kingpin inclination [degrees]	5.38	
Front kingpin inclination adjustment method	non adjustable	
Kingpin offset [mm]	43.71	
Kingpin trail [mm]	57.33	

Static ackermann [%]	107	
Static ackermann adjustment method	non adjustable	
Anti dive / Anti lift [%]	7.8% / 0.0 %	7.4 % / -9.7%
Roll center position static (above ground) [mm]	30.3	44.17
Roll center position at 1g lateral acceleration [mm]	28.125mm above ground, 117.19mm towards unladen side	43.615mm above ground, 46.445mm towards unladen side
Other significant suspension parts	anti roll bar (roll stiffness=241.628 Nm/deg twist) ; Carbon fibre A arms with steel inserts	anti roll bar (roll stiffness=275.546 Nm/deg twist) ; carbon fibre A-arms with steel inserts

Tyres and Wheels	**Front**	**Rear**
Wheels	7x13, 22mm offset, 1 pc Al rim	7x13, 22mm offset, 1 pc Al rim
Tyres - dry, make	Continental	
Tyres - dry, size	205 x 510 R13	205 x 510 R13
Tyres - dry, compound	34 M	
Tyres - rain, make	Continental	
Tyres - rain, size	205 x 510 R13	205 x 510 R13
Tyres - rain, compound	34 M	

Steering system	**Front**	**Rear**
Steering location	30.5mm above lower A-arm from centre	no rear wheel steer
Steering ratio (steering wheel / outer wheel) [deg/deg]	4.71	N/a
Steering arm length [mm]	76.3	N/a

Brake System / Hub & Axle	**Front**	**Rear**
Rotors (incl. outer and inner diameter [mm] of friction surface)	220mm OD, 147.5mm ID, Floating brakedisc, machined-Al hub	218.5mm OD, 147.5mm ID, floating brakedisc, machined-Al hub
Master cylinders (incl. diameters [mm])	AP Racing spherical bearing mounted 14mm bore front, 19mm bore rear	
Calipers (incl. diameters [mm])	31.75mm piston dia., 4-piston(opposing), fixed mounting	31.75mm piston dia., 4-piston(opposing), fixed mounting
Hub bearings	Tapered roller bearing 32010	Tapered roller bearing 32915
Upright assembly	waterjet andCNC machined 6061-Al, anodized, integral caliper and tie rod mount	waterjet and CNC machined6061-Al,anodized,integral caliper and toe control mount
Axle type, size, and material	Rotating spindle , 50 mm dia , Al-6061 , hard anodized	Rotating axle, 75mm dia OD , Al - 6061 , hard anodized
ABS	N/a	

Ergonomics	
Driver size Adjustments	Fixed seat and steering wheel with adjustable pedal box upto 45 mm fore and aft
Seat (materials, padding)	Wet Lay up (resin Infusion) Carbon fibre
Driver visibility (angle of side view, mirrors?)	210 degree side visibility
Shift actuator (type, location)	manually actuated lever , Push pull cable actuated

Clutch actuator (type, location)	Foot pedal ,cable actuated
Instrumentation	Shift light module with rpm indicator , gear position sensor

Frame	
Frame construction	Front and rear tubular space frame
Material	DIN 2391 st 52 steel round tubing
Joining method and material	TIG Welding, Filler material: AWS No. ER-70 S2, Size of filler material: 1.6 mm
Targets (Torsional stiffness or other)	1350 Nm/deg between suspension mount points
Torsional stiffness [Nm/deg]	1020
Torsional stiffness validation method	FEA and validation on test rig
Bare frame weight with brackets and paint [kg]	38
Crush zone material	carbon fibre
Crush zone length [mm]	207.5
Crush zone energy capacity [Joules]	11025
Additional safety features	n/a

Powertrain	
Manufacture / Model	2004 Honda CBR 600cc f4i
Bore [mm]	67
Stroke [mm]	42.5
Cylinders	4
Displacement [cc]	599.4
Compression ratio	12 : 1
Induction	naturaly aspirated
Throttle body / mechanism	42mm , spring throttle actuation
Fuel type	gasoline
Max power design RPM	9500
Max torque design RPM	7000
Min break specific fuel consumption [g/(kWh)]	n/a
Min RPM for 80% max torque	5000
Fuel system (manf'r, and type)	Honda stock fuel rail, Electronic fuel injection, sequential
Fuel system sensors (used in fuel mapping)	Throttle position, Crank Position, LSU Lambda Sensor, Engine Temperature
Fuel pressure [bar]	4.13
Injector location	110mm before and inclined at 26 degrees to vertical axis of inlet port
Intake plenum volume [cc]	1541
Intake plenum runner length(s) [mm]	286.33
Exhaust header design	4-2-1 Unequal Length (+/- 12.5 mm), 52 mm collector
EffectiveeExhaust runner length [mm]	914.4

Ignition system	Electronic Ignition - Coil on Plug, Motec ECU - 4 channel Ignition module
Ignition timing	3-D map, RPM and Throttle Position
Oiling system (wet/dry sump, mods)	Forced Pressure Wet sump
Coolant system and radiator location	water cooled; chassis mounted single radiator with an electric pump and fan
Fuel tank location, type	Aluminum tank, behind driver seat covered with firewall
Muffler	Free flow single glass pack
Other significant engine modifications	Reground intake and exhaust camshafts

Drivetrain	
Drive type	Chain Drive
Differential type	Clutch pack Limited Slip Differential, 30Nm preload, 1.5 bias ratio
Final drive ratio	3.81 (adjutable to 4)
Vehicle speed @ max power rpm:	
1st gear [km/h]	55
2nd gear [km/h]	76
3rd gear [km/h]	96
4th gear [km/h]	111
5th gear [km/h]	124
6th gear [km/h]	n/a
Half shaft size and material	20.6mm OD, 9mm ID, ASTM Rc40 core hardened
Joint type	Constant Velocity tripod joint

Electronics	
Driver aids	Shift light module , Driver Warnings, Traction & Launch Control
Data logging	Onboard Data Logging by MoTec M400 ECU, Maximum 64 channels @ 200Hz
Telemetry system	UDP based telemetry system via WLAN
electric auxilliaries (fan, fuelpump, waterpump)	Electric Water pump, Electric Fan, Fuel Pump
CAN bus	N/a
Battery	LiFePO4
Other significant electronic parts	Power distribution module using n-channel mosfet,max switching of upto 7.34 Mhz

Aerodynamics	**Front**	**Rear**
Wing (lift/drag coef., material, weight)	N/a	N/a
Undertray (downforce/speed)	12 kg at 65 km/hr , center of pressure 300mm aft of vehicle COG	
Wing mounting	N/a	

Optional Information	
Body work?	
Special bit A?	none
Special bit B?	none