



FPV POLAR XC5500 Brushless DC Motor First-Person View

Our Product Introduction

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Basic Information

- Place of Origin: Guangdong, China
- Brand Name: GS
- Model Number: XC5500 505KV 635KV
- Price: Negotiable
- Delivery Time: 6-8
- Payment Terms: T/T
- Supply Ability: 100



Product Specification

- Motor Model: Crimson Xc5500 V1.0
- Motor Size: D:50x67.9 Mm
- Propeller Mounting Holes: D:12 M3x4/ M6 Nut
- Shaft Diameter: IN: 6 Mm
- Bearing: 686ZZ*2/696ZZ
- Rotor Balance: $\leq 5\text{mg}$
- Motor Balance: $\leq 10\text{ Mg}$
- Motor Mounting Holes: D:25 M3x4, D:30 M4x4
- Cable Length: 750 Mm 14# Awg(Black) Silicone
- Highlight: **POLAR XC5500 Brushless DC Motor, FPV Brushless DC Motor, First-Person View Brushless DC Motor**



More Images



Product Description

FPV POLAR XC5500 Brushless DC Motor First-Person View

XC5500 and XC5000 motors are designed for the fastest high-end X-class drones, i.e.: 800-1200mm multi-rotor aircraft, VTOL aircraft and agricultural copters (2-3kg load per rotor).

1. Weighs 324g with 3pcs durable bearings.
2. Maximum thrust 6.1kg.

Enhanced power output : The XC5500 is designed to potentially deliver more power than its predecessor, allowing for faster acceleration and improved performance in freestyle flight.

High efficiency: Like other brushless motors, the XC5500 will offer high efficiency, converting more of the electrical energy from the battery into mechanical energy for propulsion, thereby extending flight time.

Durable construction: The XC5500 is brushless and durable, able to withstand the demands of frequent and intense FPV sessions.

Precise throttle control: The XC5500 will provide precise control over speed and power, which is essential for maneuvering in confined Spaces, performing aerial stunts, and maintaining stability during FPV flights.

Cooling optimization: To handle high power output and continuous use, the XC5500 may feature a better cooling design that prevents overheating and maintains consistent performance.

Compact and lightweight: FPV motors like the XC5500 are often designed to be compact and lightweight, minimizing the overall weight of the drone and allowing for better agility and control.

CRIMSON XC5500

ENERGY EFFICIENT 505KV
ENTHUSIASTS EXTREME EDITION

2.0~3.0 kgf

RECOMMENDED
HOVER THRUST

OPTIMIZED
WEIGHT 324g

6.1 kgf

MAXIMUM
THRUST

EFFICIENCY >80%

MAXIMUM THRUST MAY DEPEND ON
BATTERY LEVEL, PROPELLER TYPE,
AIR PRESSURE AND OTHER CONDITIONS



MAD Crimson XC5500 EEE 505KV MAS 12x8x3 Carbon Fiber MAD BLHELI_32 100A (6-12S)

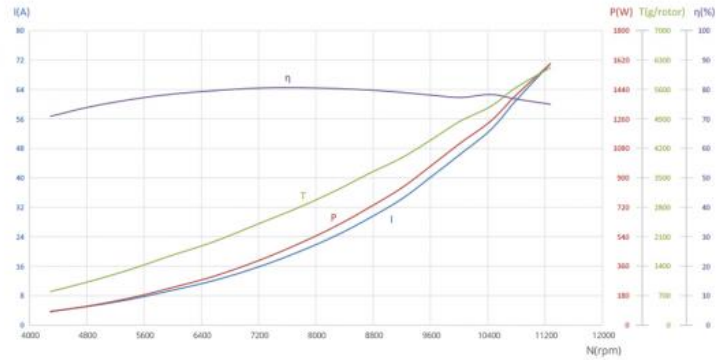
8S

MAX
113°C

Analytical Graph of Motor Operation

I – Current, P – Input Power, η – Electrical Efficiency, T – Thrust, N – Rotational Speed

The data above was measured with an input voltage of 32 V, at a temperature of 25°C and sea level. The rotational speed was adjusted by the throttle.

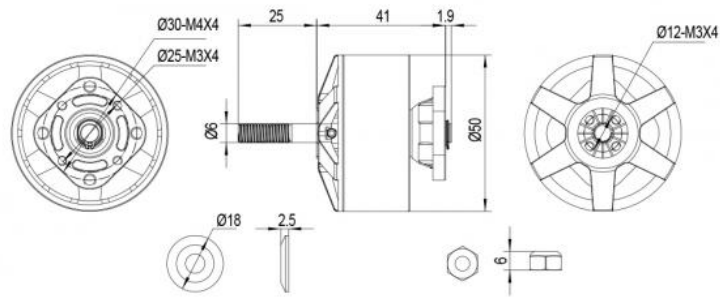


Motor Data

Motor Model	MAD Crimson XC5500 EEE V1.0	Number of pole pairs	7
Stator	TAIWAN / Anticorrosive	Varnished wire Degree	180°C
Motor Size	D:50 × 67.9 mm	Magnet Degree	150°C
Degree of Protection	Rain protection	Cable Length	750 mm 14# Awg(Black) silicone
Centrifugal Heat Dissipation	Independent	Rotor Balance	≤5 mg
Propeller Mounting Holes	D:12 M3×4 / M6 Nut	Motor Balance	≤10 mg
Shaft Diameter	IN: 6 mm	Motor Mounting Holes	D:25 M3×4, D:30 M4×4
Bearing	EZO 686ZZ *2 / EZO 696ZZ	Disruptive test	500 V
Additional Accessories	Propeller Plate *1, 4.0mm Bullet Connector*3, Heat Shrinkable Tube*3, M4*8mm *4 Motor Screws, M6 Nut Propeller Screws, Sticker*2		

Specifications

RPM/V	505 KV	Nominal Voltage	6-8S lipo battery
No Load Current	1.9A/20V	Internal resistance	31mΩ
Motor Weight	324 g	Product Boxed Weight	544g (110 x 110 x 95 mm)
Maximum Current	71 A	Maximum Power	2172W
Maximum thrust	6.1 kg	Maximum Torque	1.4 Nm
Recommended ESC	MAD BLHELI_32 100A (6-12S)	Recommended Propellers	MAS 12x8x3, MAS 13x12x3
UAV take-off weight	8S-12V 8kg-Quadcopter 12kg-Hexacopter 16kg-Octocopter	Single rotor take-off weight	2kg ~ 3kg



MAD Crimson XC5500 EEE 505KV MAS 12x8x3 Carbon Fiber MAD BLHELI_32 100A (6-12S)

6S

MAX
71°C

Throttle [%]	Voltage [V]	Current [A]	Input Power [W]	Output Power [W]	Torque [N·m]	RPM	Thrust [gf]	Efficiency [%]	Efficiency [gf/W]
30	23.99	2.36	56.2	36.1	0.107	3238	438	67	8.1
35	23.97	3.37	80.2	55.5	0.141	3755	616	72.2	8.0
40	23.94	4.69	111.8	80.6	0.180	4275	799	75.1	7.4
45	23.91	6.09	145.1	108.0	0.220	4694	996	77.4	7.1
50	23.88	7.77	185.4	140.5	0.262	5116	1202	78.7	6.7
55	23.85	9.86	234.6	183.0	0.314	5574	1431	80.8	6.3
60	23.81	12.4	294.8	232.7	0.367	6052	1684	81.7	5.9
65	23.76	15.51	368.0	293.2	0.430	6519	1977	82.2	5.5
70	23.7	18.5	438.1	349.7	0.482	6928	2218	82.3	5.2
75	23.64	22.04	520.6	416.3	0.540	7357	2491	82.2	4.9
80	23.58	25.71	605.7	483.4	0.597	7729	2752	81.8	4.7
85	23.5	29.98	703.9	562.7	0.665	8084	3059	81.6	4.4
90	23.43	34.33	803.6	637.6	0.720	8459	3306	80.8	4.2
95	23.34	39.3	916.7	723.3	0.784	8808	3587	80	4.0
100	23.21	46.35	1075.2	841.3	0.870	9240	3976	78.9	3.7

MAD Crimson XC5500 EEE 505KV MAS 12x8x3 Carbon Fiber MAD BLHELI_32 100A (6-12S)

8S

MAX
113°C

Throttle [%]	Voltage [V]	Current [A]	Input Power [W]	Output Power [W]	Torque [N·m]	RPM	Thrust [gf]	Efficiency [%]	Efficiency [gf/W]
30	31.81	3.75	118.7	81.9	0.182	4296	798	70.9	6.9
35	31.78	5.21	164.9	119.5	0.235	4861	1048	74.2	6.5
40	31.73	7.05	223.6	167.0	0.294	5420	1328	76.6	6.1
45	31.71	9.23	292.1	223.6	0.359	5944	1633	78.3	5.7
50	31.67	12.1	382.8	298.4	0.434	6575	1983	79.6	5.3
55	31.6	15.91	502.2	396.9	0.526	7214	2419	80.5	4.9
60	31.53	20.07	632.4	501.4	0.615	7782	2811	80.6	4.5
65	31.45	24.46	768.9	609.1	0.701	8296	3213	80.3	4.2
70	31.36	29.27	917.4	723.9	0.789	8765	3622	79.8	4.0
75	31.27	34.35	1073.7	841.0	0.872	9205	3983	79	3.7
80	31.16	40.26	1254.1	974.2	0.968	9608	4403	78.1	3.5
85	31.05	46.53	1444.1	1114.6	1.062	10022	4854	77.3	3.4
90	30.94	53.11	1643.0	1248.1	1.141	10443	5201	78.3	3.3
95	30.79	60.83	1872.2	1401.7	1.241	10785	5637	76.8	3.1
100	30.59	71.02	2171.8	1598.4	1.354	11274	6119	75	2.9

MAD Crimson XC5500 EEE 505KV MAS 13x12x3 Carbon Fiber MAD BLHELI_32 100A (6-12S)

6S

MAX
83°C

Throttle [%]	Voltage [V]	Current [A]	Input Power [W]	Output Power [W]	Torque [N·m]	RPM	Thrust [gf]	Efficiency [%]	Efficiency [gf/W]
30	24.13	3.42	82.2	58.3	0.179	3105	568	71.6	7.0
35	24.1	4.87	117.0	86.0	0.232	3540	781	74	6.7
40	24.06	7.21	172.8	131.4	0.308	4080	1062	76.1	6.2
45	24.04	9.37	224.6	173.6	0.370	4480	1323	77.4	5.9
50	23.99	12.02	288.1	224.4	0.440	4871	1586	80.9	5.7
55	23.93	15.06	360.0	280.3	0.509	5263	1852	81	5.4
60	23.86	18.68	445.3	346.5	0.584	5672	2126	80.7	5.0
65	23.78	23.02	547.1	423.0	0.666	6062	2430	79.9	4.6
70	23.7	27.9	660.6	505.2	0.750	6433	2746	78.8	4.3
75	23.61	32.96	777.5	594.4	0.841	6749	3044	78.4	4.0
80	23.51	38.43	903.1	681.7	0.921	7067	3277	77.1	3.7
85	23.41	44.35	1037.6	772.0	1.007	7323	3537	75.7	3.5
90	23.3	50.55	1177.2	863.6	1.086	7592	3799	74.3	3.3
95	23.18	56.95	1319.5	952.3	1.158	7854	4030	72.7	3.1
100	23	66.57	1530.8	1080.5	1.262	8179	4382	71.4	2.9

MAD Crimson XC5500 EEE 505KV APC 13x6.5 MAD BLHELI_32 100A (6-12S)

8S

MAX
102°C

Throttle [%]	Voltage [V]	Current [A]	Input Power [W]	Output Power [W]	Torque [N·m]	RPM	Thrust [gf]	Efficiency [%]	Efficiency [gf/W]
30	31.83	2.74	86.7	53.0	0.114	4431	638	62.9	7.6
35	31.81	3.78	119.7	78.7	0.149	5043	842	67.5	7.2
40	31.79	5.08	161.2	112.2	0.190	5637	1064	71.4	6.8
45	31.75	6.59	208.7	151.7	0.233	6215	1322	74.4	6.5
50	31.72	8.76	277.4	209.5	0.291	6871	1646	77.3	6.1
55	31.67	11.48	362.8	281.6	0.356	7565	2004	79.2	5.6
60	31.62	14.64	462.2	364.3	0.425	8179	2377	80.4	5.2
65	31.56	17.99	567.3	452.4	0.495	8736	2730	81.1	4.9
70	31.49	21.69	682.5	547.2	0.565	9242	3102	81.4	4.6
75	31.42	25.8	810.0	649.2	0.637	9728	3467	81.2	4.3
80	31.33	30.67	960.5	769.9	0.721	10190	3874	81	4.1
85	31.25	36.27	1132.8	900.9	0.808	10642	4203	80.1	3.7
90	31.12	42.44	1320.4	1044.3	0.901	11066	4485	79.4	3.4
95	30.98	49.84	1543.7	1208.6	1.009	11434	4838	80.8	3.2
100	30.82	59.57	1835.3	1408.4	1.124	11966	5186	78.8	2.9

The above data are the theoretical values when the input voltage is 32 V, for reference only. In the case of room temperature of 25°C and no additional cooling device, the current over 60A is non-working zone, 18-60A is short-term (about 10-30s), working zone, and below 18A is sustainable working zone. In actual use, please control the motor running time according to the working environment temperature and heat dissipation conditions.

CRIMSON XC5500

ENERGY EFFICIENT 635KV
ENTHUSIASTS EXTREME EDITION

2.0~3.0 kgf

RECOMMENDED
HOVER THRUST

OPTIMIZED WEIGHT 321g

5.1 kgf

MAXIMUM
THRUST

EFFICIENCY >77%

MAXIMUM THRUST MAY DEPEND ON
BATTERY LEVEL, PROPELLER TYPE,
AIR PRESSURE AND OTHER CONDITIONS



MAD Crimson XC5500 EEE 635KV MAS 12x8x3 Carbon Fiber MAD BLHELI_32 100A (6-12S)

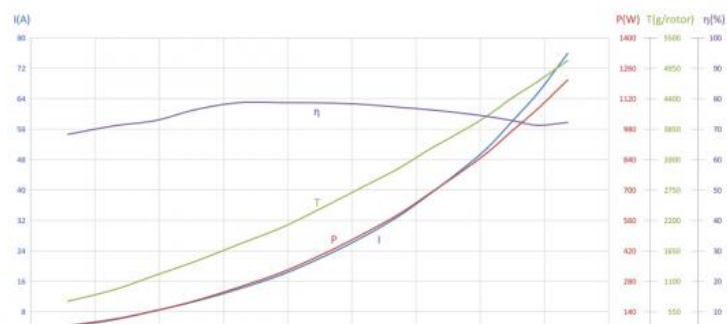
6S

MAX
89°C

Analytical Graph of Motor Operation

I – Current, P – Input Power, η – Electrical Efficiency, T – Thrust, N – Rotational Speed

The data above was measured with an input voltage of 24 V, at a temperature of 25°C and sea level. The rotational speed was adjusted by the throttle.





Specifications

RPM/V	635 KV	Nominal Voltage	6S lipo battery
No Load Current	2.1A/20V	Internal resistance	31 mΩ
Motor Weight	321 g	Product Boxed Weight	544g (110 x 110 x 95 mm)
Maximum Current	76 A	Maximum Power	2172W
Maximum thrust	5.1 kg	Maximum Torque	1.4 Nm
Recommended ESC	MAD BLHEU_32 100A (6-12S)	Recommended Propellers	MA5 12x8x3, MA5 13x12x3
UAV take-off weight	6S-12V 8kg--Quadcopter 12kg--Hexacopter 16kg--Octocopter	Single rotor take-off weight	2kg ~ 3kg

MAD Crimson XC5500 EEE 635KV **MAS 12x8x3 Carbon Fiber** **MAD BLHELI_32 100A (6-12S)**

6S

MAX
89°C

Throttle [%]	Voltage [V]	Current [A]	Input Power [W]	Output Power [W]	Torque [N×m]	RPM	Thrust [gf]	Efficiency [%]	Efficiency [gf/W]
30	24.1	4.34	104.0	70.9	0.167	4062	740	68.3	7.1
35	24.07	6.08	146.1	103.3	0.213	4638	948	71.1	6.5
40	24.03	8.27	198.2	144.2	0.268	5147	1206	72.8	6.1
45	23.99	10.75	257.4	190.7	0.322	5650	1460	76.4	5.8
50	23.93	14	334.6	253.2	0.390	6193	1770	78.7	5.5
55	23.87	17.86	425.9	323.1	0.458	6739	2080	78.7	5.1
60	23.78	22.92	544.5	414.2	0.543	7291	2474	78.6	4.7
65	23.7	27.89	660.5	501.2	0.617	7758	2823	78.1	4.4
70	23.61	33.17	782.5	589.0	0.687	8186	3144	77.2	4.1
75	23.49	38.78	910.6	681.6	0.760	8560	3479	76.4	3.9
80	23.38	44.6	1042.1	773.4	0.828	8923	3773	75.4	3.7
85	23.26	50.96	1184.7	870.5	0.895	9283	4087	74.2	3.5
90	23.16	58.16	1346.4	974.1	0.969	9602	4418	72.8	3.3
95	23.02	65.24	1501.2	1070.4	1.032	9907	4702	71.3	3.1
100	22.83	75.92	1732.5	1206.4	1.120	10290	5089	72.2	3.0

MAD Crimson XC5500 EEE 635KV **APC** 13x6.5 **MAD** BLHELI_32 100A (6-12S)

6S

MAX
76°C

Throttle [%]	Voltage [V]	Current [A]	Input Power [W]	Output Power [W]	Torque [N·m]	RPM	Thrust [g]	Efficiency [%]	Efficiency [g/W]
30	24.12	3.37	80.9	48.0	0.107	4288	595	59.6	7.4
35	24.1	4.62	110.8	72.1	0.141	4874	790	65.4	7.2
40	24.07	6.09	146.0	99.0	0.174	5425	978	67.9	6.7
45	24.04	7.91	189.7	135.0	0.217	5956	1218	71.2	6.4
50	23.99	10.25	245.5	181.0	0.263	6568	1481	75.6	6.2
55	23.95	13.44	321.4	243.3	0.323	7196	1805	78.8	5.9
60	23.87	17.01	405.4	311.0	0.382	7766	2130	79.6	5.5
65	23.81	20.94	498.1	383.1	0.442	8276	2431	79.6	5.1
70	23.75	25.06	594.5	457.2	0.499	8748	2750	79.4	4.8
75	23.67	29.73	703.0	541.0	0.564	9166	3074	79.2	4.5
80	23.58	34.66	816.5	628.1	0.624	9612	3386	78.8	4.3
85	23.48	40.12	941.4	721.4	0.688	10007	3708	78.2	4.0
90	23.37	46.51	1086.1	826.7	0.761	10372	4052	77.3	3.8
95	23.24	53.39	1240.0	931.7	0.830	10718	4250	75.9	3.5
100	23.04	63.61	1465.0	1083.2	0.930	11125	4579	74	3.1

The above data are the theoretical values when the input voltage is 24 V, for reference only. In the case of room temperature of 25°C and no additional cooling device, the current over 64A is non-working zone, 21-64A is short-term (about 10-30s) working zone, and below 21A is sustainable working zone. In actual use, please control the motor running time according to the working environment temperature and heat dissipation conditions.

Our Services

1. We provide 1 Year Warranty. Buy with confidence.
2. If you are not satisfied when you receive your item, please return it within 14 days for a replacement or money back. Please contact me before you return it.
3. If item is defective in 3 months, We will send you a replacement without extra charger, or offer refund after we receive the defective item.
4. If item is defective after 3 months, you can still send it back to us. We will send you a new one after receiving the defective item. But you have to pay the extra shipping fee.



FAQ

Q1: Do you support OEM/ODM?

A1: Yes. We can print your logo on the product.

Q2: About samples.

A2: Under normal circumstances, samples will be ready within 7 days, and 10-20 days for OEM/ODM orders. Sample fee and shipping will be charged.

Q3: What is the delivery time?

A3: For regular orders, we can ship within 15 days, for OEM/ODM, we can ship within 25-45 days (depending on the quantity). In the event of delays, we will notify you in advance of the status and resolution.

Q4: What is the minimum order quantity?

A4: There is no MOQ for wholesale (1 piece accepted), including OEM/ODM.

Q5: What are your payment terms?

A5: L/C.TT100%.

Q6: Can you reduce the shipping cost?

A6: When calculating the shipping cost for you, we always choose the cheapest and safest express. Although we have partnerships with shipping companies, we can't keep costs down because it's not us who get paid. If you think it's expensive for you. You can always make your own choice.

Q7: Return policy.

A7: If you want to replace the received item, you must contact us within 7 days after receiving the item. Returned items should be in their original condition and you should pay for additional shipping.



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