DARKMATTER®

Disruptive Momentum

IAF ISO 9001:2015

GST: 19AAVFD6551E1Z1

BRAHMA F7

DATASHEET

MADE IN INDIA

TABLE OF CONTENTS

CONTENTS	PAGE
Specifications	3 - 5
Dimensions	6
Flight Controller Layout	7
Flight Controller - Peripheral Connection	8
4 in 1 ESC Plug and Play Connection	9
4 in 1 ESC Direct Soldering Connection	10
2 x 4 in 1 ESC Direct Soldering Connection For 8 Motors	11
Single ESCs Direct Soldering Connection For 8 Motors	12
Flight Controller - Package Contents	13
Warranty Details	14

DARKMATTER

BRAHMA F7 – Specifications 1/3

Product Name	DARKMATTER BRAHMA F7
Product Category	Flight Controller
Processor (MCU)	F7 – STM32F722
Gyroscope (IMU)	ICM42688P
Barometer	DPS310
On-Screen Display	AT7456E
Blackbox	32MB Winbond Blackbox
USB Port Type	Type-C
Supported Flight Controller Firmware	BetaFlight (Default), iNav
Power Input	3-6S LiPo
Mounting	30.5 X 30.5mm (4mm hole size)
Dimensions	39mm(L) x 37mm(W) x 5mm(H)
Weight	9g

DARKMATTER

BRAHMA F7 – Specifications 2/3

5V Output	7 groups of 5V output, four +5V pads and 1 BZ+ pad (used for Buzzer) on front side, and 2x LED 5V pads. The total current load is 2A.
9V Output	1 9V output, one +9V pad on front side. The total current load is 2A.
4v5 Output	1 4.5V output, 500mA from USB to connect receiver or other peripherals
3.3V Output	Supported. Up to 500mA current load.
Traditional BetaFlight LED Pad	Supported. 5V, G and LED pads on the bottom side. Used for WS2812 LED controlled by BetaFlight firmware.
Buzzer	BZ+ and BZ- pad used for 5V Buzzer
ESC Signal	M1 - M4 on front side | M5-M8 on bottom side
DJI Air Unit Connection Way	Plug & Play Port

DARKMATTER

BRAHMA F7 – Specifications 3/3

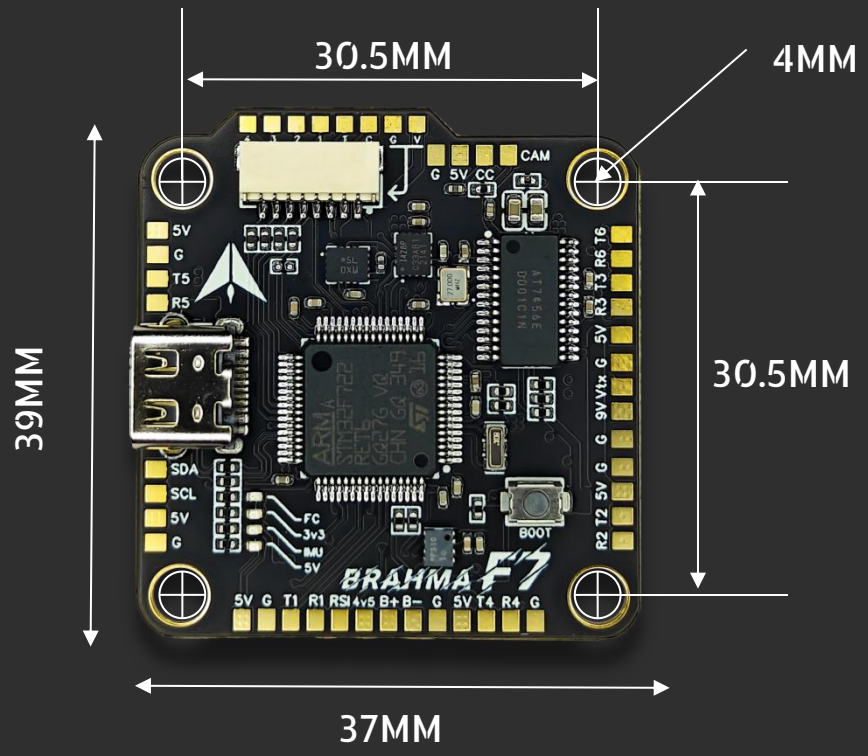
BOOT Button	Supported. Press and hold BOOT button and power the FC on at the same time will force the FC to enter DFU mode, this is for firmware flashing when the FC gets bricked.
RSSI Input	Supported. Named as RSI on the front side.
SmartPort	Use any TX pad of UART for the SmartPort feature.
UART	6 sets(UART1, UART2, UART3(For ESC Telemetry), UART4, UART5, UART6)
ESC Telemetry UART	R3(UART3)
I2C	Supported. SDA & SCL pads on front side. Used for magnetometer, sonar, etc.
OPERATING TEMPERATURE	-10° C TO 55° C
COUNTRY OF ORIGIN	INDIA

DARKMATTER

DIMENSIONS

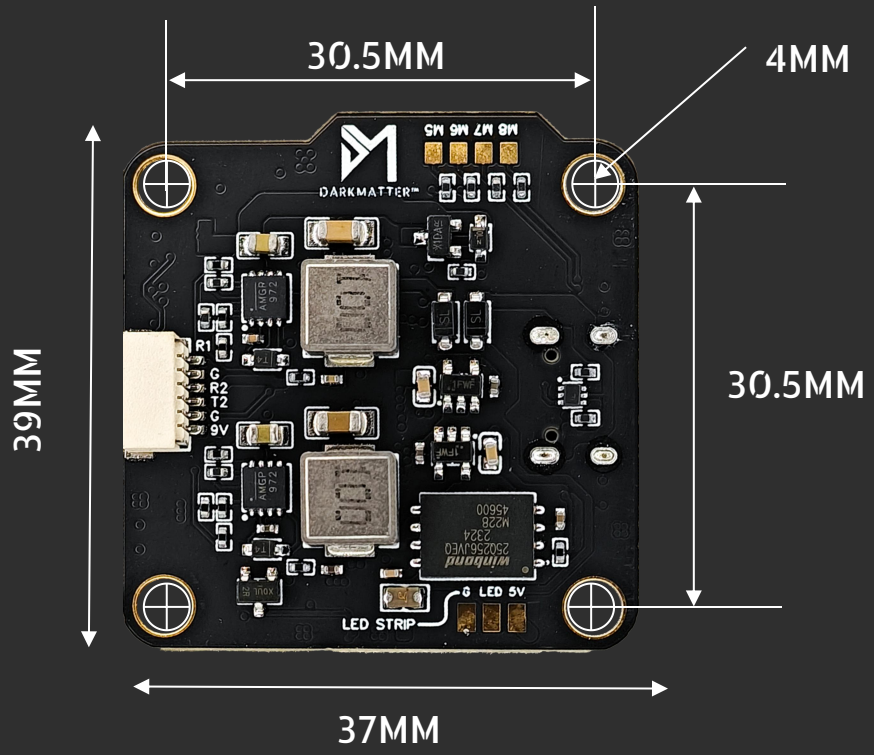
DARKMATTER

Front

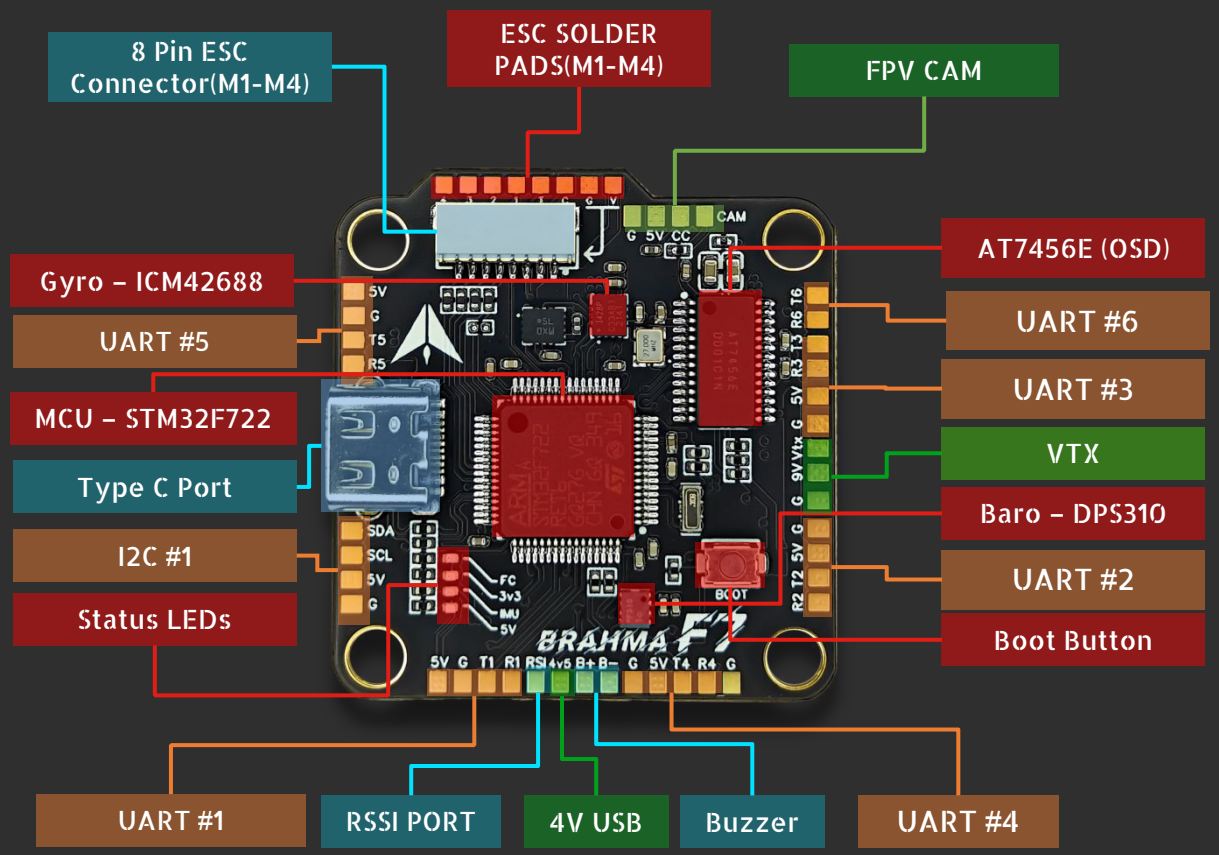


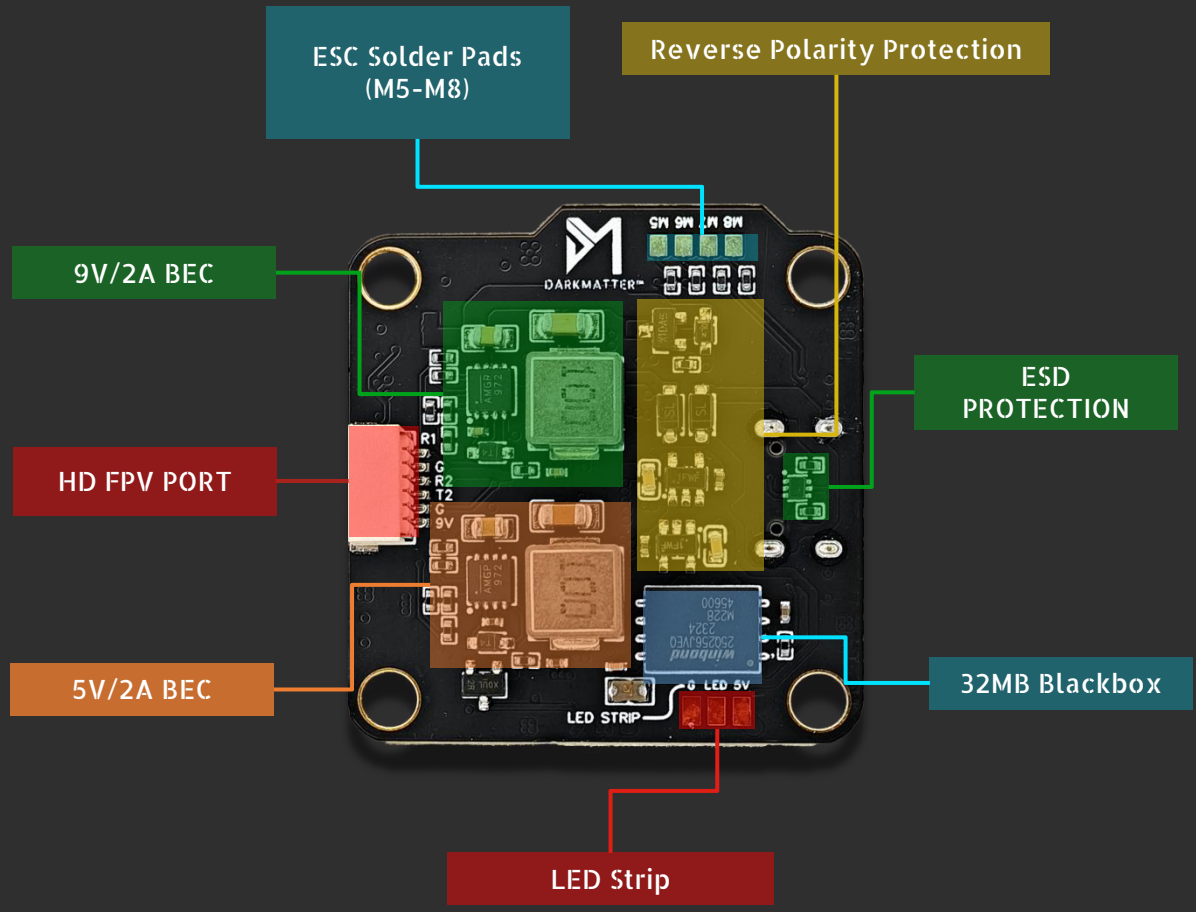
Side

Back

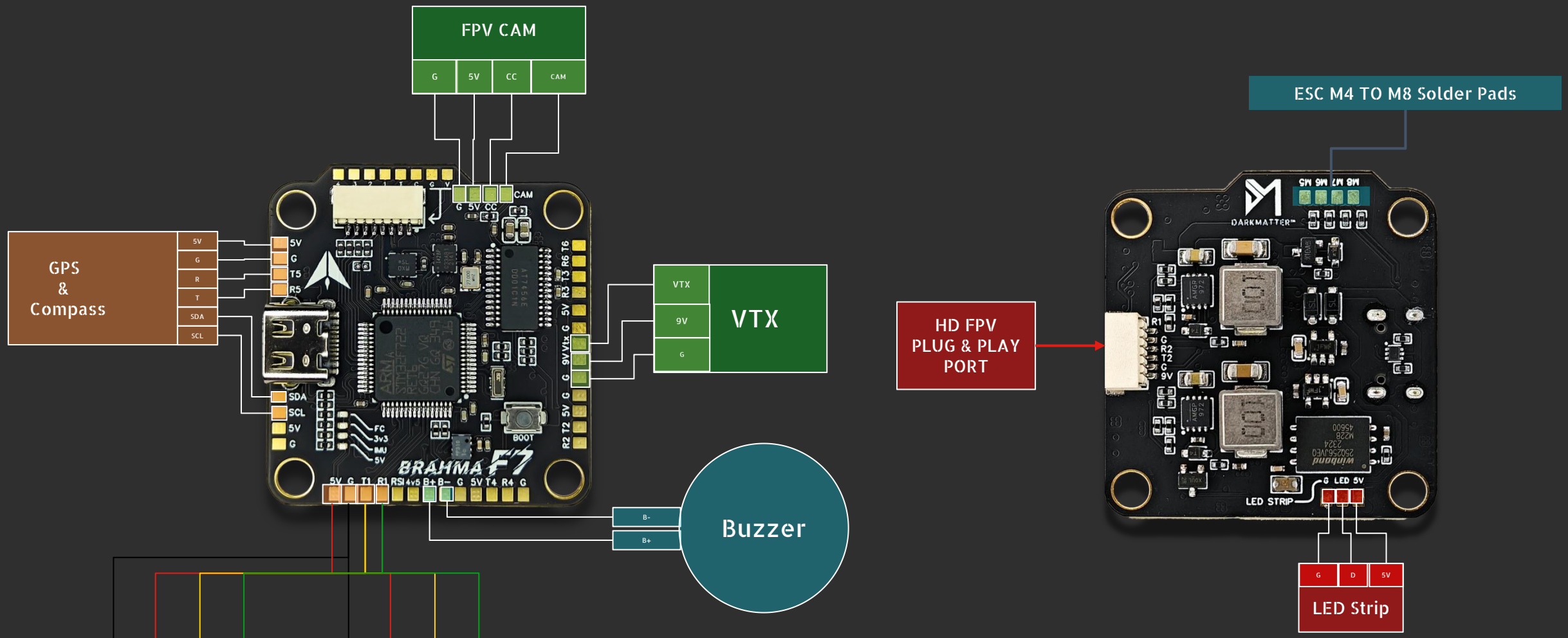


Flight Controller Layout



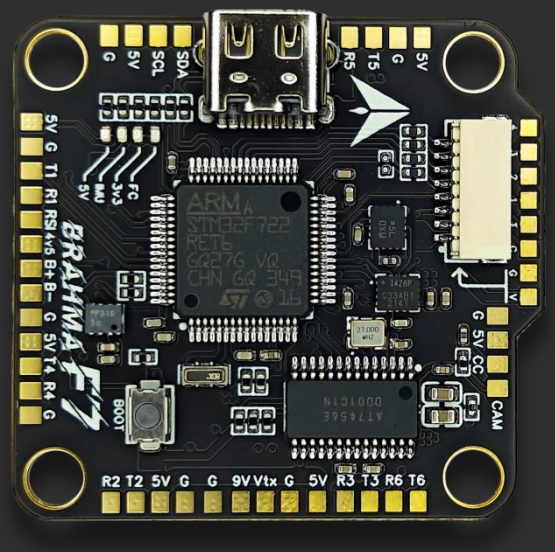


Flight Controller – Peripheral Connection



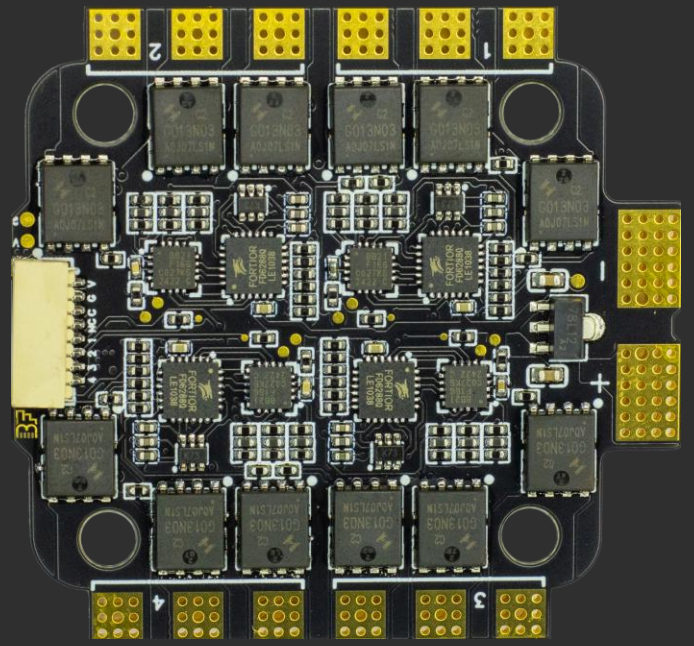
4 in 1 ESC Plug and Play Connection

DARKMATTER



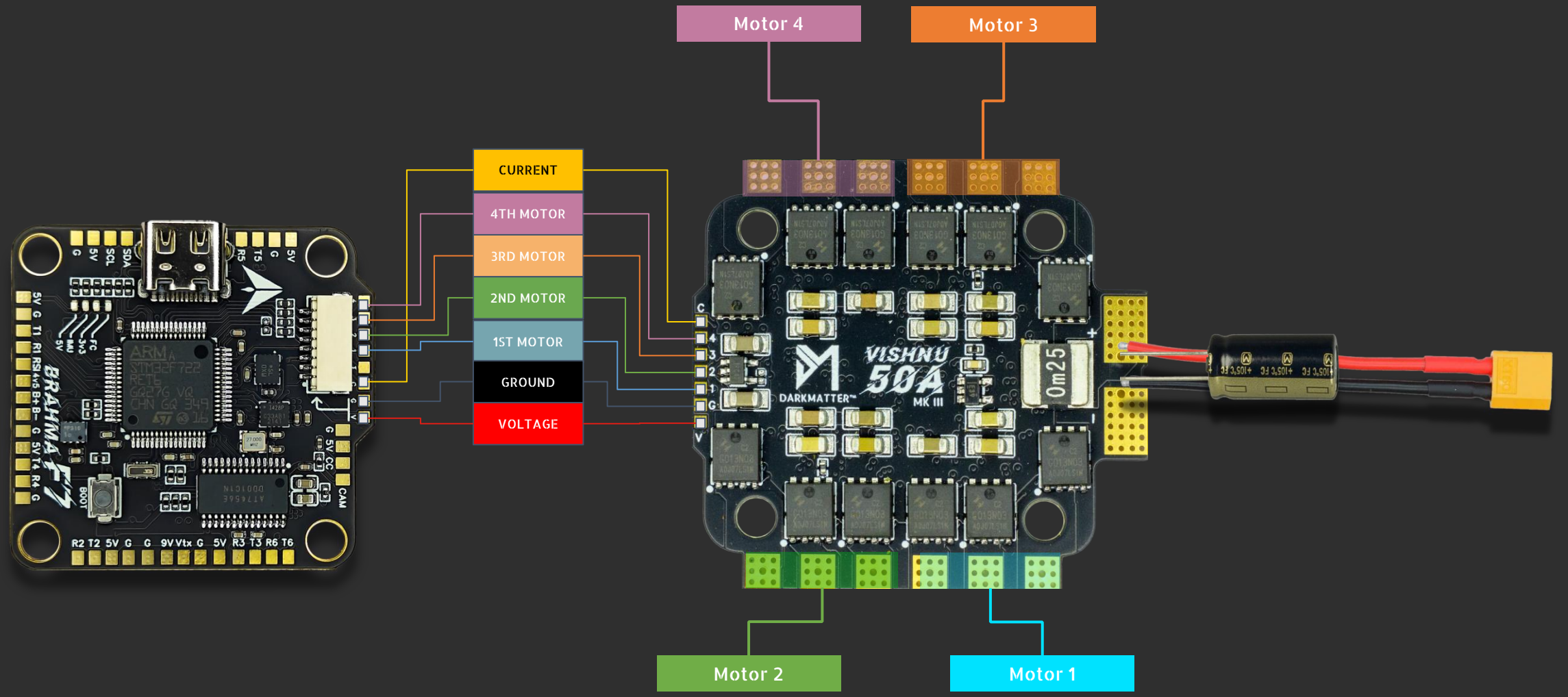
VOLTAGE
GROUND
CURRENT
TELEMETRY
MOTOR 1
MOTOR 2
MOTOR 3
MOTOR 4

BETAFLIGHT
STANDARD CONNECTOR



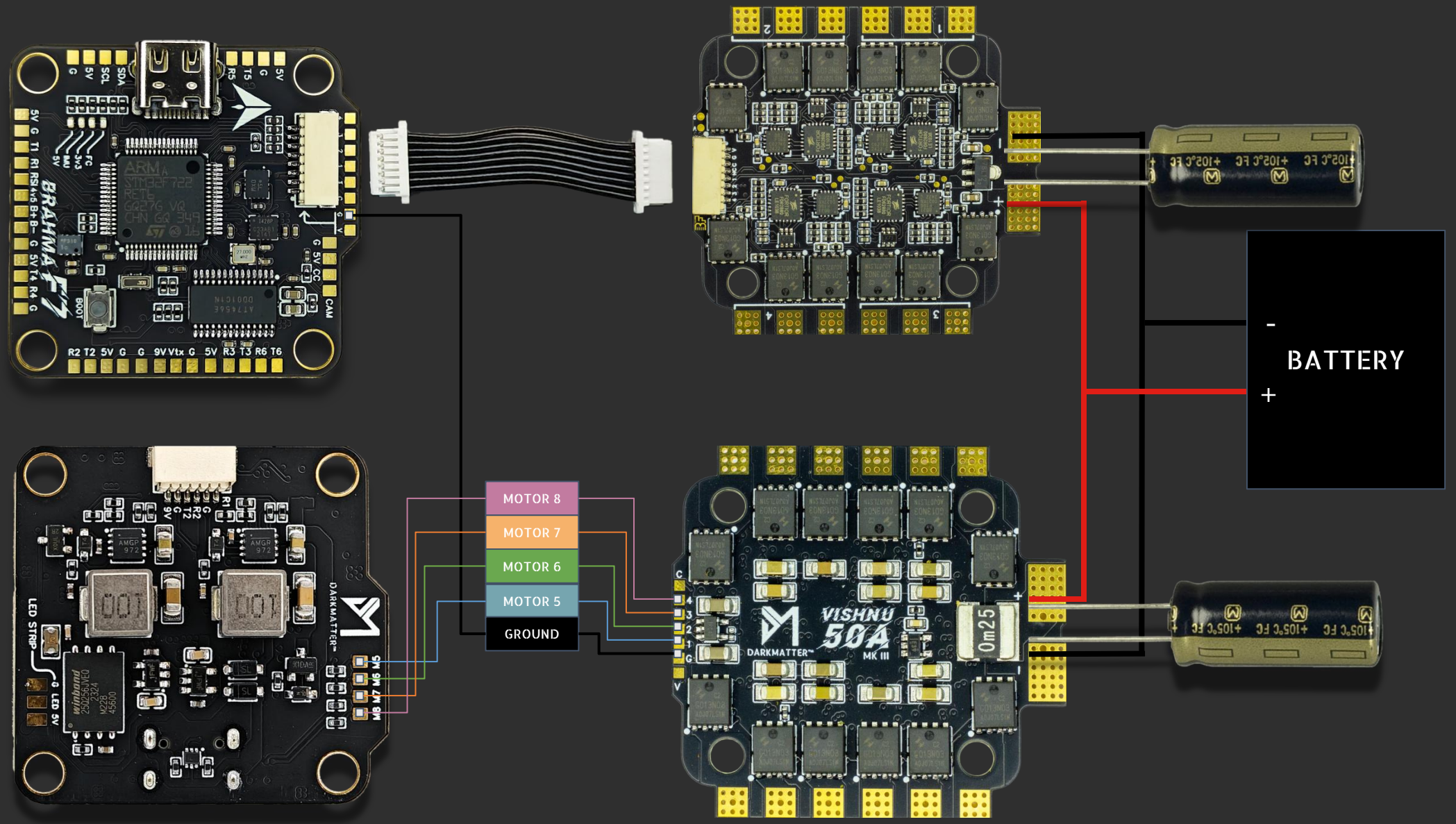
4 in 1 ESC Direct Soldering Connection

DARKMATTER



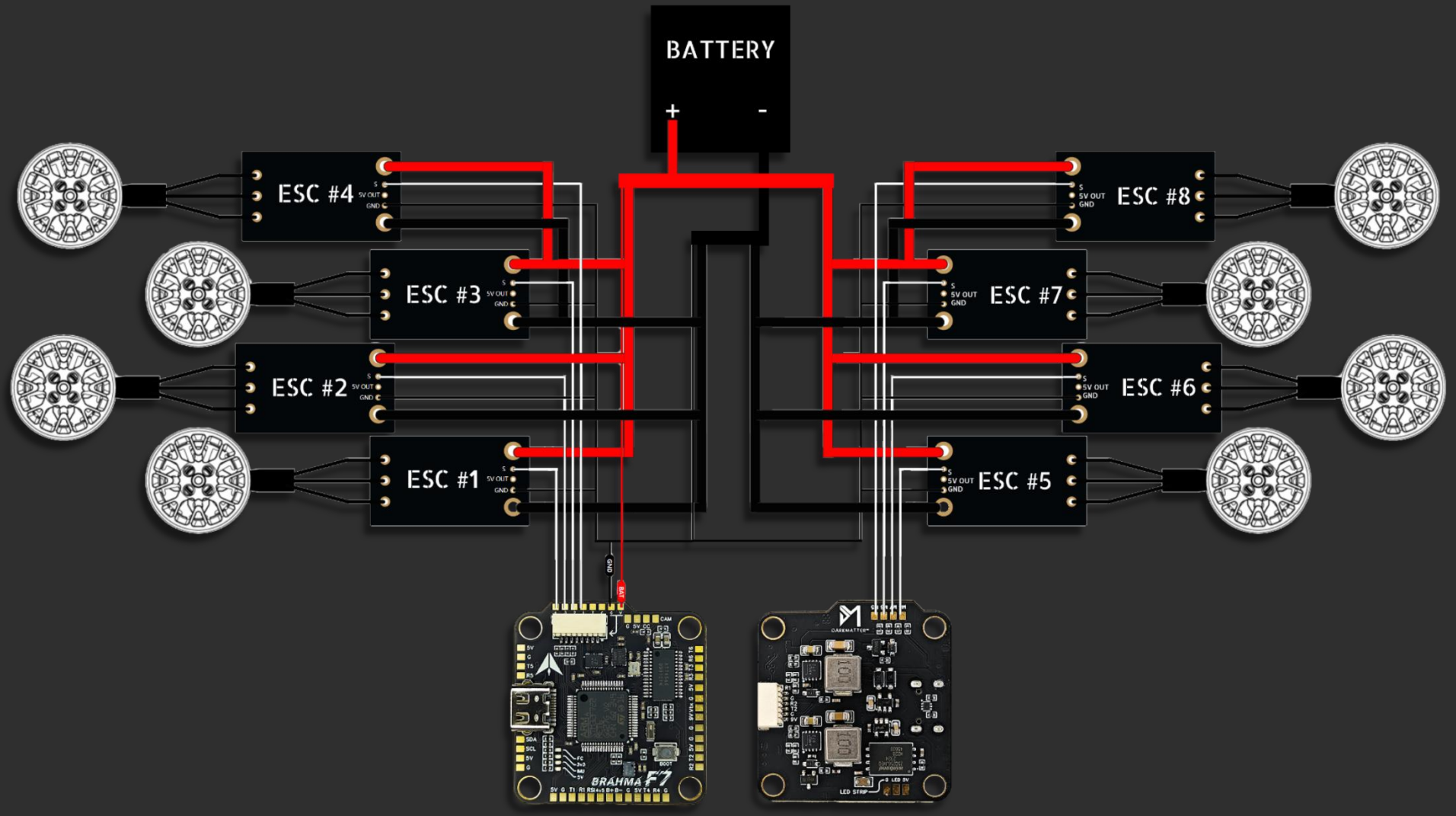
2 x 4 in 1 ESC Direct Soldering Connection For 8 Motors

DARKMATTER



Single ESCs Direct Soldering Connection For 8 Motors

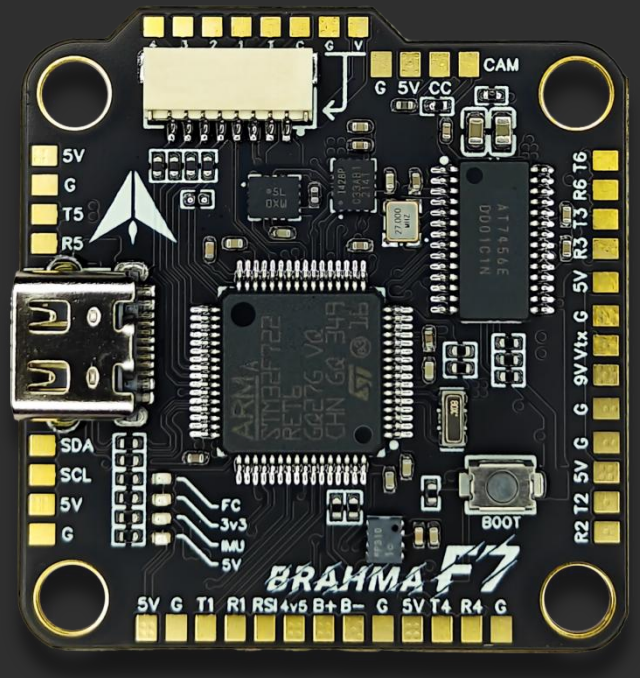
DARKMATTER



IMPORTANT: PLEASE DO NOT CONNECT THE 5V OUT OF THE ESC TO FC, IT WILL CAUSE THE ESC/FC TO BURN

Flight Controller – Package Contents

1



2

1. Darkmatter – BRAHMA F7 Flight Controller x 1
2. SH 1.0mm 30mm-length 8pin Cable(for FC-ESC connection) x 1

BRAHMA F7 Flight Controller - 6 Months Warranty

- **Warranty Period:** The BRAHMA F7 Flight Controller comes with a 6-month warranty from the date of purchase.
- **Proof of Purchase:** Please retain and provide a copy of the purchase invoice for warranty claims.
- **Exclusions:** The warranty does not cover any physical damage to the product, including water damage or burns.
- **Warranty Process:** If a claim is made within the warranty period, we will examine the PCB for physical damage. If the product is eligible, we will provide a replacement at no additional cost.

Your satisfaction and product performance are our top priorities.
For any warranty-related inquiries, please contact us at +91-8017193277.

DARKMATTER

DARKMATTER®

Disruptive Momentum

IAF ISO 9001:2015

GST: 19AAVFD6551E1Z1

Thank you!

Please visit thedarkmatter.in for firmwares, manuals and support.