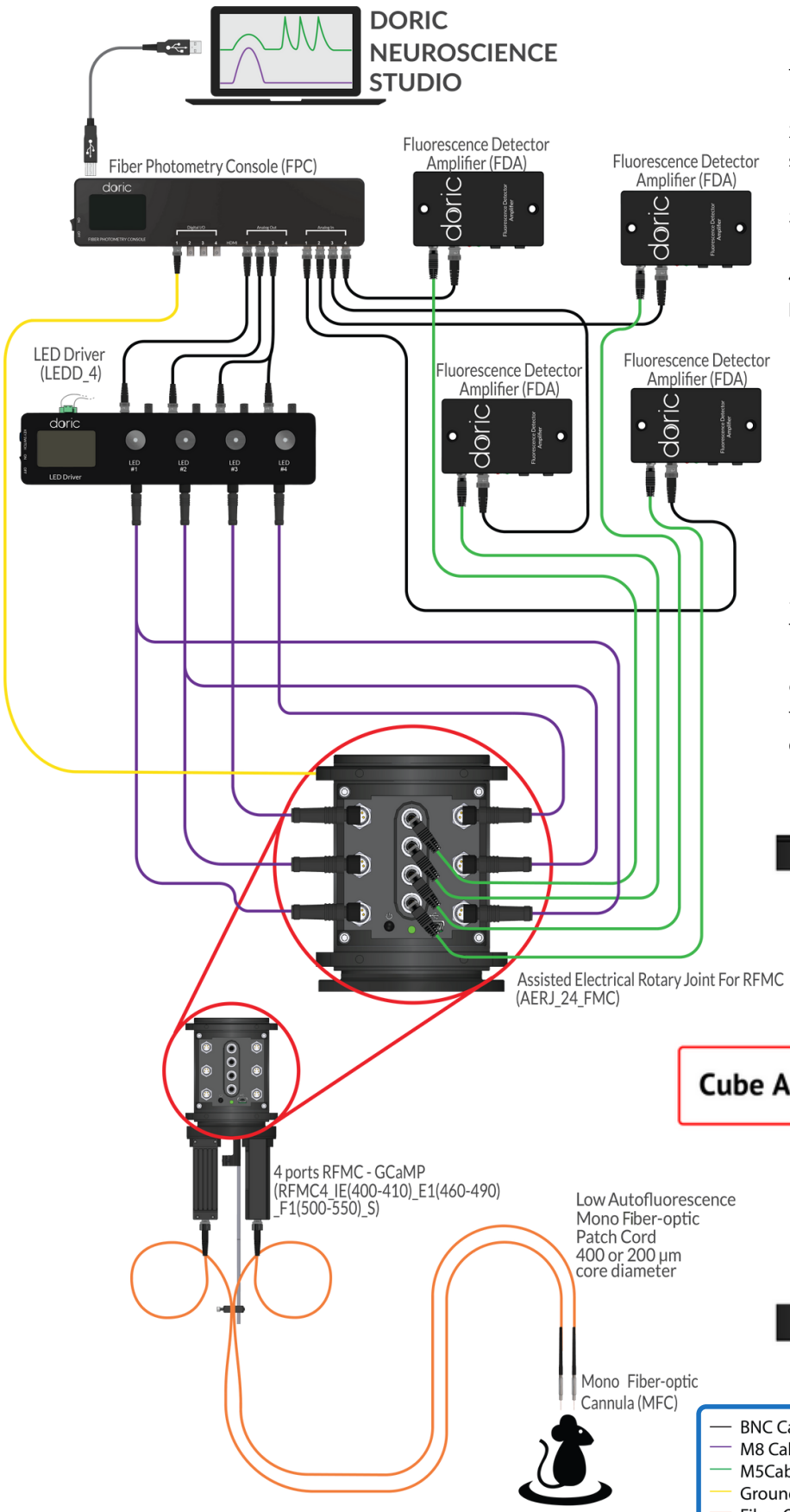
Rotary Fluorescence Mini Cube System
Two cubes configuration

Getting Started - Hardware configuration



1. Install both Rotary Fluorescence Mini Cubes (RFMC) with the 2 screws already on the Rotary Joint.

2. Add the torque detection extension rod on the torque sensor.

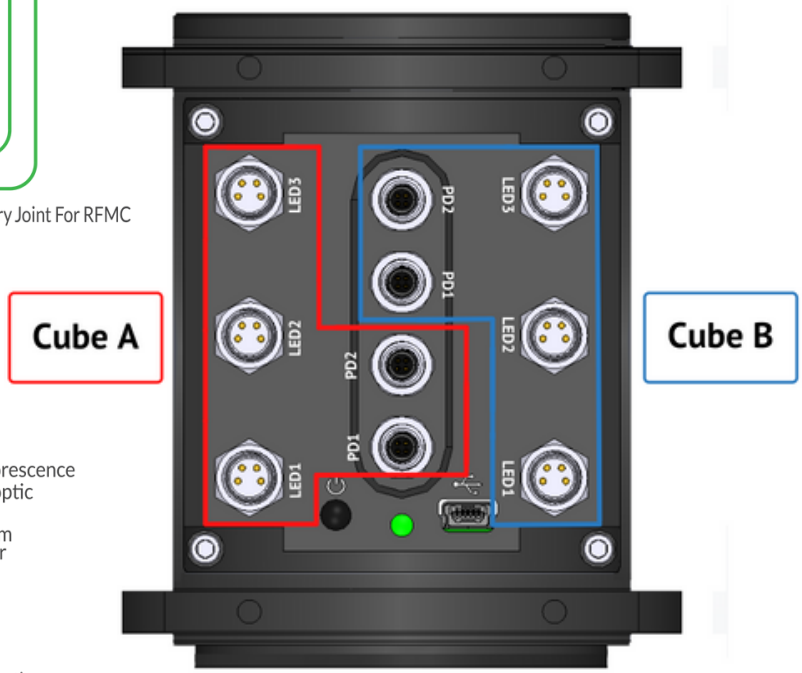
3. Place the Rotary Joint at the top of the cage.

4. Plug the M8, M5, BNC, USB, RFMC ground cable & power cables:

- The Rotary Joint top connection diagram is shown below
- The number of M8 cables, M5 cables and amplifiers will vary depending on your RFMC configuration
- Connect the M8 splitter cable to the same channel on each cube. E.G. LED1 cube A & LED1 Cube B
- Couple the RFMC ground cable to the ground hole

5. Plug the patch cords in the RFMC and loop it in the torque detection bracket, as shown.

6. Power on the Rotary Joint by pressing the front button, then adjust the optical fiber cable such that the Rotary Joint does not move when left untouched.



LED Driver	Fluorescence Detector Amplifier
• Low-power mode • Current: 200mA • External analog (ExAnlg)	• DC mode • 10x gain

Fiber Photometry Console (FPC)

For a complete Lock-In set up guide, please check the Fiber Photometry Getting Started guide on our FPC webpage.

This section assumes the following connections:

- FPC Analog Out 1 → LED Driver Ch 1 → LED 1 (Cube A&B)
- FPC Analog Out 2 → LED Driver Ch 2 → LED 2 (Cube A&B)
- FPC Analog Out 3 → LED Driver Ch 3 → LED 3 (Cube A)
  → LED Driver Ch 4 → LED 3 (Cube B)

- Detector 1 (Cube A) → FDA → FPC Analog In 1
- Detector 2 (Cube A) → FDA → FPC Analog In 2
- Detector 1 (Cube B) → FDA → FPC Analog In 3
- Detector 2 (Cube B) → FDA → FPC Analog In 4

In Doric Neuroscience Studio, add a new channel with the following parameters:

Mode: Lock-In

Saturation: Doric Detector

If you have a custom RMFC or you think your configuration should differ from the above, please contact us for the correct lock-in configuration.

RFMC Type	2 LED & 1 detector RFMC4 (GCaMP)			1 LED & 2 detector RFMC4 (FRET)			3 LED & 2 detector RFMC6		
Carrier check boxes: Analog Out	**1**	**2**	**3**	**1**	**2**	**3**	**1**	**2**	**3**
Analog In (Ch.1) - Cube A / DET1	✕	✕		✕			✕	✕	
Analog In (Ch.2) - Cube A / DET2				✕					✕
Analog In (Ch.3) - Cube B / DET1	✕	✕		✕			✕	✕	
Analog In (Ch.4) - Cube B / DET2				✕					✕