

MOZA Air 2 Release Notes

Date 2020/03/30

Firmware (Air2) V1.0.4

What is New about Air 2?

1. Added the roll axis range to $\pm 60^\circ$ in Roll Follow Mode.
2. Added Z CAM E2 controlling functions.
3. Added BMPCC 4K controlling functions.
4. Added low battery protection functions.
5. Added compatibility with the iFocus firmware and V2.0.0 remote control hand unit.
6. Fixed invalid habit settings when controlling with the remote controller issue.
7. Optimized missing photos when taking photos under the USB control issue.
8. Fixed inconsistency issues with the left and right rotation speed when controlling with the joystick.

Note: Below are detailed explanations for some points listed above.

Descriptions:

For Point 2:

1. Use M3C-LANC cable for Z CAM E2 control (select M3C-LANC for protocol in the Air 2).
2. Please do not choose a protocol other than M3C-LANC to connect the Air 2 to Z CAM E2 when selecting a protocol in the Air 2.
3. Please select a protocol in the Air 2 before connecting the camera control cable.

For Point 3:

4. Use M3C-CP cable for BMPCC 4K control (select M3C-CP for protocol in the Air 2).
5. When BMPCC 4K is successfully connected to the Air 2, please do not manually operate the camera with the Air 2's controls (if you use the Air 2 to control start/stop recording or other functions). This will cause the Air 2's disable the first button used, although pressing record button again will still works.
6. When the BMPCC 4K camera battery is extremely low (red), the camera will stop recording.
7. Please select a protocol in the Air 2 before connecting the camera control cable.

For Point 4:

1. When the battery level is below 5%, the system will enter into sleep mode; when the battery level is below 3%, the system will automatically shut down.

For Point 5:

1. This firmware includes the latest firmware for iFocus motor, users with iFocus motor are recommended to upgrade the iFocus firmware with Air 2.

2. Upgraded iFocus motor can be used with V2.0.0 remote control hand unit.

Note: The M3C-LANC and M3C-CP cables are not in Air 2's packaging box , these optional accessories needed to be purchased separately.

MOZA Air 2 Release Notes

Date	2019/9/29
Firmware	V1.0.2
MOZA Master for Android	V2.0.11
MOZA Master for iOS	V2.0.11
MOZA Master for Windows	V1.3.0
MOZA Master for Mac OS	V1.3.0
iFocus	V2.0.0
iFocus M	V2.0.8

What's New

- Added smart wheel modes for tilt axis, roll axis, and pan axis control. Updated icons for the smart wheel modes.**

Icon						
Smart	Focus	Focus	Electroni c Focus			

Wheel Modes	Channel 1	Channel 2	Channel	Tilt axis	Roll axis	Pan axis
----------------	-----------	--------------	---------	-----------	-----------	----------

How to Change Modes: Press the M button on the smart wheel to switch modes.

2. Added a new feature called FPV mode. This feature can follow 360° for all three axes.



How to Access: Triple press the Fn button to enter the FPV Mode. Triple press again to exit the FPV Mode.

3. The improved Inception Mode 3.0 now features angle speed control and the optimized button definition.

How to use Inception Mode:

3.1 Move the joystick to the left or right: The gimbal turns to the left or right. When release or turn to a specified angle the gimbal stops.

3.2 Rotating the dial wheel: Adjust the rotation speed.

3.3 Press the left button on the dial wheel once: The gimbal will start rotating to the left automatically. To stop the gimbal from rotating, press the button again.

3.4 Press the right button on the dial once: the gimbal will start rotating to the right automatically. To stop the gimbal from rotating, press the button again.

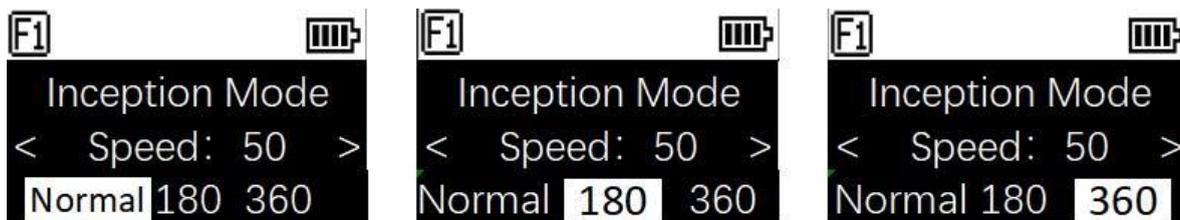
3.5 Press up/down button on the dial wheel: select rotation angle.

The Rotation Angle Selection:

Normal: The gimbal will continuously rotate.

180°: The gimbal rotates only 180° and then stops automatically.

360°: The gimbal rotates 360° and then stops automatically.



Access Inception: Double press the Fn button to enter the Inception Mode and double press again to exit.

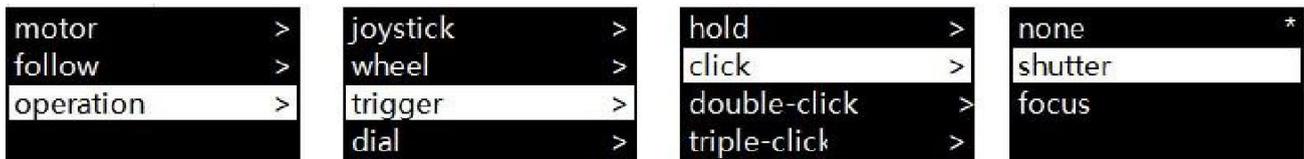
4. Improved balance check algorithm. Once completed, the balance check algorithm will display a guide on how to correct the balance of the camera setup.



How to Access: Enter the menu, select advance>balance chk, and the gimbal’s system will start to check the balance of each axis.

Note: After balance check, the gimbal will automatically enter the sleep mood for balance adjustment. After adjustments are made to balancing the camera’s center of mass, long press the menu button to wake up the gimbal.

5. Single Press the Smart Trigger to re-center the camera automatically



Access Trigger Settings: Single press to enter the menu, select the OLED Display>operation>trigger> click> shutter

6. Added Button Functions

Double press the TV button: Turning on/ off the tilt follow

Double press the IOS button: Turning on/ off the roll follow

Double press the AV button: Turning on/ off the pan follow

7. Menu Description

L1	L2	L3	L4	L5	Value	Function	
camera		Shutter Cable			*	set the connection type to universal shutter cable	
		MCSC-Multi			*	set the connection type to Sony-Multi port	
		MCSC-Multi/C			*	set the connection type to Sony-Multi port and power supply	
		MCSC-Remote			*	set the connection type to Panasonic-Remote port	
		M3C-USB			*	set the connection type to USB port	
		ISO			32--106400	Set the camera ISO	
	TV			30--1/8000	Set the camera shutter		
	AV			F1--F22	Set the camera aperture		
gimbal	motor	switch			? /ok	turn on/off motor	
		power	autotune			? /ok	tuning/tuned
				level	ultra light	*	set motor level to the minimum
				light	*	set motor level to light	
				medium	*	set motor level to medium	
				heavy	*	set motor level to heavy	
				ultra heavy	*	set motor level to ultra heavy	
		custom	tilt		0-100	set tilt motor power	
			roll		0-100	set roll motor power	
			pan		0-100	set pan motor power	
		filter	tilt		0-100	set tilt motor filter	
			roll		0-100	set roll motor filter	
			pan		0-100	set pan motor filter	
		follow	switch	tilt		on/off	enter/exit tilt follow mode
	roll				on/off	enter/exit roll follow mode	
	pan				on/off	enter/exit pan follow mode	
	speed		tilt		0-100	set the following speed of tilt motor	
			roll		0-100	set the following speed of roll motor	
			pan		0-100	set the following speed of pan motor	
	deadband		tilt		0-100	set the following initiation angle of tilt motor	
			roll		0-100	set the following initiation angle of roll motor	
			pan		0-100	set the following initiation angle of pan motor	
	operation	joystick	function	left-right		tilt/rol/pan	move the joystick left/right to control the tilt/roll/pan rotation
				up-down		tilt/rol/pan	move the joystick up/down to control the tilt/roll/pan rotation
			sensitivity	left-right		0-100	set sensitivity level of left-right movement
				up-down		0-100	set sensitivity level of up-down movement
			habits	left-right		+/-	set the control habit of joystick left/right movement
				up-down		+/-	set the control habit of joystick up/down movement
		wheel	function	focus-1		*	control the external focus motor 1
				focus-2		*	control the external focus motor 2
				focus-e		*	control the electronic focus
				tilt		*	control the pan axis
				roll		*	control the tilt axis
				pan		*	control the roll axis
			sensitivity			0-100	wheel sensitivity
			habits			+/-	set the control direction of wheel rotation
		trigger	hold	none		*	none
				follow		*	enter pan-tilt follow mode
				lock		*	enter all lock mode
				quick		*	enter sport gear mode
				FPV		*	enter FPV mode
click			none		*	none	
	shutter			*	take photo		
	focus			*	auto focus		
double-click	none			*	none		
	re-center			*	re-center		
				*	rotate the gimbal 180° for selfie		

advanced	autotune		? /ok	auto tune	
	balance chk			check the balance state of camera	
	ifocus	F1	switch	? /ok/err	turn on/off the focus motor 1
			set A	? /ok/err	set the point A of focus motor 1
			set B	? /ok/err	set the point B of focus motor 1
			Clear AB	? /ok/err	Clear the calibration information
		F2	Guidance	*	Enter the guidance mode
			switch	? /ok/err	turn on/off the focus motor 1
			set A	? /ok/err	set the point A of focus motor 1
			set B	? /ok/err	set the point B of focus motor 1
		Clear AB	? /ok/err	Clear the calibration information	
		Guidance	*	Enter the guidance mode	
	Dolly Zoom	>		Enter the dolly zoom mode	
	inception	speed	0-100	set the rotation speed of inception mode	
	motion sensing	switch	tilt	? /on/off	turn on/off the motion control of tilt axis
			roll	? /on/off	turn on/off the motion control of roll axis
		pan	? /on/off	turn on/off the motion control of pan axis	
		speed	0-100	set the rotation speed of motion control	
	tracking	speed	0-100	set the max speed of tracking	
	manual pos.	tilt	on/off	turn on/off the manual positioning of tilt axis	
roll		on/off	turn on/off the manual positioning of roll axis		
pan		on/off	turn on/off the manual positioning of pan axis		
calibration	gyro		? /ok	calibrating/calibrated the gyroscope	
	acc		? /ok	calibrating/calibrated the accelerometer	
	angle offset	tilt	0-100	set the offset value of tilt axis	
		roll	0-100	set the offset value of roll axis	
		pan	0-100	set the offset value of pan axis	
	language	English	*	switch display language to English	
中文		*	switch display language to Chinese		
general	config	config1	save	? /ok	save to configuration 1
			load	? /ok	load configuration 1
		config2	save	? /ok	save to configuration 2
			load	? /ok	load configuration 2
		config3	save	? /ok	save to configuration 3
			load	? /ok	load configuration 3
about	reset		? /ok	restore default parameter settings	
				device name and firmware information	

Marks description and operation

- If there is a “*” mark at the right side of the selected item, the current list is the final option. Press the right button of dial wheel to launch the selection.
- If there is a “>” mark at the right side of the selected item, press right button of the dial wheel to see the next menu.
- If there is a “[]” which contains a number mark at the right side of the selected item, rotate the dial wheel to adjust its value.
- If there is a “()” which contains an option mark at the right side of the selected item, press the right button to switch among options

Note:

1. If there is no mark on the right side of the selected item or other items in the menu list, press the right button of the dial wheel to start the option. During the process “?” is displayed, ‘OK’ is displayed after the process is completed, and ‘ERR’ is displayed if the option fails.
2. The above display rules do not apply when balance checking or using special functions.
3. Filtering parameters: If the motor vibrates and admits high-frequency sound, the motor power values need to be reduced. When the motor vibrates and admits low-frequency sound, the motor power values need to be increased.

4. The manual positioning function has a lower priority than the follow function. When using the manual positioning of an axis, the follow function of the axis should be turned off.

8. Optimized Camera Control

- Fixed the 'err' issue related to connecting the control cable to some models of Canon cameras
- Added electronic focus function for Sony cameras (Sony camera's focus mode needs to be set to MF)
- Added camera functions through USB control for Panasonic GH5 and GH5S. Supported functions, shutter control, video rec/stop, parameter adjustments, and electronic focus control. Note: Requires M3C-Micro+Micro to Type-C adapter.

9. Added Record and Repeat Follow Focus Movement for iFocus and iFocus M



Instructions on How to Operation: Enter the menu, select 'Advanced> 'iFocus'> 'F1'> 'Guidance', then select 'Record' and click the right button. The gimbal will start recording the movement of the smart wheel, recording time is limited one minute. Click the right button on the dial to stop recording. After the recording is completed, select 'Play', and then click the right button on the dial to repeat the recorded motion.

Note: To use this function, the firmware of the follow focus motor must be updated to the latest version.

10. Added Mimic Motion Control Function (MOZA Mater App is needed)

Access Mimic motion Control: Remote control >Mimic motion control



How to Use Mimic Motion Control: Through the MOZA Master app enter mimic motion control, click the 'Start' button, then rotate the phone. The gimbal will mimic the direction and speed of the phone's movement. The sensitivity of mimic motion control can be adjusted on the left. On the right, each axis's movement can be turned off or on.

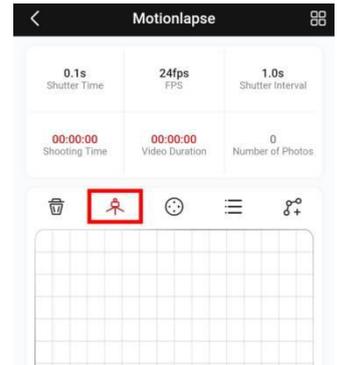
11. Added Tripod Mode Option for Time-lapse to Stabilize Longer Exposures

Select: Creative video > Motionlapse

How to access Tripod Mode: Enter motionlapse, then tap the Tripod Mode icon to select.

Note: Before starting the tripod mode, the stabilizer needs to setup at desired location. Once the tripod mode is activated, the stabilizer cannot be moved again. If moved the gimbal will fail to follow preset path.

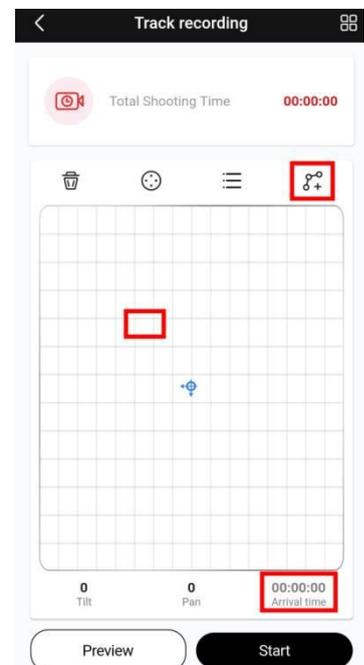
The tripod mode cannot be used, when shooting a hyperlapse.



12. New Motion Track Recording Function (MOZA Mater App is needed)

Access Track Recording: Creative video > Track Recording

How to Record a Track: After opening track recording, set at least 2 key frames, drag the key frames to adjust the position of the gimbal, and then set the timing of each key frame. Click the 'Start' button, the gimbal will return to the starting key frame and then move according to the track. To repeat the scene for cloning, click the start button to repeat the track.

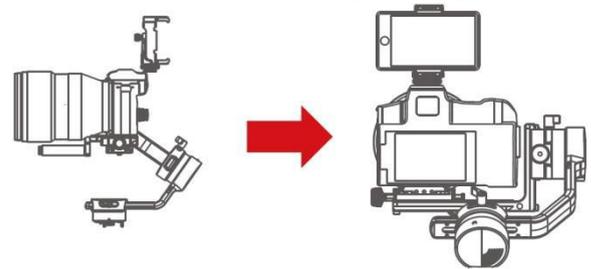


13. New Object Tracking Function (MOZA Master APP is needed)



The object tracking function requires a smartphone to be mounted above the camera and running the MOZA Master App. (Phone Holder is available for purchase) The App will use your phone's camera to track a subject/object and direct the movement of the gimbal to follow that subject/object.

Access Object Tracking: Creative video > Object tracking



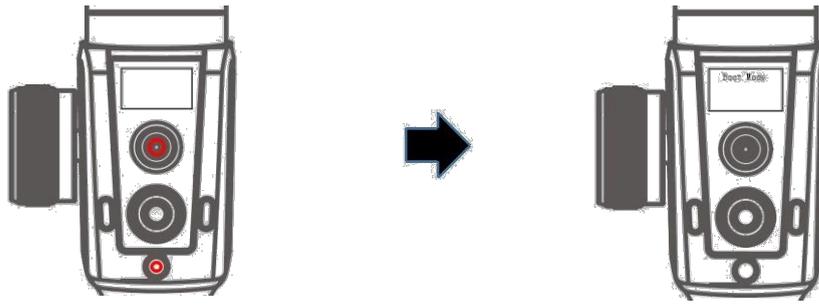
How to Setup: Mount the smartphone holder to the camera's hot shoe adapter, attach the phone, and

open the app to enter object tracking. Note: Under the object tracking interface, the text prompt must

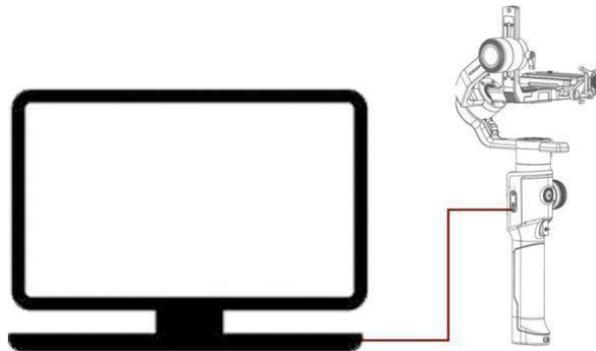
not be upside down. If the text direction is incorrect, reinstall the app or restart the app. After mounting the phone, adjust the phone's camera to keep the viewfinder interface consistent with the viewfinder of the camera. Check the the balance of your camera setup, if needed re -balance the gimbal. From the phone's screen, select subject/object to be tracked. The gimbal will automatically rotate to keep the subject/object in the middle of the screen.

14. Power Management System, Optimize Voltage Usage to Extend Battery Life. How to Upgrade the Firmware

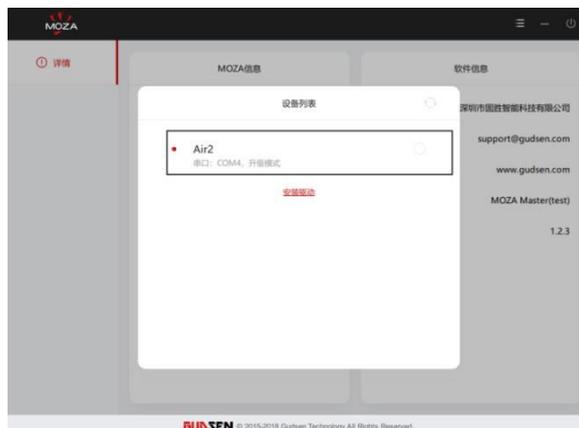
1. Powered off the gimbal. Press in and hold the joystick in and also press the power button. The screen will display 'Boot Mode', now release the joystick, and power button. Simultaneous upgrade of the iFocus/iFocus-M. Boot mode for follow focus. Long press the follow focus power button until the light is white, and then connect the follow focus with the Multi-CAN cable to the gimbal for simultaneous firmware upgrade.



2. Connect the Air 2 to the USB port of your computer using the USB-C cable



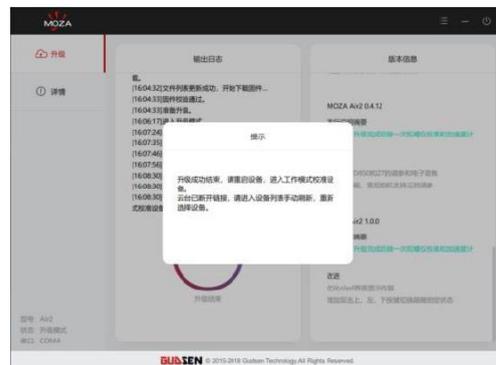
3. Launch **the MOZA_Master** software. After the Air 2 device appears, click to connect the device. After the connection is successful, The Air 2's screen will display 'Connected'



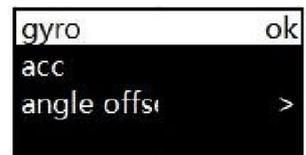
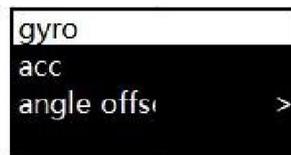
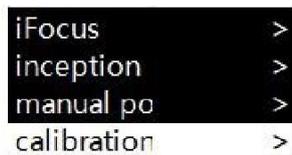
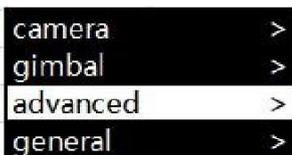
4. MOZA_Master Software will read the Air 2's firmware status and automatically download the latest firmware, when download is completed, click the 'Upgrade' button to get the latest firmware.



The upgrade process takes about 3 minutes to complete, please be patient. When upgrade is completed the message “Upgrade” will be displayed on the screen. The software will prompt you to disconnect the gimbal and restart it.



After upgrade is completed, unplug the USB cable, and restart gimbal. Calibrate the Gyro and Acce before the using the gimbal. The current version of the firmware is 01.00.00. Check the gimbal’s version of firmware by selecting the 'About' option in the menu.



Connect the iFocus-M to the computer by using USB Type-C cable. Open the MOZA_Master App, After the iFocus-M is shown on the screen click to connect the device. After a successful connection the software will recognize the iFocus-M is in firmware upgrade status, and download the latest firmware. When the download is completed, click the 'Upgrade' button to install the firmware.

Note: If it is the first time you have connected a MOZA product to your computer, you will need to install a driver to identify MOZA products such as Air 2, AirCross 2, Air 2, iFocus-M, etc.

Notes:

- Firmware for MOZA products must be updated to the latest version in order for them to be used together. Such as, Air 2, iFocus, iFocus M, APP, GUI.
- After firmware upgrade, the iFocus/iFocus-M will not connect to the wireless remote controller before updating the firmware for remote controller.
- Windows/Mac OS MOZA Master App does not support Air 2 with/under V1.0.0, after connection, the firmware upgrade prompt will be popped up.
- Please do not use this version to upgrade Air 2 if you keep MOZA Master with V1.1.X version in your computer.