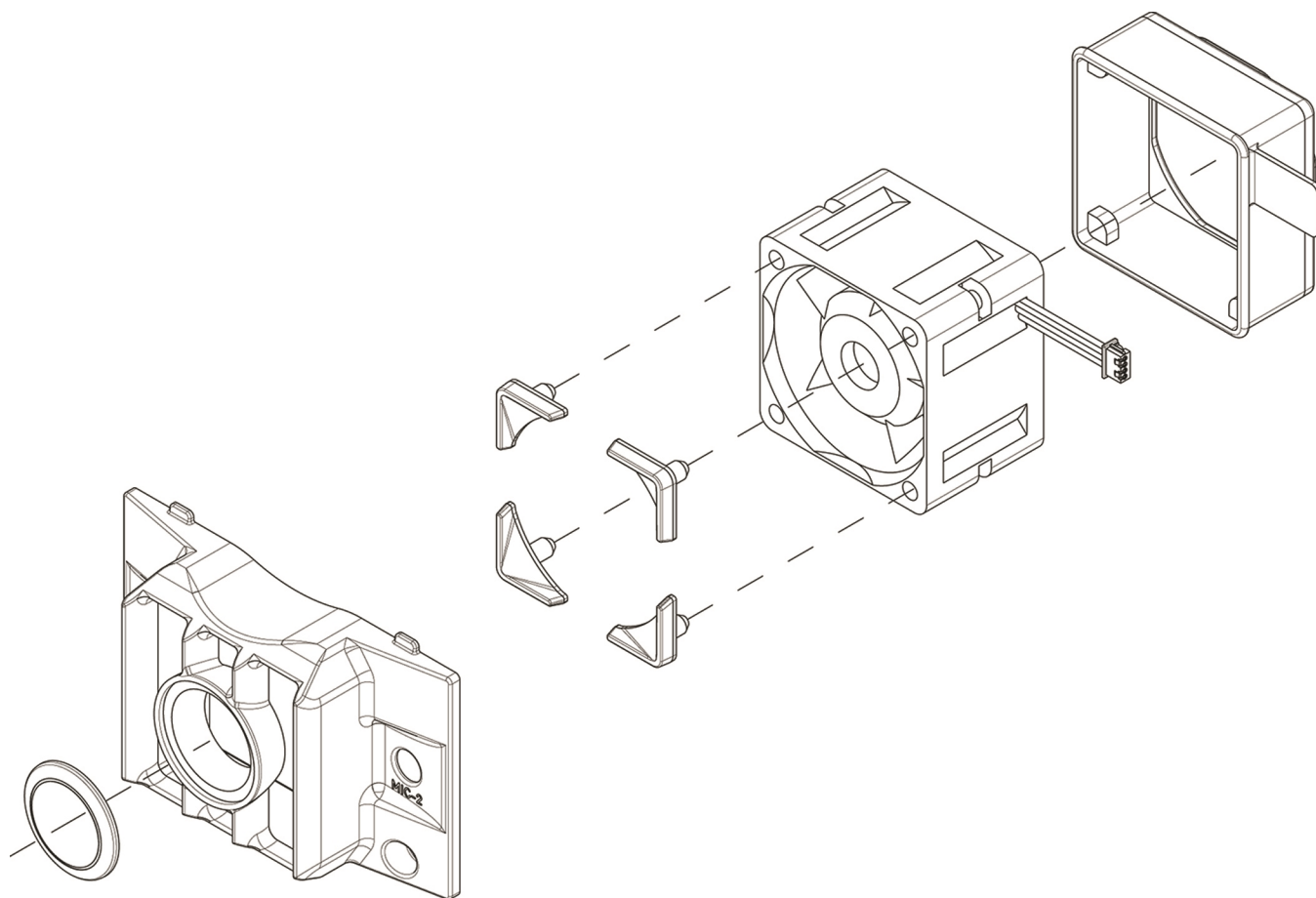




# DSMC FAN 2.0

## UPGRADE INSTRUCTIONS

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DSMC FAN 2.0 UPGRADE KIT  
[RED.COM](http://RED.COM)

# DSMC FAN 2.0 UPGRADE INSTRUCTIONS

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# DSMC FAN 2.0 UPGRADE INSTRUCTIONS

## DISCLAIMER

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## COMPLIANCE STATEMENTS

### INDUSTRIAL CANADA EMISSION COMPLIANCE STATEMENTS

This device complies with Industry Canada license-exempt RSS standards RSS 139 and RSS 210. Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.

This Class B digital apparatus complies with Canadian ICES-003.

Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes : (1) l'appareil ne doit pas produire de brouillage, et (2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement. Cet appareil numérique de la classe B est conforme à la norme NMB-003 du Canada.

## FEDERAL COMMUNICATIONS COMMISSION (FCC) STATEMENTS



This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate

radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- ▶ Reorient or relocate the receiving antenna.
- ▶ Increase the separation between the equipment and receiver.
- ▶ Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- ▶ Consult the dealer or an experienced radio/TV technician for help.

In order to maintain compliance with FCC regulations, shielded cables must be used with this equipment. Operation with non-approved equipment or unshielded cables is likely to result in interference to radio and TV reception. The user is cautioned that changes and modifications made to the equipment without the approval of manufacturer could void the users authority to operate this equipment.

**NOTE:** This device complies with Part 15 of the FCC Rules.

Operations subjected to the following two conditions (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including that may cause undesirable interference.



**CAUTION:** Exposure to Radio Frequency Radiation.

The device shall be used in such a manner that the potential for human contact is minimized

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with a minimum distance of 20 cm between the radiator and your body.



**CAUTION:** Regulations of the FCC and FAA prohibit airborne operation of radio-frequency wireless devices because their signals could interfere with critical aircraft instruments.

# DSMC FAN 2.0 UPGRADE INSTRUCTIONS



**CAUTION:** If the device is changed or modified without permission from RED, the user may void his or her authority to operate the equipment.

## AUSTRALIA AND NEW ZEALAND STATEMENTS

RED declares that the radio equipment described in this document comply with the following international standards.

- ▶ IEC 60065 - Product Safety
- ▶ ETSI EN 300 328 - Technical requirement for radio equipment

RED declares digital devices described in this document comply with the following Australian and New Zealand standards.

- ▶ AS/NZS CISPR 22 – Electromagnetic Interference
- ▶ AS/NZS 61000.3.2 – Power Line Harmonics
- ▶ AS/NZS 61000.3.3 – Power Line Flicker

## JAPAN STATEMENTS



This is a Class B product based on the standard of the Voluntary Control Council for Interference (VCCI) for information technology equipment. If this equipment is used near a radio or television receiver in a domestic environment, it may cause radio interference. Install and use the equipment according to the instruction manual.

本機器は、情報処理装置等電波障害自主規制協議会(VCCI)の基準に基づくクラスB情報技術装置です。この装置は家庭環境で使用することを目的としていますが、ラジオやテレビジョン受信機に近接して使用されると、受信障害を引き起こすことがあります。取扱説明書に従って正しい取り扱いをしてください。

## EUROPEAN UNION COMPLIANCE STATEMENTS



RED declares that the radio equipment described in this document comply with the R&TTE Directive (1999/5/EC) issued by the Commission of the

European Community.

Compliance with this directive implies conformity to the following European Norms (in brackets are the equivalent international standards).

- ▶ EN 60065 (IEC 60065) – Product Safety
- ▶ ETSI EN 300 328 Technical requirement for radio equipment
- ▶ ETSI EN 301 489 General EMC requirements for radio equipment.

## INFORMATION

Products with the CE marking comply with the EMC Directive (2004/108/EC) and the Low Voltage Directive (2006/95/EC) issued by the Commission of the European Community. Compliance with these directives implies conformity to the following European Product Family Standards.

- ▶ EN 55022 (CISPR 22) – Electromagnetic Interference
- ▶ EN 55024-1 (CISPR 24) – Electromagnetic Immunity
- ▶ EN 61000-3-2 (IEC610000-3-2) – Power Line Harmonics
- ▶ EN 61000-3-3 (IEC610000) – Power Line Flicker
- ▶ EN 60065 (IEC60065) – Product Safety

## WASTE ELECTRICAL AND ELECTRONIC EQUIPMENT (WEEE)



The Waste Electrical and Electronic Equipment (WEEE) mark applies only to countries within the European Union (EU) and Norway. This symbol on the product and accompanying documents means that used electrical and electronic products should not be mixed with general household waste. For proper treatment, recovery and recycling, please take this product to designated collection points where it will be accepted free of charge. Alternatively, in some countries you may be able to return your

products to your local retailer upon purchase of an equivalent new product.

Disposing of this product correctly will help save valuable resources and prevent any potential negative effects on human health and the environment, which could otherwise arise from inappropriate waste handling. Contact your local authority for further details of your nearest designated collection point. Penalties may be applicable for incorrect disposal of this waste, in accordance with your national legislation.

For business users in the European Union, if you wish to discard electrical and electronic equipment, contact your dealer or supplier for further information.

## USAGE RESTRICTIONS FOR PRODUCTS THAT INCORPORATE R.C.P.



Products that fall into this category are denoted by inclusion of the Class 2 identifier symbol (exclamation mark in a circle) accompanying the CE Mark on the products regulatory label, example to the left.

# DSMC FAN 2.0 UPGRADE INSTRUCTIONS

## FRANCE

Usage Restrictions - Geographic Area Where Restriction Applies : France

For mainland France

- ▶ 2.400 - 2.4835 GHz (Channels 1-16) authorized for indoor use
- ▶ 2.400 - 2.454 GHz (Channels 1-10) authorized for outdoor use

Restrictions d'utilisation - Zone géographique où les restrictions s'appliquent : France

Pour la France métropolitaine

- ▶ 2.400 - 2.4835 GHz (Canaux 1 à 16) autorisé en usage intérieur
- ▶ 2.400 - 2.454 GHz (Canaux 1 à 10) autorisé en usage extérieur

## NORWAY

This subsection does not apply for the geographical area within a radius of 20 km from the centre of Ny-Ålesund

Dette gjelder ikke for det geografiske området innenfor en radius av 20 km fra sentrum av Ny-Ålesund

## RESPONSIBLE PARTY

RED Digital Cinema

34 Parker

Irvine, CA 92618

USA

## SAFETY INSTRUCTIONS

- ▶ DO NOT use the camera or accessories near water. Avoid exposing your camera to moisture. The unit is not waterproof, so contact with water could cause permanent damage to the unit as well as electric shock and serious injury to the user. DO NOT use the camera in the rain or under other conditions with high moisture without appropriate protection, and immediately remove power source if camera or accessories are exposed to moisture.



**WARNING:** To reduce the risk of fire or electric shock, do not expose the camera to rain or moisture.

- ▶ DO NOT expose the camera to laser beams, as laser beams may damage the sensor.
- ▶ DO NOT expose your camera to excessive vibration or impact (shock). Be careful not to drop your camera. Internal mechanisms may be damaged by severe shock. Mechanical alignment of optical elements may be affected by excessive vibration.
- ▶ ELECTROMAGNETIC INTERFERENCE: The use of devices using radio or other communication waves may result in the malfunction or interference with the unit and/or with audio and video signals.
- ▶ Clean only using a dry cloth. When cleaning your camera, remember that it is not waterproof and moisture can damage electronic circuitry. DO NOT rinse or immerse any element of the camera, lens or other accessory, keep them dry at all times. DO NOT use soaps, detergents, ammonia, alkaline cleaners, and abrasive cleaning compounds or solvents. These substances may damage lens coatings and electronic circuitry.

- ▶ Maintain sufficient ventilation—DO NOT block any ventilation openings or obstruct cooling fan airflow.



**CAUTION:** Proper camera ventilation requires a minimum 0.5" (1.25 cm) clearance between the camera ventilation openings and external surfaces. Verify that objects that can block the fan intake and exhaust ports do not impede airflow. Failure to permit adequate airflow may result in overheating of the camera, degraded operation and in extreme situations, damage to the camera.

- ▶ DO NOT operate or store near any heat sources such as radiators, heat registers, stoves, or any other apparatus that produce heat. Store in a protected, level and ventilated place. Avoid exposure to temperature extremes, damp, severe vibration, strong magnetic fields, direct sunlight or local heat sources during storage. Remove any batteries from the camera before storage. Recommended storage and usage temperatures for your camera, lenses and other accessories are:
  - ▶ Operating range: 0°C to 40°C (32°F to 104°F)
  - ▶ Storage range: -20°C to 50°C (-4°F to 122°F)
- ▶ If there are any performance issues with your camera or accessories when operating within this temperature range, submit a Support ticket at <https://support.red.com>.
- ▶ The DSMC® Side Handle, side SSD modules, rear modules, and lens mounts are NOT HOT SWAPPABLE, meaning you cannot remove or install them while the camera is turned on. Before installing or removing any of these accessories, you MUST turn off the camera. Failure to do so may result in damage to the accessory and/or camera BRAIN® that will not be covered under warranty.
- ▶ DO NOT bypass the third prong of the grounding-type plug on the power cord of the DSMC AC Power Adaptor. A grounding-type plug has two blades and a third "grounding" prong. The third prong is provided for your safety. A grounding-type plug shall be connected to an outlet with a protective earthen connection. If the grounding-type plug does not fit into your outlet, do not attempt to modify the plug or outlet, consult a qualified electrician.
- ▶ Protect all power cords from being pinched, walked on or driven over by a vehicle. Replace any power cords suspected of sustaining damage due to crushing or other forms physical damage.



Products marked with this symbol are class 2 devices. These devices are not provided with a grounding type plug.



**CAUTION:** The power cord plug for the DSMC AC Power Adaptor is used as the power disconnect. To disconnect all power from the DSMC AC Power Adaptor, unplug the power cord plug from the wall outlet. During use, the power cord plug should remain easily accessible at all times.

# DSMC FAN 2.0 UPGRADE INSTRUCTIONS

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- ▶ Lithium-ion batteries may be subject to special handling requirements pursuant to federal and local laws. Refer to specific shipping instructions included with your battery regarding proper transport of your battery. Do not handle your battery if it is damaged or leaking. Disposal of batteries must be in accordance with local environmental regulations. For example, California law requires that all rechargeable batteries must be recycled by an authorized recycle center. Storing batteries fully charged or in high temperature conditions may permanently reduce the life of the battery. Available battery capacity may also be temporarily lessened after storage in low temperature conditions.



**WARNING:** DO NOT expose the battery to excessive heat.



**WARNING:** Danger of explosion if an incorrect battery is charged with the RED Charger or is used to power the camera and accessories. Replace only with the same or equivalent type battery.



**CAUTION:** Refer all service and repair to qualified RED service personnel. To reduce the risk of electric shock, and damage to the camera or accessories, DO NOT attempt to perform any servicing other than any procedures that are recommended in the operating instructions.



**INDOOR USE ONLY:** Products marked with this symbol are designed for use indoors only.

## CHAPTER 1:

# FAN UPGRADE OVERVIEW

### INTRODUCTION

The DSMC® Fan 2.0 Upgrade is available for SCARLET® and RED EPIC® cameras. You may upgrade your BRAIN® with one (1) or both of the following fans:

- ▶ **DSMC Fan 2.0 (Bottom):** Replaces the bottom fan with a more powerful, efficient, and quieter fan that allows you to run at a low noise level for a longer period of time. The bottom fan is specific to your corresponding camera model and is distinguished by a SCARLET or EPIC coin and grill.
- ▶ **DSMC Fan 2.0 (Top):** Replaces the top fan with a more powerful, efficient, and quieter fan. Provides you with a quiet, effective cooling solution that allows for extended recording sessions at a low noise level.

RED Digital Cinema® can perform this installation for you, free of charge. Submit a Support ticket at <https://support.red.com>.

**WARNING:** These instructions are provided for use AT YOUR OWN RISK. Failure to comply in full with these instructions may cause severe damage to your camera and WILL NOT be covered by any RED® warranty plan. Damage to the BRAIN or other components of the DSMC system caused by improper installation is not covered under warranty.

**WARNING:** The top of the BRAIN and top fan may be hot. To prevent accidental contact, RED recommends that you always operate your BRAIN with a compatible top vent scoop or DSMC Tactical Top Plate 2.0.

**NOTE:** For EPIC and SCARLET cameras, the DSMC Fan 2.0 (Bottom) and the DSMC Magnesium PL Mount 2.0 are not natively compatible with each other, since the fan grill prevents the lens mount locking ring from rotating. To use these devices together, remove the lower tabs from the locking ring using a T8 TORX® driver.

**NOTE:** Once the upgrade is complete, a firmware update and/or hardware rediscover is required to recognize new fans. For more information, go to "[Configure Firmware](#)" on page 27.

**NOTE:** RED recommends upgrading your camera firmware to v4.0.12 or later to support full control over both top and bottom fans. The DSMC Fan 2.0 Upgrade is not fully supported by earlier versions of camera firmware.

### DSMC FAN 2.0 UPGRADE KIT COMPONENTS

#### DSMC FAN 2.0 UPGRADE KIT (TOP)

This kit includes the following components:

- ▶ 2.0 Top Fan Assembly
- ▶ EPIC-X (black) or SCARLET-X® (gray) top vent scoop
- ▶ T6 TORX driver (short)
- ▶ T8 TORX driver
- ▶ Two (2) M2x0.4 x 4 mm cap screws

# DSMC FAN 2.0 UPGRADE INSTRUCTIONS

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## DSMC FAN 2.0 UPGRADE KIT (BOTTOM)

This kit includes the following components:

- ▶ 2.0 bottom fan assembly
- ▶ Fan grill
- ▶ T10 TORX driver
- ▶ Two (2) M3x0.5 x 6 mm cap screws
- ▶ One (1) ESD-safe solder stick

## DSMC FAN 2.0 UPGRADE KIT (TOP/BOTTOM)

This kit includes the following components:

- ▶ 2.0 Top Fan Assembly
- ▶ EPIC-X (black) or SCARLET-X (gray) top vent scoop
- ▶ T6 TORX driver (short)
- ▶ T8 TORX driver
- ▶ Two (2) M2x0.4 x 4 mm cap screws (top)
- ▶ 2.0 bottom fan assembly
- ▶ Fan grill
- ▶ T10 TORX driver
- ▶ Two (2) M3x0.5 x 6 mm cap screws (bottom)
- ▶ One (1) ESD-safe solder stick

**NOTE:** For EPIC and SCARLET cameras, the DSMC Fan 2.0 (Bottom) and the DSMC Magnesium PL Mount 2.0 are not natively compatible with each other, since the fan grill prevents the lens mount locking ring from rotating. To use these devices together, remove the lower tabs from the locking ring using a T8 TORX driver.

## ADDITIONAL RESOURCES

The following resources offer additional information about RED, the DSMC system, and the RED community:

- ▶ **RED.com:** Check the [official RED website](#) for the latest information about RED products.
- ▶ **RED Learn Articles:** RED offers [in-depth technical articles](#) about RED cameras, post-production, and digital cinematography.
- ▶ **RED Downloads:** Go to [RED Downloads](#) to download the latest firmware, operation guides, and post-production software.
- ▶ **DSMC Toolkit:** Go to [RED Downloads](#) to find the DSMC Toolkit, which offers many helpful tools and resources to customize and improve your camera workflow.
- ▶ **RED Support:** Check the [RED SUPPORT site](#) for FAQs, or to file a support ticket.
- ▶ **In-Camera Help:** Select the Help button on an in-camera screen to open up the help for that screen.
- ▶ **REDUSER:** Discuss all things RED on the [REDUSER](#) third-party forum.



## CHAPTER 2:

## UPGRADE BOTTOM FAN

### REQUIRED TOOLS

- ▶ T10 TORX® driver
- ▶ ESD-safe solder stick (included)

### REMOVE CURRENT BOTTOM FAN

1. Turn off the camera.
2. Remove all power sources, accessories, the lens, and the lens mount.
3. Cover the camera opening with a DSMC® Front Body Cap to protect your sensor from dust and foreign particles during the fan upgrade procedure.
4. Place the BRAIN® on a suitable flat work surface with the front of the BRAIN facing upward.
5. Use a T10 TORX driver to remove the two (2) M3x0.5 x 6 mm cap screws that attach the current fan grill to the BRAIN.



*Figure: Remove Cap Screws*

# DSMC FAN 2.0 UPGRADE INSTRUCTIONS

6. Remove the fan grill by rotating it upward, using the ESD-safe solder stick (included) for assistance if necessary.



*Figure: Remove Grill*

7. Pinch the upper right and lower left corners of the current fan assembly.



*Figure: Pinch Fan Corners*

**NOTE:** In the next step, DO NOT pull out the connector, or damage will occur.

8. While continuing to hold the upper right and lower left corners of the current fan assembly, wiggle and pull the fan assembly back-and-forth until it releases from the BRAIN.

# DSMC FAN 2.0 UPGRADE INSTRUCTIONS

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9. If the connector on your original fan assembly has a white tab, depress the white tab with the ESD-safe solder stick and gently pull the cables until the connector is free.

If the connector does not have a white tab, gently pull the cables until the connector is free. Use the ESD-safe solder stick for assistance if necessary.



*Figure: Disconnect Fan*

## INSTALL 2.0 BOTTOM FAN

**NOTE:** If any of the fan bumpers fall off of the fan assembly during the installation process, reattach the bumpers and ensure that they are properly aligned.

1. Identify the new fan assembly.
2. Align the female connectors with the pins in the connector slot and verify the following:
  - ▶ Verify that the blue wire is at the top, and the red wire is at the bottom.
  - ▶ Verify that the connector enters the slot directly, and NOT on its side, so that the female connectors align with the pins in the connector slot.

# DSMC FAN 2.0 UPGRADE INSTRUCTIONS

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3. Carefully push the white connector into the appropriate slot on the BRAIN, using the ESD-safe solder stick for assistance if necessary.

You will hear a click when the connector is successfully attached to the BRAIN.



*Figure: Connect Fan*

4. Insert the new fan assembly so that the fan bumpers are facing away from the camera, and that the label on the fan is facing inward toward the camera. Keep the front of the fan assembly tilted forward, and make sure that the connector cables are under the surface.

**NOTE:** DO NOT push the fan assembly into the seat all the way. Installing the fan grill secures the fan assembly.



*Figure: Insert Fan*

# DSMC FAN 2.0 UPGRADE INSTRUCTIONS

5. Install the fan grill by pointing the top of the fan grill downward and sliding both tabs into the slots below the DSMC Front Body Cap, so that the grill lies flat on top of the fan assembly.



*Figure: Install Fan Grill*

6. Use a T10 TORX driver to install the two (2) M3x0.5 x 6 mm cap screws (included) that attach the fan grill to the BRAIN. DO NOT FULLY TIGHTEN.



*Figure: Install Cap Screws*

7. Tighten the M3x0.5 x 6 mm screws evenly. DO NOT exceed 70 in-oz, or damage may occur.  
**WARNING: DO NOT OVERTIGHTEN.**
8. Reattach the lens mount, lens, and any DSMC accessories that you removed from the BRAIN.

# DSMC FAN 2.0 UPGRADE INSTRUCTIONS

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9. Upgrade your firmware or perform a hardware rediscover to ensure that your camera recognizes the new fan. For more information, go to "[Configure Firmware](#)" on page 27.

**NOTE:** If you need to replace any screws, submit a Support ticket at <https://support.red.com>.



## CHAPTER 3:

# INSTALL TOP FAN

### TOP FAN COMPATIBILITY

The table below describes which top plates are compatible with the top fan. All compatible top plates provide sufficient clearance for the top fan.

Once again making obsolescence obsolete, RED® provides a replacement top vent scoop in each DSMC® Fan 2.0 Upgrade Kit (Top and Bottom/Top), so that you can install a compatible top plate along with your top fan.

TOP PLATE	PART NUMBER	COMPATIBLE	NOTES
EPIC-X top vent scoop	125-2057	Yes	This top plate currently ships with EPIC-X cameras, and is included in the DSMC Fan 2.0 Upgrade Kit (Top and Bottom/Top) — EPIC® as a replacement for incompatible top plates.
SCARLET-X® top vent scoop 2.0	125-2057-02	Yes	This top plate is included in the DSMC Fan 2.0 Upgrade Kit (Top and Bottom/Top) — SCARLET® as a replacement for incompatible top plates.
DSMC® Tactical Top Plate 2.0	790-0383	Yes	This second generation DSMC Tactical Top Plate is specially designed to provide extra efficiencies and clearance for the DSMC Top Fan.
EPIC-M top vent scoop <sup>1</sup>	125-2095	No	If you have an EPIC-M top vent scoop, install the replacement EPIC-X top vent scoop included in the DSMC Fan 2.0 Upgrade Kit (Top and Bottom/Top) — EPIC when installing the top fan.
SCARLET-X top vent scoop	125-2100	No	If you have a SCARLET-X top vent scoop, install the replacement SCARLET-X top vent scoop 2.0 included in the DSMC Fan 2.0 Upgrade Kit (Top and Bottom/Top) — SCARLET when installing the top fan.
DSMC Tactical Top Plate	790-0255	No	If you currently have an original DSMC Tactical Top Plate, you can either send in your DSMC Tactical Top Plate and receive credit toward the purchase of a new DSMC Tactical Top Plate 2.0, or you can send in your DSMC Tactical Top Plate for modification by RED free of charge.

1. Submit a request at <https://support.red.com/home> if you have an eligible EPIC-M that has not already been sent in for the free upgrade program. The upgrade program includes mechanical improvements and additional mounting points. The upgrade should be performed before you install the top fan.

The part number of each top vent scoop is marked on the bottom of the top vent scoop.

**NOTE:** Any top vent scoop part number that is not listed in the table above is not compatible with the top fan.

**NOTE:** For more details about the DSMC Tactical Top Plate modification and trade-in options, submit a request at <https://support.red.com/home>.

# DSMC FAN 2.0 UPGRADE INSTRUCTIONS

## INSTALL TOP FAN WITH TOP VENT SCOOP

### REQUIRED TOOLS

- ▶ T8 TORX® driver
- ▶ T6 TORX driver (included)

### REMOVE TOP VENT SCOOP

1. Turn off the camera.
2. Remove all power supplies, accessories, and the lens.
3. Place the BRAIN® on a suitable flat work surface with the top of the BRAIN facing upward.
4. Use a T8 TORX driver to remove the four (4) M2.5x0.45 x 6 mm cap screws that attach the top vent scoop to the BRAIN.



*Figure: Remove Cap Screws*



# DSMC FAN 2.0 UPGRADE INSTRUCTIONS

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5. Remove the top vent scoop from the BRAIN.



*Figure: Remove Top*

6. Use a T6 TORX driver (included) to remove the two (2) M2x0.4 x 4 mm cap screws from the exhaust fan pogo cover (black plastic slip).



*Figure: Remove Cap Screws*

# DSMC FAN 2.0 UPGRADE INSTRUCTIONS

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7. Remove the exhaust fan pogo cover.

**NOTE:** Store the exhaust fan pogo cover and the two (2) M2x0.4 x 4 mm cap screws in a safe place, in case you want to remove or replace the top fans at a later time.



*Figure: Remove Cover*

## INSTALL TOP FAN AND TOP VENT SCOOP

1. Place the top fan assembly on top of the vent so that the “RED PRO” lettering is facing up and the connector is facing down.



*Figure: Align Top Fan*

2. Attach the top fan to the BRAIN by installing two (2) M2x0.4 x 4 mm cap screws (included) with a T6 TORX driver (included).

# DSMC FAN 2.0 UPGRADE INSTRUCTIONS

3. Tighten the M2x0.4 x 4 mm cap screws evenly. DO NOT exceed 30 in-oz, or damage may occur.

**WARNING: DO NOT OVERTIGHTEN.**



*Figure: Install Top Fan*

4. Place the top vent scoop on top of the fan.



*Figure: Place Top on Fan*

# DSMC FAN 2.0 UPGRADE INSTRUCTIONS

5. Attach the top vent scoop to the BRAIN by installing four (4) M3x0.5 x 6 mm cap screws with a T8 TORX driver. DO NOT FULLY TIGHTEN.

**WARNING:** DO NOT OVERTIGHTEN.



*Figure: Install Cap Screws*

6. Tighten the M3x0.5 x 6 mm cap screws evenly. DO NOT exceed 30 in-oz, or damage may occur.  
**WARNING:** DO NOT OVERTIGHTEN.
7. Reattach any DSMC accessories that you may have removed from the BRAIN.
8. Upgrade your firmware or perform a hardware rediscover to ensure that your camera recognizes the new fan. For more information, go to "[Configure Firmware](#)" on [page 27](#).

**NOTE:** The top fan may not run immediately after turning on the BRAIN, as the top fan runs when the BRAIN requires additional cooling power.

**NOTE:** If you need to replace any screws, submit a Support ticket at <https://support.red.com>.

# DSMC FAN 2.0 UPGRADE INSTRUCTIONS

## INSTALL TOP FAN WITH DSMC TACTICAL TOP PLATE

### REQUIRED TOOLS

- ▶ T6 TORX driver (included)
- ▶ 3/16" hex key
- ▶ 3 mm hex key

### REMOVE DSMC TACTICAL TOP PLATE

1. Turn off the camera.
2. Remove all power supplies, accessories, and the lens.
3. Place the BRAIN on a suitable flat work surface with the top of the BRAIN facing upward.



*Figure: Loosen M4x0.7 x 12.5 mm Captive Screws*

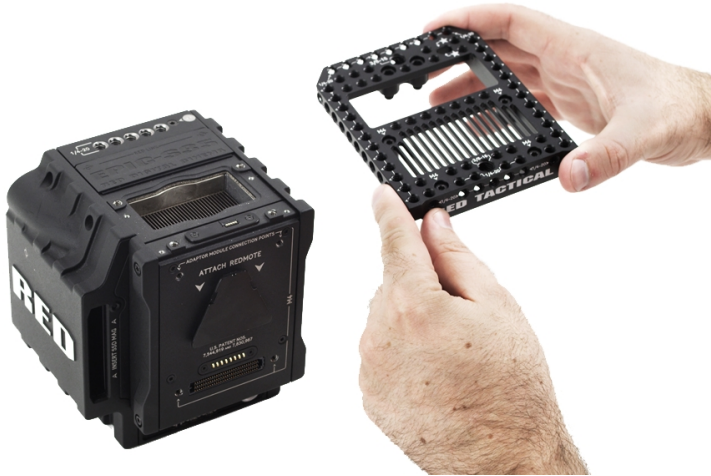
4. Use a 3/16" hex key to loosen the two (2) 1/4-20 x 12 mm screws.
5. Continue to loosen all screws until the plate can be removed.



# DSMC FAN 2.0 UPGRADE INSTRUCTIONS

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6. Remove the plate.



*Figure: Remove Top Plate*

7. Use a T6 TORX driver (included) to remove the two (2) M2x0.4 x 4 mm cap screws from the exhaust fan pogo cover (black plastic slip).



*Figure: Remove Cap Screws*

# DSMC FAN 2.0 UPGRADE INSTRUCTIONS

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8. Remove the exhaust fan pogo cover.

**NOTE:** Store the exhaust fan pogo cover and the two (2) M2x0.4 x 4 mm cap screws in a safe place, in case you want to remove or replace the top fans at a later time.



*Figure: Remove Cover*

## INSTALL TOP FAN AND DSMC TACTICAL TOP PLATE 2.0

**NOTE:** The top plate installation instructions below are also applicable to the original DSMC Tactical Top Plate that was modified by RED to accommodate the top fan.

1. Ensure that the original Tactical Top Plate and exhaust fan pogo cover are already removed from the BRAIN.  
For more information on removing the Tactical Top Plate and exhaust fan pogo cover, go to ["Remove DSMC Tactical Top Plate" on page 21](#).
2. Place the BRAIN on a suitable flat work surface with the top of the BRAIN facing upward.

# DSMC FAN 2.0 UPGRADE INSTRUCTIONS

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3. Place the top fan assembly on top of the vent so that the “RED PRO” lettering is facing up and the connector is facing down.



*Figure: Insert Top Fan*

4. Attach the top fan to the BRAIN by installing two (2) M2x0.4 x 4 mm cap screws (included) with a T6 TORX driver (included). DO NOT FULLY TIGHTEN.



*Figure: Install Top Fan*

5. Tighten the M2x0.4 x 4 mm cap screws evenly. DO NOT exceed 30 in-oz, or damage may occur.  
**WARNING: DO NOT OVERTIGHTEN.**



# DSMC FAN 2.0 UPGRADE INSTRUCTIONS

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6. Place the DSMC Tactical Top Plate 2.0 on top of the fan.



*Figure: Place Plate on Fan*

7. Align the captive screws in the plate with the threaded holes on top of the BRAIN.
8. Use a 3/16" hex key to tighten the two (2) 1/4-20 x 12 mm screws by about two (2) turns. DO NOT FULLY TIGHTEN.



*Figure: Install 1/4-20 x 12 mm Screws*

# DSMC FAN 2.0 UPGRADE INSTRUCTIONS

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9. Use a 3 mm hex key to tighten the four (4) M4x0.7 x 12 mm captive screws by about two (2) turns. DO NOT FULLY TIGHTEN.



*Figure: Install M4x0.7 x 12.5 mm Captive Screws*

10. Fully tighten the 1/4-20 x 12 mm screws. DO NOT OVERTIGHTEN.
11. Tighten the M4x0.7 x 12.5 mm captive screws in a cross pattern. DO NOT OVERTIGHTEN.
12. Reattach any accessories that you removed from the BRAIN.
13. Upgrade your firmware or perform a hardware rediscover to ensure that your camera recognizes the new fan. For more information, go to "[Configure Firmware](#)" on page 27.

**NOTE:** The top fan may not run immediately after turning on the BRAIN, as the top fan runs only when the BRAIN requires additional cooling power.

**NOTE:** If you need to replace any screws, submit a Support ticket at <https://support.red.com>.

# DSMC FAN 2.0 UPGRADE INSTRUCTIONS

## CHAPTER 4:

# CONFIGURE FIRMWARE

RED® recommends that you upgrade your camera firmware to the latest firmware version in order to have full control over both the top and bottom fans. Camera firmware v4.0.12 and later offers full hardware support for both fans, and provides more robust and precise fan settings, so that you have full control over the speed and noise level of the fans. Earlier versions of firmware do not fully support DSMC® 2.0 fans.

## UPGRADE FIRMWARE

1. Download the latest firmware file for your camera from [www.red.com/downloads](http://www.red.com/downloads).
2. Perform the firmware upgrade on your camera.

**NOTE:** For more information on upgrading firmware, see the camera [operation guides](#), available at [www.red.com/downloads](http://www.red.com/downloads).

## PERFORM HARDWARE REDISCOVER

If you upgraded your firmware before installing the new fans, or if you are not upgrading your firmware, perform a manual hardware rediscover after you install new fans so that the camera firmware recognizes the new fans.

**NOTE:** The screenshots below are from firmware v6.0.

1. Turn on the camera.
2. Go to **Menu > Settings > Maintenance**.
3. Select **Rediscover**.
4. Select **Yes** to perform the hardware rediscover.

Wait for the camera to turn off.



Figure: Hardware Rediscover

5. Turn on the camera.

The camera firmware rediscovers all hardware and caches the data for future boot cycles.

# DSMC FAN 2.0 UPGRADE INSTRUCTIONS

## ADJUST FAN SETTINGS

After installing the 2.0 fans and performing other necessary operations, adjust your fan settings to account for the new top fan (if applicable), the increased speed of the bottom fan, and the new fan mode settings that are available in firmware v4.0.12 and later.

**NOTE:** The screenshots below are from firmware v6.0.

1. Turn on the camera.
2. Navigate to **Menu > Settings > Setup > Fan Control**.
3. Adjust the fan settings to meet your personal preferences or the needs of your project.

**NOTE:** For more information on upgrading firmware, see the camera [operation guides](http://www.red.com/downloads) , available at [www.red.com/downloads](http://www.red.com/downloads).

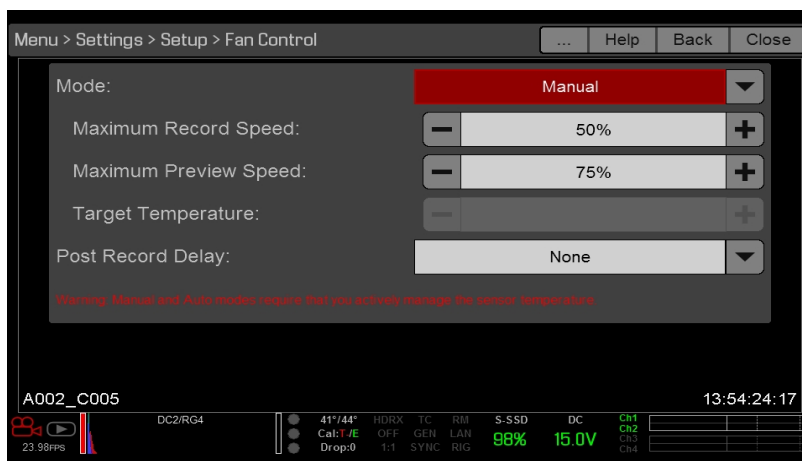


Figure: Adjust Fan Settings