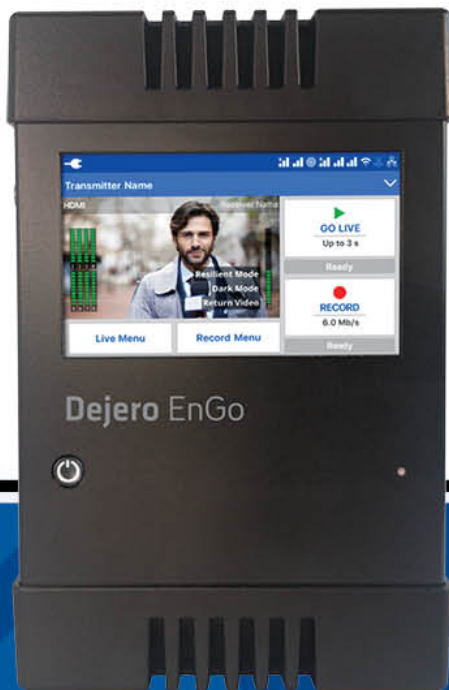


# Dejero EnGo 260



## User Guide

November 2019

**Dejero**

# Dejero Labs Inc.

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Dejero products or portions thereof are protected by patents granted and pending.

## Symbols and Conventions

This document uses the following symbols and conventions:



**Note:** Shares important related information, reminders, recommendations, and suggestions.



**Tip:** Shares helpful tips or alternate ways to accomplish a goal.



**Caution:** Means that the action you take could cause harm to your equipment/device, cause you to lose data, or void your warranty.



**Warning:** Describes an action that could cause you physical harm. Follow the guidelines in this document or the device itself when handling electrical equipment.

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## Warranty and Liability

Reasonable care has been taken in preparing the information in this document. However, this document may contain omissions, technical inaccuracies, or typographical errors. Dejero Labs Inc. does not accept responsibility of any losses due to the use of this document. Product specifications are subject to change without notice.

Due to the nature of wireless communication, transmission and reception of data can never be guaranteed. While Dejero strives to provide high-quality video transmission without significant delays, environmental and cellular network conditions beyond Dejero's control may result in data delay, corruption, or loss.

Dejero accepts no responsibility for and is not liable for any loss or damage, including, but not limited to, revenue or personal injury, resulting from delays in, errors in, or failure to transmit or receive data using the Dejero platform.

Warranty on the EnGo is voided if the case is opened by anyone who has not been trained and certified by Dejero. For details, see Handling and Operating Conditions below.

## Safety Warnings and Hazards

Read this section in its entirety before operating the EnGo.

### Class A device

This is a Class A product intended to be used in a commercial, industrial or business environment. In a domestic environment this product may cause radio interference, in which case the user may be required to take adequate measures.

### Federal Communications Commission statement

EnGo complies with Part 15 of the FCC rules for a Class A device.

### Industry Canada statement

EnGo complies with Industry Canada ICES-003 Class A specifications.

### RF Exposure Notice

#### **THIS DEVICE MEETS THE GOVERNMENT REQUIREMENTS FOR EXPOSURE TO RADIO WAVES.**

EnGo is a radio transmitter and receiver. It is designed and manufactured not to exceed the emission limits for exposure to radio frequency (RF) energy set by the Federal Communications Commission of the U.S. Government and Industry Canada.

## Explosive Atmosphere

The EnGo should be powered off in an area with a potentially explosive atmosphere such as fuelling areas, fuel or chemical transfer or storage areas, below deck on boats, or in areas where the air contains chemicals or particles such as grain, dust or metal powders. It is rare, but there is potential for PC-like devices, such as the EnGo, to generate sparks, which could trigger an explosion. Do not store the EnGo in the compartment of a vehicle that contains flammable gas, liquid, or explosives.

## Blasting or Construction Sites

The EnGo should be powered off in areas where blasting is in progress, where explosives may be present, or near any other equipment that is susceptible to radio interference.

## Hospitals

The EnGo should be powered off near medical equipment or life support systems, or near any other equipment that is susceptible to radio interference. Hospitals or other medical facilities often ask visitors, patients, and staff to switch off all electronic devices in some areas. Please make sure that you follow any local rules and regulations.

## Aircraft

The EnGo should be powered off and not operated in any aircraft, whether in flight or on the ground; systems onboard the aircraft could be affected by radio interference.

The EnGo contains an internal lithium-ion battery and cannot be checked as luggage. The EnGo must be treated as carry-on luggage.

The EnGo 260 has an internal battery that is less than 100 watt hours (Wh). The battery, if left inside the EnGo, is rated by the TSA and FAA as safe for travel on aircraft.

## Driving

The driver or operator of any vehicle should not operate the EnGo while in control of a vehicle. Doing so will detract from the driver's or operator's control and operation of that vehicle.

## In-vehicle use

Dejero Labs Inc. (Dejero) is not liable for any liabilities, obligations, loss, damage, personal injury, special, incidental or consequential damages for personal injury or other damage of any nature arising, including but not limited to those arising under any contract, warranty, negligence or in theory of contract or tort law, directly or indirectly as a result of the improper installation or use of its products in a vehicle or any other application. In order to safely install and use Dejero products full consideration of vehicle occupants, vehicle systems (i.e., the location of fuel lines, brakes lines, electrical, drive train or other systems), airbags and other safety equipment is recommended. Dejero specifically disclaims any responsibility for the improper use or installation of its products not consistent with the original vehicle manufacturer's specifications.

## Personal Health and Safety

For personal health and safety, the operator should maintain a minimum distance of 10 mm from the EnGo while it is powered on, except when using the touch screen.

## Medical Implant Devices

It is possible that the radio modems in the EnGo may interfere with some types of medical devices (such as cardiac pacemakers or implant defibrillators), when operated close to the device. You should seek advice from your doctor before operating the EnGo. For personal health and safety, persons concerned about exposure should maintain a minimum distance of 10 mm from the EnGo while it is powered on, except when using the touch screen.

## Hearing Devices

People with hearing aids or cochlear implants may experience interfering noises when using mobile devices, or when one is nearby. The level of interference depends on the type of aid or implant, the type of mobile device, and the distance between the two. Increasing the distance between the EnGo and the hearing device may reduce interference.

## Electrical Safety

Disconnect all power sources before servicing the unit.

The socket-outlet shall be installed near the equipment and shall be easily accessible.

## Li-ion secondary (rechargeable) battery notice



**Warning:** The battery installed in this device may present a risk of fire or chemical burn if mistreated. Do not attempt to disassemble the device to access or replace the internal battery. Only authorised Dejero personnel can service the internal battery and the unit.

# Handling and Operating Conditions

Read this section in its entirety before operating the EnGo.

## Handle Device with Care

While the EnGo case is durable, it is possible to damage or knock loose the electronics inside if the device is dropped or thrown. Please handle with care. Damage sustained as the result of mishandling the EnGo renders the warranty null and void.

## Do Not Open the Case or Store Anything Inside

The EnGo case should remain sealed at all times to protect the sensitive electronics inside and ensure the safety of the operator. Opening the case renders the warranty null and void.

## Do Not Disassemble the Product

Only authorized Dejero personnel can open, modify, or repair the EnGo unit. Unless authorized by Dejero personnel, any attempt by the user to open, disassemble, or repair the device renders the warranty null and void.

## Keep Air Vents Clear

If the air vents are blocked, the EnGo may overheat and shut down. These vents are located on the top and bottom of the device. (The intake is protected by the black plastic antenna module end caps on the top and bottom.) Please keep these areas clear and unobstructed to ensure adequate airflow.

## Keep Device as Cool as Possible

For optimal performance, keep the EnGo in well-ventilated areas, away from heat sources and direct exposure to sunlight. Do not operate the EnGo in temperatures outside of the ambient range (0° C to +45° C / 32° F to 113° F).

## Keep Device Dry

Keep the EnGo dry. The EnGo backpack is designed to be weather-resistant, but not weatherproof. Keep it covered during inclement conditions, while still ensuring adequate air flow to keep the EnGo cool. Do not expose it to liquid, moisture, or excessive humidity. Using the EnGo with backpacks other than the ones supplied is not recommended and will void the warranty.

# About the Dejero EnGo 260

The Dejero EnGo 260 is a compact mobile transmitter that encodes high-quality video and transmits it over multiple IP connections to reliably deliver exceptional picture quality with extremely low latency—even in challenging network conditions.

Vehicle-mounted or worn in a backpack, EnGo is ideal for newsgathering, sports coverage, and live event broadcasting from remote locations, and while in motion.

Reliable and simple to use, EnGo is designed for mobile video contribution professionals who require agility and versatility.

## Remarkable performance

Blending up to eight network connections with Dejero Smart Blending Technology, EnGo reliably delivers exceptional picture quality with low latency, even in challenging bandwidth conditions. Get your live shot where others can't.

## Broadcast from virtually anywhere

Cellular, Wi-Fi®, and satellite connectivity from a compact transmitter enables you to reliably broadcast live from virtually anywhere. You can even broadcast live while in motion.

## Easy to use

The simple, intuitive touch screen interface provides confidence monitoring, status information, and easy operation. Built-in intelligence does most of the work for you so you can focus on the shot.

## Exceptionally versatile

Whether you put it in a backpack or mount it in your vehicle, the EnGo adapts to your needs. The latest LTE-A global modems and field-user accessible SIMs make it easy to go live using local SIMs.

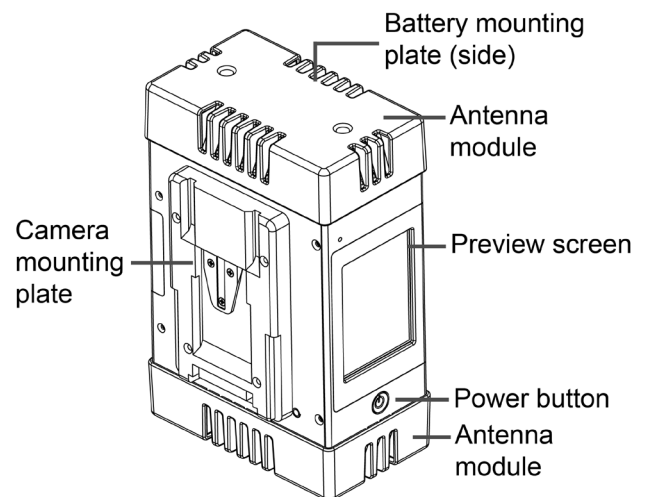
## What's included

The EnGo includes the following items:

- EnGo mobile transmitter
- Power adapter with country-specific cord
- EnGo backpack, which includes
  - A power cable that connects directly to a D-Tap port on a battery or the included V-Mount or Gold Mount battery plates
  - A backpack cover for weather protection
  - Right angle SDI cable
  - Right angle HDMI cable
  - Mini-XLR to XLR audio adapter for IFB
- Quick Start Guide



**Note:** The touch screen on the EnGo is a capacitive screen. If you are wearing gloves, you must remove them before using the screen.



## About Dejero Control

When you manage the EnGo with Dejero Control, you can:









- Assign live and recorded video, as well as file transfers, from the EnGo to a Dejero receiver.
- Geolocate the EnGo mobile transmitter.
- Preview and route feeds from the EnGo.
- Remotely control and configure the EnGo.
- Review analytics about the performance of the EnGo.



# Powering the EnGo


When the EnGo is on, it runs on its internal battery. The EnGo does not supply power to the camera.

The following icons appear on the Preview screen to indicate the battery's status. The percent that appears with each battery icon indicates the remaining charge.


	Running on auxiliary power (either a power source or an auxiliary battery). If the internal battery needs charging, the battery icon indicates that the battery is charging.
	Running on internal battery.
	Running on internal battery, but the remaining charge is 20% or less.
	Running on internal battery, but the remaining charge is 5% or less.
	Battery error, but the EnGo is running on auxiliary power. For more information, tap  > <b>Warning</b> .
	Battery error. For more information, tap  > <b>Warning</b> .

## Charge the EnGo

When the battery is low, you must charge the EnGo. Charge the battery in EnGo fully prior to using it for the first time.

 **Note:** While the battery is charging, the power button flashes slowly. The battery might not charge if the temperature is below 0° C / 32° F or above +45° C / 113° F, or if it has encountered a problem that caused the battery to fail.

### Charge the EnGo using a power outlet

 **Note:** You cannot use the charger from an EnGo hardware version 1.3 or earlier to charge the EnGo 260.


1. Connect the power cord to its power adapter.
2. Connect the power cord to the DC IN port on the side of the EnGo.
3. Plug the power cord into a power outlet.

### Charge the EnGo using an auxiliary battery


Use the included power cord to connect to a D-Tap port on an auxiliary battery or the V-Mount or Gold Mount battery plates to charge the EnGo.

1. Connect the power cord to the DC IN port on the side of the EnGo.
2. Perform one of the following actions:
  - Connect the power cord directly to an auxiliary battery.

- Connect the power cord to the battery plate. Slide an auxiliary battery onto the battery plate.

 **Note:** When you connect an auxiliary battery to the EnGo, the battery both powers and charges the EnGo (if the internal battery needs charging). Because it performs both functions, the battery level in the auxiliary battery drains faster.

## Starting the EnGo

1. On the front of the EnGo, press .

While the transmitter turns on and establishes a network connection, start-up messages appear on the **Preview** screen.

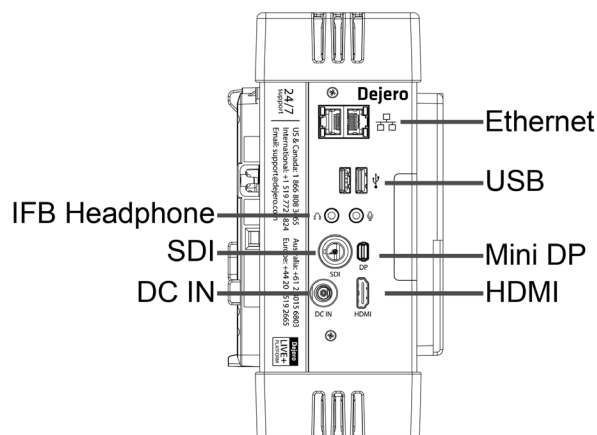
## Using the EnGo

You can use the EnGo in one of the following operation modes:

- **Live:** Transmit live video over network blending of cellular, Wi-Fi, Ethernet, or satellite connections to the Dejero receivers.
- **Recording:** Record video for later transmission. Use this mode when a live feed is not required, or when bandwidth is limited or not available.
- **Live and Recording:** Transmit live while also recording high-quality video to use later. Use this mode when network bandwidth is limited but you still need to broadcast live.
- **File Transfer:** Quickly transfer photos, scripts, graphics, or edited video packages to the Dejero receivers using the blended network connectivity.

## Connecting to the EnGo

You can use the connection ports on the EnGo to connect video and audio, Ethernet, or IFB. You can also use the USB ports on the EnGo.



## Connect video and audio

The EnGo supports HDMI or SDI video input with embedded audio.

1. Plug the included SDI or HDMI cable into the video camera's output port.
2. Plug the SDI or HDMI cable into the video input port on the EnGo.
3. Make sure that all cables are firmly connected.

The EnGo selects the correct video input automatically. If you do not see video on the screen, make sure that the cables are connected properly and that you are using a supported video format.

If the video format is not detected automatically, you may need to configure the video settings. For more information, see [Configuring the transmitter](#) on page 16.

## Connect Ethernet

Using an optional Ethernet connection, you can choose to transmit using Ethernet only or broadcast over Ethernet and cellular networks simultaneously.

If multiple networks are available, you can plug in a second Ethernet cable for additional throughput.

1. On the side of the EnGo, plug an Ethernet cable into one of the ports.
2. Ensure that UDP port 6000 is open on the network for inbound and outbound traffic.

The Ethernet adapter is configured to obtain IP address details automatically using DHCP. For more information, see [Configuring the transmitter](#) on page 16.

## Connect IFB

IFB acts as a one-way audio communication tool from Dejero receivers to the EnGo. It enables communication and cueing from the studio crew to the reporter in the field. The station sends a program feed to the reporter's earpiece, which is connected to the EnGo.

You can use IFB at any time – regardless of whether the EnGo is transmitting a live stream. To use IFB when the EnGo is not live, both the EnGo and the receiver that you are using must be using software version 5.3 or later.

For more information on Dejero receivers, visit [support.dejero.com](http://support.dejero.com) to read the receiver user guides.



**Note:** Connecting IFB is optional.

1. Connect your audio device (such as an earpiece, headset, or IFB amplifier input) to the XLR connector on the included adapter.
2. Plug the adapter into the min-XLR connector on the side of the EnGo.

As soon as the EnGo is turned on, an IFB indicator appears on the right side of the screen. It shows the following information:

- I = Idle
- R = Receiving

- .1-.9 = IFB is active and the delay is less than 1 second
- 1-9 = IFB is active and delay is less than 10 seconds
- X = IFB is active and the delay is 10 seconds or more

The indicator starts at I and, when IFB is active, it shows the volume and the delay interval. As the EnGo receives voice packets from the receiver, the sound level varies.



**Note:** If you are using a Dejero Broadcast Server or a Dejero Transceiver, the audio is unbalanced. If you are using a Dejero WayPoint receiver, the audio is balanced.

## Use the USB ports

The EnGo has two USB 3.0 ports. You can use these ports for connecting USB memory sticks (for file transfers), for connecting support peripherals (such as a keyboard or mouse), or for connecting other supported devices.

# Inserting the EnGo into the backpack

When the EnGo is inside the backpack, ensure that the cables are not bent.

1. Route the SDI or HDMI cable from the video output port on the camera through the Velcro opening on the right side of the backpack.
2. If required, route the IFB audio cable through the same Velcro opening.
3. If you want to power the EnGo using an auxiliary battery, perform the following actions:
  - a. Run the power cable from the battery compartment up through the foam channel into the top compartment of the backpack.
  - b. In the battery compartment, connect the D-Tap connector to the battery plate.
  - c. Ensure that the battery plate is held in place with Velcro.
  - d. Slide the auxiliary battery onto the battery plate.
4. Set the EnGo inside the top compartment of the backpack with the screen facing out and the video and IFB ports facing down.
5. Lift the EnGo and perform the following actions:
6. Connect the SDI or HDMI video cable to the correct input port on the side of the EnGo.
7. If necessary, connect the IFB audio cable to the IFB output port.
8. Ensure that the cables lie flat in the foam channel below the EnGo so they are not bent.
9. To secure the EnGo in the backpack, pull the top and bottom of the attached zip cords over the left and right sides of the EnGo. Pull the cords all the way around to make sure that the endcaps hold the EnGo in place.
10. Connect the cable to the DC IN port on the EnGo.
11. Close the backpack.



**Tip:** Use the strap on the right side of the backpack to secure disconnected audio and video cables.

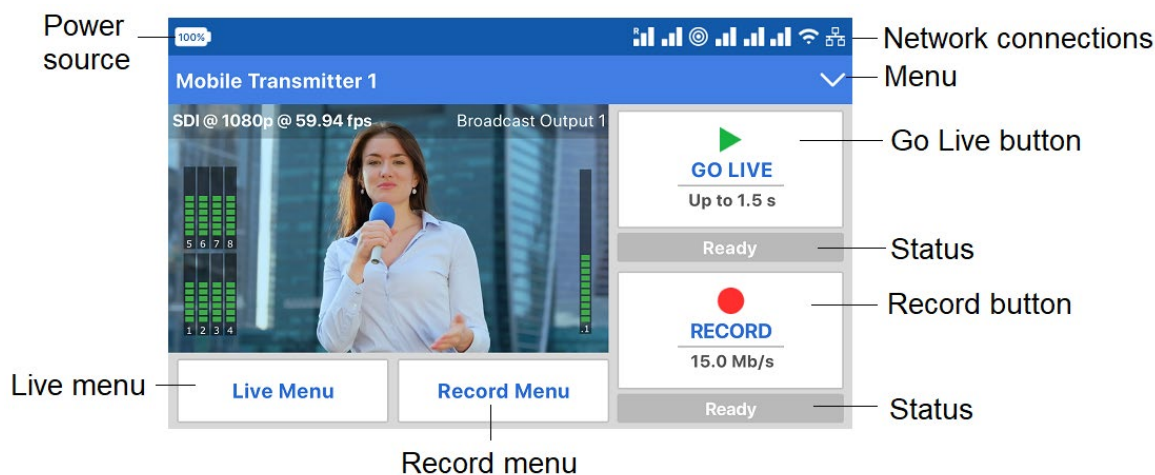
## Use the EnGo inside the backpack

When the EnGo is inside the backpack, you do not need to remove it to view the screen or interact with it.

1. Open the top compartment of the backpack halfway.
2. Use the magnet at the top of the backpack to hold open the top compartment.

## About the Preview screen

When the EnGo is on, the **Preview** screen appears.



You can use the **Preview** screen in portrait or landscape mode. By default, the screen appears in landscape mode. For more information on changing the display orientation, see [Changing the display orientation](#) on page 35.

The **Preview** screen is the hub of the EnGo transmitter. The top half of the screen shows the live camera feed, as well information about the power level, network connections, stream health, and any errors. From the menu, you can transfer files or show transmitter settings, error messages, and connection details. For a list of possible error messages, see page 40.

You can use the menus and buttons to access the features of the EnGo:

- **Go Live** button: Use this button to start a live transmission. The current live stream profile appears below the **Go Live** button. When you tap the button, the **Preview** screen shows the live stream run time below the button, and the stream connection health and the latency above the button.
- **Record** button: Use this button to record Store & Forward clips. The current quality setting appears below the button. When you tap the **Record** button, the **Preview** screen shows the clip run time below the button. Above the button, the screen shows the amount of remaining video time that you can record and store in the device storage.

- **Live Menu:** Use this menu to select the settings for your live transmission.
- **Record Menu:** Use this menu to set the quality of your Store & Forward clips.



**Note:** Your Control administrator must assign the transmitter to a receiver output destination before you can use it to go live. If your administrator has not assigned the transmitter, an error appears. Your administrator can also change the Store and Forward Clip upload or File upload receiver destination using Control and the available quality settings for clips. If any settings are not available, a message appears with the quality setting in the **Record Menu**.

## Change the settings for a live transmission

1. On the **Preview** screen, tap the **Live Menu** button.
2. Tap **Feed**, **Auto**, or **User**.

### Live feed settings


Setting	Description
Feed	Use the <b>Feed</b> profile to send video to the station in poor network conditions. You can also use <b>Feed</b> when you have time to send the highest quality video or when recording live events without anchor desk and reporter interaction.
Auto	Use the <b>Auto</b> profile to adapt to network conditions. It increases latency as needed.
User	Use the <b>User</b> profile if you set the configuration options manually. For more information, see Configuring the transmitter on page 16.



## Set the quality of Store & Forward clips

1. On the **Preview** screen, tap the **Record** button.
2. Tap **2.5 Mb/s**, **4.0 Mb/s**, **6.0 Mb/s**, **12.0 Mb/s**, or **15.0 Mb/s**.

## Network connection icons

The following icons appear on the **Preview** screen to show the status of the EnGo's connections. The icons also appear on the screen when using Remote Control with the EnGo.

Icon	Description
	Ethernet connection
	CellSat connection


Icon	Description
	Wi-Fi connection
	Cellular connection



**Note:** If an icon appears in grey or if no bars appear, no connection is available. If a red X appears with the icon, there is an error with the connection. For Wi-Fi and cellular connections, the number of bars indicates the strength of the connection. For cellular connections, an R indicates that you are roaming.

## Specifying the camera input type

The EnGo is configured to detect the camera input automatically. After the camera is connected and video appears on the **Preview** screen, use the **Configuration** screen to verify your settings, if necessary. On this screen, you can check your video and video format type, connection type, and latency settings.

1. On the **Preview** screen, tap .
2. Tap **Settings**.
3. Tap **Input**.
4. Tap **Video Input**.
5. Tap **SDI**, **HDMI**, or **Auto**.

For more information on the configuration settings, see page 16.

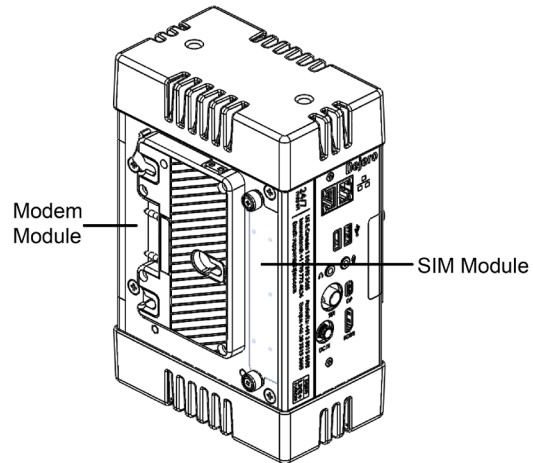
## Changing SIM modules

The EnGo has a user-changeable SIM module for regional cellular network access. You can access the SIM module to change the SIM cards to ones from a different region.

The SIM module uses nano SIM cards.

## Swap the SIM module

1. Power off the EnGo.
2. Remove the SIM module from the EnGo by loosening the thumbscrews.
3. Replace the SIM module by lining up and tightening the thumbscrews. Ensure that the module is aligned correctly and tightly connected.



## Change the SIM cards in the accessible SIM module



**Note:** When inserting the SIM cards, use the diagram on SIM module to determine the correct orientation.

1. Power off the EnGo.
2. Remove the SIM module from the EnGo by loosening the thumbscrews.
3. Remove the SIM cards by pushing the SIM card in gently. The SIM card will spring out.
4. If necessary, pull the SIM card the rest of the way out of the slot.
5. Place a SIM card into the correct slot in the SIM module, with the notch on the SIM card inserted first. For more information, visit [support.dejero.com](http://support.dejero.com) to read the *SIM Configuration Guide*.
6. Gently push the SIM card into the slot, until it locks into place. If the SIM card is inserted incorrectly, it does not insert all the way.
7. Repeat steps 3 through 6 for each slot.
8. Replace the SIM module by lining up and tightening the thumbscrews. Ensure that the module is aligned correctly and tightly connected.

# Configuring the EnGo

Use the Settings screen to configure the transmitter settings.




**Note:** When you are streaming live content, you cannot configure the settings for the EnGo.




## Adjust the brightness display

The preferred brightness can be manually set or auto-adjust can be turned on to change the brightness automatically, based on the light sensor. Auto-adjust brightens the display in bright light and dims it in low light.


1. On the **Preview** screen, tap .
2. Tap **Brightness**.
3. Use the slider to adjust the brightness.
4. Tap the check box to turn the Auto-adjust feature on or off.

## Configure the video input

By default, the transmitter automatically detects HDMI or SDI connections, frame rate, and resolution with its **Auto** setting. If you select SDI as the input type and the EnGo does not detect the frame rate and resolution settings automatically, you can set them manually.

1. On the **Preview** screen, tap .
2. Tap **Settings**.
3. Tap **Input**.
4. Tap **Video Input**.
5. Set the video input to **Auto**, **SDI**, or **HDMI**.
6. Tap **Back**.
7. If you selected **SDI**, set the **Input Resolution** and **Input Frame Rate**.

Input Resolution	Input Frame Rates
480i	29.97
576i	25
720p	50, 59.94, 60
1080i	25, 29.97, 30
1080p	23.98, 25, 29.97, 30
1080p	50, 59.94, 60 (3G-SDI Level-A)


8. To exit from **Input**, tap **Back**.
9. Tap  to close the menu.



**Note:** Depending on the frame rate that you select, the available input resolutions change.


## Configure the audio input

By default, EnGo uses two audio channels. To add more audio channels and maintain video quality, you will require additional data. Any additional data that you use for additional audio channels is deducted from your data plan allotment.

1. On the **Preview** screen, tap .
2. Tap **Settings**.
3. Tap **Input**.
4. Tap **Audio Input**.
5. Select the number of audio channels.
6. Tap **Back**.

## Configure the video loss setting

You can configure what appears on the screen if the video is lost during a transmission.


1. On the **Preview** screen, tap .
2. Tap **Settings**.
3. Tap **Input**.
4. Tap **Video Loss**.
5. Set the video loss setting to **Black Screen** or **Last Frame**.
6. Tap **Back**.

## Configure the Live Resolution setting

Live resolution is the resolution of the video, as transmitted over-the-air when broadcasting. It is independent of the transmitter input and receiver output resolutions.




**Note:** An administrator might choose to update the maximum live resolution setting allowed for a EnGo in Control. When a restriction is added, the resolution is stepped down automatically to the allowable resolution when modems or all connections are selected. The administrator also uses Control to set the maximum connection bitrate.

1. On the **Preview** screen, tap .
2. Tap **Settings**.
3. Tap **Live**.
4. Tap **Resolution**.
5. Set the live resolution to **Auto: SD**, **Auto: SD+**, **Auto: HD**, **Auto: HD+**, **Auto: HD+20**, or **Manual**.
6. If you set the live resolution to **Manual**, perform the following actions:
  - Tap **Back**.
  - Tap **Bit Rate**.

- Set the maximum connection bitrate.

7. Tap **Back**.

8. Tap **Back** as needed.

9. Tap  to close the menu.

The EnGo monitors the available bandwidth and adjusts the transport resolution automatically to give you the best possible video quality under the current network conditions. The receiver output resolution does not change, so the video routed to your internal systems remains constant.

Each Auto option has a different maximum bandwidth cap, appropriate for the base video resolution that you send.

Live Resolution	Ethernet Type	Maximum Connection Bitrate
Auto: SD	Normal	2.5 Mb/s
Auto: SD+	Normal	5.0 Mb/s
Auto: HD	Normal	5.0 Mb/s
Auto: HD+	Normal	10.0 Mb/s
Auto: HD+20	Normal	20.0 Mb/s

If you choose Manual, you set the maximum connection bitrate. This setting is useful if you want to control your data usage or if you are broadcasting from an area with poor coverage and want to cap the bandwidth at a very low rate.

### Audio-only mode

In situations of limited bandwidth, when the available bandwidth falls below the threshold required for usable video quality, the EnGo automatically sends only audio to the receiver and the last good frame of the video remains on the screen. When the bandwidth increases above the required threshold, the EnGo resumes sending video.



**Note:** The thresholds change depending on the number of audio channels selected; more audio channels result in higher thresholds.

### Configure the latency

Latency is the time that it takes for the video to arrive at the receiver. Glass-to-glass refers to the delay from the time the camera detects an image to the time that it appears on a video monitor connected to the Dejero receiver.



**Tip:** In an area of poor coverage, or very high cellular network traffic, you might achieve better video transmission results with a medium or long latency.

1. On the **Preview** screen, tap .

2. Tap **Settings**.

3. Tap **Live**.
4. Tap **Latency**.
5. Tap a preset value: **1.5 seconds**, **3 seconds**, **8 seconds**, or **Preset**, where Preset is between 0.8 to 20 seconds, as defined for the assigned receiver output in Control.
6. Tap **Back**.
7. Tap **Latency Mode**.
8. Tap a latency mode: **Fixed**, **Adaptive**, or **Up to**.
9. Tap **Back**.




**Note:** If you engage a satellite connection as part of the CellSat service, the EnGo must use a latency of greater than 1.5 seconds. If the latency is set to less than 1.5 seconds, the EnGo changes the latency to **Short** (1.5 seconds). If there is the potential to lose cellular connections completely, Dejero recommends setting the latency to **Preset** (at 2.2 seconds) for maximum reliability.

## Latency settings

Setting	Description
Fixed Latency mode	<p>In Fixed Latency mode, the system attempts to give the glass-to-glass latency requested. If the current network conditions cannot support the configured latency, a warning appears on the screen.</p> <p>This setting is ideal when a known latency is preferred.</p>
Adaptive Latency mode	<p>In Adaptive Latency mode, the system measures the network conditions during the stream and gradually adjusts the requested latency upwards to a value that is supported by the current conditions.</p> <p>This setting is ideal when picture quality is the priority.</p>
Up to Latency mode	<p>In Up-to Latency mode, the system measures the network conditions during the beginning of the stream and provides the shortest possible latency available. If the conditions worsen during the stream, the EnGo gradually increases the latency up to the maximum latency that you set. When the EnGo reaches the maximum latency, the latency remains fixed at the specified value.</p> <p>This setting is ideal when the lowest possible latency is the priority.</p>

## Configure Auto Start

You can use Auto Start to initiate a live transmission automatically when you power on the EnGo and it detects video input. You can also specify a delayed start for the live transmission.

1. On the **Preview** screen, tap .
2. Tap **Settings**.
3. Tap **Operation**.


4. Tap **Auto Start**.
5. Tap your delay selection: **No delay**, **1 minute**, **2 minutes**, **3 minutes**, **4 minutes**, or **5 minutes**.



**Note:** If you turn on Auto Start, the live stream starts when the transmitter detects video. If the live stream is stopped manually, Auto Start does not start again until you turn off and turn on the EnGo again.

## Configure the connection type


You can set the type of connection to use when transmitting data.

1. On the **Preview** screen, tap .
2. Tap **Settings**.
3. Tap **Connections**.
4. Tap **Connection Types**.
5. Tap **All**, **Ethernet**, or **Modems**.
6. Tap **Back**.

### Connection type settings

Setting	Description
All	The transmitter sends data through all available connections, including cellular, Ethernet, and Wi-Fi. The transmitter uses only the connections that are available. If multiple connections are available, the transmitter uses all connection types simultaneously.
Ethernet	The transmitter sends data over Ethernet, Wi-Fi, or both. If you select this option but do not have an Ethernet cable connected or a Wi-Fi connection configured, an error appears on the screen.
Modems	The transmitter sends data over the modem connections only. Use this mode when your Wi-Fi or Ethernet connection is poor, or with high usage by others resulting in low bandwidth.

## Configure the connection settings


1. On the **Preview** screen, tap .
2. Tap **Settings**.
3. Tap **Connections**.
4. Tap **Preferred Connection**.
5. Tap **Automatic**, **Ethernet**, or **Cellular**.
6. Tap **Back**.

## Connection Preference settings

Setting	Description
Automatic	Use Automatic to provide an even weighting of connections across cellular and Ethernet connections. The EnGo adjusts the overall weighting according to network conditions to provide the requested bitrate.
Cellular	Use Cellular if your Ethernet connection is a satellite connection and you prefer to use cellular connections instead. EnGo puts a higher priority on the cellular connection and, if necessary, adjusts the weighting depending on the network conditions to provide the requested bitrate.
Ethernet	Use Ethernet to put a higher priority on the Ethernet connection over the cellular connection. Use this option if the Ethernet connection is a lower cost option as part of blended connectivity. EnGo adjusts the weighting according to the network conditions to provide the requested bitrate.

## Define the SIM set

The EnGo can use different SIMs based on the region that you are in. If you are using regional SIMs, you must select a SIM set.


1. On the **Preview** screen, tap .
2. Tap **Settings**.
3. Tap **Connections**.
4. Tap **SIM Set**.
5. Depending on your geographic location, tap **Primary** or **Secondary**.



**Note:** Primary refers to the default set of SIM cards included in the EnGo. Secondary refers to any auxiliary SIM cards that you insert into the SIM module.

## Activate the hotspot

You can activate the hotspot so smartphones, laptops, and other devices can use the EnGo to connect to the internet. Activating the hotspot reserves a single modem connection for hotspot use and keeps the remaining connections available for live streams. When not in use, deactivate the hotspot to free up connections for live streams.

1. On the **Preview** screen, tap .
2. Tap **Settings**.
3. Tap **Connections**.
4. Tap **Hotspot**.
5. Tap a connection to use for the hotspot.

6. Tap **Actions**.



7. Tap **Activate**.



**Note:** When a hotspot is active, the selected connection is not used for live streams.



## Rename the hotspot

By default, the hotspot name is the name that appears for laptops or mobile devices in the available Wi-Fi networks list. You can change this name to make it easier to identify.


1. On the **Preview** screen, tap .
2. Tap **Settings**.
3. Tap **Connections**.
4. Tap **Hotspot**.
5. Tap **Actions**.
6. Tap **SSID**.
7. Type the new hotspot name.
8. Tap .

## Change the hotspot password

The password prevents unauthorized users from accessing the EnGo hotspot.

1. On the **Preview** screen, tap .
2. Tap **Settings**.
3. Tap **Connections**.
4. Tap **Hotspot**.
5. Tap **Actions**.
6. Tap **Password**.
7. Delete the old password.
8. Type the new hotspot password.
9. Tap .

## View devices connected to the hotspot




1. On the **Preview** screen, tap .
2. Tap **Settings**.
3. Tap **Connections**.
4. Tap **Hotspot**.
5. Tap **Actions**.

6. Tap **Info**.


## Managing Wi-Fi connections

You can connect the EnGo to a Wi-Fi network to blend other network connections with a WAN connection.


### Configure a Wi-Fi connection

1. On the **Preview** screen, tap .
  2. Tap **Settings**.
  3. Tap **Connections**.
  4. Tap **Wi-Fi**.
  5. Scroll through the list of available Wi-Fi connections and tap your selection.
  6. Tap **Actions**.
  7. Tap **Connect**.
  8. If prompted, use the keyboard on the screen to type the password.
  9. Tap .
-  **Tip:** Select **ABC** for uppercase letters and **abc** for lowercase letters. Select **123.?!** for special characters. Select it again for more special characters.

### Disconnect a Wi-Fi connection


1. On the **Preview** screen, tap .
2. Tap **Settings**.
3. Tap **Connections**.
4. Tap **Wi-Fi**. The current Wi-Fi network is highlighted in green.
5. Tap **Actions**.
6. Tap **Disconnect**.

### Delete a saved Wi-Fi profile

1. On the **Preview** screen, tap .
2. Tap **Settings**.
3. Tap **Connections**.
4. Tap **Wi-Fi**. The current Wi-Fi network is highlighted in green.
5. Tap **Actions**.
6. Tap **Forget**.




## Check the details of a Wi-Fi connection

1. On the **Preview** screen, tap .
2. Tap **Settings**.
3. Tap **Connections**.
4. Tap **Wi-Fi**. The current Wi-Fi network is highlighted in green.
5. Tap **Actions**.
6. Tap **Info**.

# Managing return feeds


You can subscribe to return feeds sent from the studio using a Dejero CuePoint server.

## Turn on return video feeds


1. On the **Preview** screen, tap .
2. Tap **Return Video**.
3. Tap **Return Video**.
4. To add sound, tap **Audio**.

Return Video appears on the Preview screen to indicate that the mode is active.

## View the status of the Return Video connection

1. On the **Preview** screen, tap .
2. Tap the **Device Status** message.

## Turn off return video feeds

1. On the **Preview** screen, tap .
2. Tap **Return Video**.
3. Tap **Off**.


# Managing SIM cards

When traveling, you might need to set up any secondary SIM cards that you use from local carriers.

## Change the Access Point Name

When you add new SIM cards, you might need to change the Access Point Name (APN). The APN is needed by the source transmitter to set up the connection to the wireless network.

Usually, the APN is available from the SIM card, but, in some cases, you might need to change it manually.

1. On the **Preview** screen, tap .
2. Tap **Connections**.
3. Tap a connection.
4. Tap **Actions**.
5. Tap **Edit APN**.
6. Tap a field to access the keyboard.
7. Type the new APN, network name, and PDP type.
8. Tap **Apply**.





**Note:** If you need to reset the SIM to the default values, tap the **Delete** button. The Delete button is only available after you apply changes.

## Unlock a SIM

When you add a new SIM card, you might need to unlock it prior to use. The PIN to unlock the SIM card is usually available with the packaging but you can also contact your carrier to request it.



**Note:** If a SIM card is locked, it may display as *Cellular* rather than a carrier name. To determine if you selected the correct connection, scroll down to the SIM card ICCID and compare it to the SIM card packaging.


1. On the **Preview** screen, tap .
2. Tap **Connections**.
3. Tap the connection for the SIM card carrier. SIM cards in the secondary SIM set will have a list of available actions.
4. Tap **Actions**.
5. Tap **Unlock SIM**.
6. Tap a field to access the keyboard.
7. Type the unlock PIN.
8. Tap .
9. Repeat steps 3 through 8 for each locked SIM.

For more information on defining the SIM set, see page 22.

## Change the PIN for a SIM



If necessary, you can change the PIN for a SIM card, such as if there are security reasons to change it, or you want to change it to something that's easier to remember.

1. On the **Preview** screen, tap .



2. Tap **Connections**.
3. Tap the connection for the SIM card carrier. SIM cards in the secondary SIM set will have a list of available actions.
4. Tap **Actions**.
5. Tap **Change PIN**.
6. Type the current PIN.
7. Type the new PIN.
8. Tap .

## Disable the PIN for a SIM

If you do not want to type the PIN every time you make changes to the SIM card, you can disable the PIN. Disabling the PIN simplifies your future actions.

1. On the **Preview** screen, tap .
2. Tap **Connections**.
3. Tap the connection for the SIM card carrier. SIM cards in the secondary SIM set will have a list of available actions.
4. Tap **Actions**.
5. Tap **Disable PIN**.
6. Type the current PIN.
7. Tap .


## Enable PIN for a SIM

1. On the **Preview** screen, tap .
2. Tap **Connections**.
3. Tap the connection for the SIM card carrier. SIM cards in the secondary SIM set will have a list of available actions.
4. Tap **Actions**.
5. Tap **Enable PIN**.
6. Type the current PIN for the SIM card.
7. Tap .

## Unblock a SIM

If you type the PIN wrong the maximum number of times, the carrier blocks the SIM card. To unblock a SIM card, call the carrier or access your account online and request a Personal Unlocking Key (PUK) code.

1. On the **Preview** screen, tap .


2. Tap **Connections**.
3. Tap the connection for the SIM card carrier. SIM cards in the secondary SIM set will have a list of available actions.
4. Tap **Actions**.
5. Tap **Unblock SIM**.
6. Type the PUK code.
7. Tap .



**Note:** There is a limit on the number of PUK attempts. If you exceed this limit, the SIM is no longer usable.

## Turn off roaming for a connection

In some regions, you might be able to manage roaming for each cellular connection that the EnGo has. By default, roaming is turned on, so connections roam on to any available cellular network. If this option is configured for your EnGo, you can turn roaming off for individual connections.

1. On the **Preview** screen, tap .
2. Tap **Connections**.
3. Tap a connection.
4. Tap **Actions**.
5. Set the **Roaming field** to **No**.

When roaming is turned off, an X appears over the signal strength indicator for a connection that is roaming.

To turn on roaming again, set the **Roaming** field to **Yes**. If roaming is on for a connection, on the **Connections** screen, an R appears with the signal strength indicator for that connection.

# Transmitting live

## Connect to cellular networks automatically

When the transmitter is on and set to either All or Modems as the connection type, it automatically connects to all available cellular connections.

## Start a transmission

After you connect your camera to the EnGo, you can start a transmission.

**Prerequisite:** Confirm that the latency settings as indicated on the **Go Live** button are appropriate for the transmission. For more information, see [Change the settings for a live transmission](#) on page 14.

1. Tap **Go Live**.

You can monitor the video feed as it transmits.

## Switch to a CellSat connection

During a live transmission, you can switch to a CellSat connection, if one is available.

1. In the **Start CellSat** dialog box, perform one of the following actions:

- To start using the CellSat connection, tap **Yes**.
- To check your connections first, tap **No**.



**Note:** If you want to use the CellSat connection after checking your connections, on the **Preview** screen, tap **Start CellSat**. Tap **Yes**.

## Stop a transmission

1. On the **Preview** screen, tap **Stop**.
2. Tap **Yes**.

The Preview screen continues to show the input from the camera. The device remains ready to resume broadcasting. To resume the transmission, tap **Go Live**.

If you switched to a CellSat connection, the EnGo disconnects the CellSat connection when you stop the transmission.



**Tip:** After you finish transmitting, always charge your EnGo battery.

# Using Store & Forward

With Store & Forward (S&F), you can record up to 30 hours of HD video clips directly onto the transmitter. You can also transfer and delete clips. Recording a clip can happen independently of a live transmission. You can also start and stop recording during a live transmission.

If you turn on transfer while recording, the EnGo starts to transfer the clip as it is recording it. There might be a delay between 1 and 10 seconds between starting the recording and the transfer starting.

Each clip is named with the date and time that the clip finished recording, using the following format: YYYY-MM-DD\_hhmmss.



## Set up Store & Forward

You can record Store & Forward clips when the transmitter is in either Live and Recording or Recording mode. The selected quality setting impacts the file size of the clip; a higher quality setting results in a larger file.

You can set the quality setting when configuring Store & Forward. You can also select the quality setting on the **Preview** screen.



**Note:** Your administrator configures the available quality settings for Store & Forward clips using Control. Certain quality settings might not be available. For more information, contact your administrator.

1. On the **Preview** screen, tap .
2. Tap **Settings**.
3. Tap **Record**.
4. Tap **Quality**.
5. Set the recording rate to **2.5 Mb/s**, **4.0 Mb/s**, **6.0 Mb/s**, **12.0 Mb/s**, or **15.0 Mb/s**.
6. Tap **Back**.
7. Tap **Clip File Format**.
8. Tap the preferred file format: **MP4**, **MOV**, or **M2TS**.
9. Tap **Back**.
10. Tap **Auto transfer**.
11. To transfer clips while they are recording, tap **On**.
12. Tap **Back**.
13. Tap **Prefix**.
14. Type the prefix that you want to add to the names of Store & Forward clips.
15. Tap .
16. Tap **Back**.

### Clip file format settings

Setting	Description
MP4	The standard MP4 clip contains H.264 video and AAC audio. For interlaced input formats, the video is encoded in MBAFF format.
MOV	The MP4 clip contains H.264 video and AAC audio. Interlaced input formats are encoded in progressive frame format to use with QuickTime-based players and editors. You need to tell QuickTime-based software that the file is interlaced.
M2TS	This format creates usable clips, even if the power is lost during recording.




**Note:** Your administrator can create custom metadata profiles for clips using Control. For more information on how to add a profile to your device, visit [support.dejero.com](http://support.dejero.com) to read the *Dejero Control User Guide*.

## Transfer a clip

The receiver that receives the transferred clip is defined in Control. Clips are recorded Store & Forward files.



**Note:** You cannot transfer a file or transfer a clip while recording if you are streaming live content.

1. On the **Preview** screen, tap .
2. Tap **Transfer**.
3. Tap **Clips**.
4. Scroll through the clips to find the correct clip.
5. Perform one of the following actions:
  - To select a clip, tap the checkbox.
  - To select all clips, tap **All**.
  - To cancel selecting all clips, tap **All** again.
6. Tap **Actions**.
7. Tap **Transfer**.
8. Tap **Back**.


To stop transferring the clip, tap **Stop**.



**Note:** When transferring a clip, you can switch to a CellSat connection, if one is available. In the **Start CellSat** dialog box. Tap **Yes**. If a CellSat connection becomes available after starting a clip transfer, on the **Preview** screen, tap **Start CellSat**. Tap **Yes**.

## View a clip's information

The clip information includes the transfer receiver, the transfer complete percentage, as well as the timestamp.



1. On the **Preview** screen, tap .
2. Tap **Transfer**.
3. Tap **Clips**.
4. Tap a clip.
5. Tap **Actions**.
6. Tap **Info**.
7. Tap **Back**.

## Change the prefix for a clip


You can change the prefix for a single clip before you transfer it to a receiver.



**Note:** When you change the prefix for a clip, you are not changing the default prefix. For more information on changing the default prefix, see page 29.


1. On the **Preview** screen, tap .
2. Tap **Transfer**.
3. Tap **Clips**.
4. Tap a clip.
5. Tap **Actions**.
6. Tap **Change Prefix**.
7. Type a new name for the clip.
8. Tap .

## Delete a clip

1. On the **Preview** screen, tap .
2. Tap **Transfer**.
3. Tap **Clips**.
4. Tap a clip.
5. Tap **Actions**.
6. Tap **Delete**.
7. To delete the clip from the transmitter permanently, tap **Yes**.
8. Tap **Back**.

## Import a clip


You can import your edited clips to the EnGo transmitter. Imported clips appear with the Store & Forward clips. You can transfer them to your receiver to view and play them back from Control.

1. On the side of the EnGo, insert a USB drive.
2. On the **Preview** screen, tap .
3. Tap **Transfer**.
4. Tap **Files**.
5. Using the arrows on the right side of the screen, navigate to the file that you want to import.
6. Tap the file to select it.
7. Tap **Actions**.
8. Tap **Import**.

## Backup clips or files

1. On the side of the EnGo, insert a USB drive.



2. On the **Preview** screen, tap .
3. Tap **Transfer**.
4. Tap **Clips** or **Files**.
5. Tap **Actions**.
6. On the **S&F Clip Selection** screen, select clips.
7. Tap **Actions**.
8. Tap **Backup**.
9. Select the drive.
10. To start the backup and save it in the currently selected destination folder, tap **Backup**.

## Record a Store & Forward clip

**Prerequisite:** Confirm that the Store & Forward clip quality that appears on the Record button is appropriate for the clip. For more information, see Set the quality of Store & Forward clips on page 14.



**Note:** You do not need to connect the EnGo to a network to record a Store & Forward clip.

1. On the **Preview** screen, tap **Record**.

The **Preview** screen shows the video that you are recording.

Statistics about the current clip also appear above and below the **Record** button, including the clip length, resolution, and the quality setting. Based on the available free disk space and the current quality setting, the estimated time remaining for the current clip appears. The format of the clip length and time remaining is: hh:mm:ss.

## Stop recording

1. To stop recording, on the **Preview** screen, tap **Stop**.
2. Tap **Yes**.

The **Preview** screen continues to show the input from the camera. The device remains ready to resume broadcasting. To resume the transmission, tap **Record**.

## Transmit live and record a Store & Forward clip

You can transmit live and record a Store & Forward clip at the same time. Depending on the connection and network conditions, the resolution of the live broadcast might change, but the resolution used when recording the Store & Forward clip does not change.

1. On the **Preview** screen, tap **Go Live**.
2. Tap **Record**.

The **Preview** screen shows the video that you are transmitting and recording.




**Note:** When transferring a clip, you can switch to a CellSat connection, if one is available. In the **Start CellSat** dialog box. Tap **Yes**. If a CellSat connection becomes available after starting a clip transfer, on the **Preview** screen, tap **Start CellSat**. Tap **Yes**.

## Transferring files

You can insert a USB drive into either of the USB ports on the EnGo. After you insert a USB drive, you can transfer files to the EnGo and then send the files to a receiver.

### Transfer a file

1. On the back of the EnGo, insert a USB drive into either of the USB ports.
2. On the **Preview** screen, tap .
3. Click **Transfer**.
4. Tap **Files**.
5. Using the arrows on the right side of the screen, navigate to the file that you want to import.
6. Tap the file to transfer. You can select and transfer multiple files from the same folder.
7. Tap **Actions**.
8. Tap **Transfer**.

The file transfer progress appears on the screen.



**Note:** When transferring a file, you can switch to a CellSat connection, if one is available. In the **Start CellSat** dialog box. Tap **Yes**. If a CellSat connection becomes available after starting a file transfer, on the **Preview** screen, tap **Start CellSat**. Tap **Yes**.


## About warning and error states

### Live

If the EnGo encounters an issue during a live transmission, the background color of the Preview screen changes.

- If a warning appears, the background color changes to yellow. You can troubleshoot the underlying issue and resolve the problem.
- If an error appears, the background color changes to red. The EnGo requires more advanced troubleshooting and might require support from your system administrator.

### View error or warning information

1. On the **Preview** screen, tap .
2. Tap **Error** or **Warning**.

## Record

If an error occurs during recording (such as the EnGo is out of disk space), the error appears in the status area under the Record button.

## Transfer


If an error occurs during a Store & Forward clip transfer or file transfer, a red X appears on the row.

# Using the Remote Control

You can use the Remote Control feature in Control to control the EnGo from a remote location. For more information, visit [support.dejero.com](http://support.dejero.com) to read the *Dejero Control User Guide*.

When the EnGo is under remote control, a blue border appears on the **Preview** screen. The blue border only appears at the top of the menu screen. The **Info** screen shows the name of the user who is controlling the EnGo.

## View the Remote Control user

1. On the **Preview** screen, tap .
2. Tap **Settings**.
3. Tap **Info**.


When the Remote Control is active, the Preview screen and the transmission activity continue to appear and the buttons work.

# Changing the display orientation

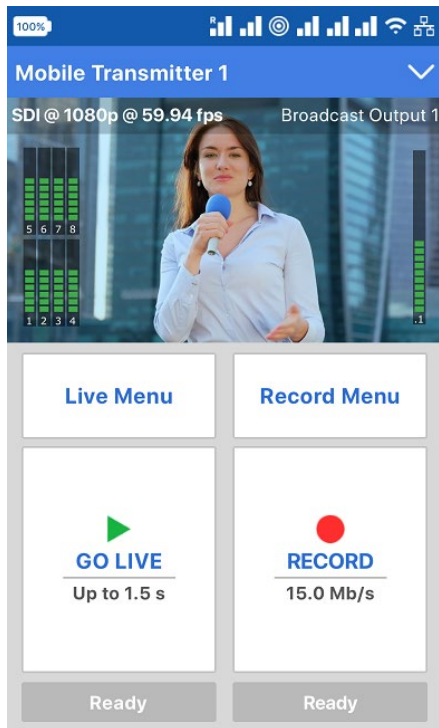
By default, the EnGo appears in landscape mode. When you rotate the EnGo, the display orientation changes automatically, but you can change it manually.



**Note:** If you change the display orientation manually, it remains in that orientation until you change it manually again. It does not rotate automatically.


1. On the **Preview** screen, tap .
2. Tap **Settings**.
3. Tap **Operation**.
4. Tap **Display**.
5. Select a display orientation.
6. Tap **Back**.


The EnGo appears in portrait mode.




## Viewing connection information

The EnGo communicates data through modems, Ethernet, CellSat, and Wi-Fi connections. Individual connections show the active data transmission rate and, if enabled, the roaming status.


 **Note:** On the **Connections** screen, the modem number for the connection appears before the network name.

1. On the **Preview** screen, tap .
2. Tap **Connections**.
3. To view detailed connection information, including the latency, MB/s transferred, roaming status, the network that you are roaming on to, and the connection's MAC address, tap a connection.

 **Note:** If roaming is not on for a connection, on the Connections screen, an X appears over the signal strength indicator for that connection.

### View SIM connection information

You can view SIM-specific details for any cellular connection that you changed the APN for. For more information on changing an APN, see [Change the Access Point Name](#) on page 25.

1. On the **Preview** screen, tap .
2. Tap **Settings**.

3. Tap **Connections**.

4. Tap **Carrier Data**.

Any connection that you changed the APN for appears on this screen along with the connection's ICCID, network, and APN. If you did not change the APN for any connections, **No Carrier Data** appears.



**Note:** You can also change the SIM settings from this screen. On the **Carrier Data** screen, tap **Edit**. Change the APN, network name, or PDP type. Tap **Apply**. Restart the EnGo for the changes to take effect.

## About stream indicators

On the **Preview** screen, you can view overall stream performance.

### Glass-to-glass latency

Latency measures time delay. Glass-to-glass refers to the delay from the time that the EnGo detects an image to the time that it appears on a video monitor connected to the SDI output of the Broadcast Server, or is output from the Cloud Server.

When transmitting live, the glass-to-glass latency appears on the **Preview** screen, above the **Go Live** button.

### Stream Health indicator

When transmitting live, the Stream Health indicator appears on the **Preview** screen above the **Live** menu. It appears as either **Good**, **Marginal**, or **Poor**. A colored dot appears along with the value to show the stream health.

The Stream Health indicator measures the quality of the live video stream received, decoded, and displayed by the output receiver.

The two components that have the strongest effect on the health of the stream are:

- The number of video frames that arrive at the receiver in time. Frames that are late or missing can result in paused or stuttering video, or video artifacts such as smearing or discoloration.
- The bitrate at which the video frames are encoded. Excessively low bitrates result in poor quality picture, indicated by blockiness and lack of detail.

When neither of these events occurs, the Stream Health indicator appears as Good.

## Troubleshooting

### No display on Preview screen

If you do not see a video on the **Preview** screen, perform the following actions:

- Make sure that all cables are connected correctly.
- Verify that your video source is on and sending video.
- If necessary, select the specific video input type (HDMI or SDI), input resolution, and input frame rate for your camera.
- Verify that the supplied video is in a compatible format.

## Start-up or power problems

Problem	Possible solution
EnGo does not turn on	Make sure that the battery is charged. Connect the EnGo to a power outlet or attach a charged auxiliary battery. If the EnGo still does not turn on, contact Dejero Support.
EnGo does not turn on when using DC power	If you are using DC power, confirm that all cable connections are secure and that the power connector is locked firmly into place. Verify that the power indicator light on the power adapter is on, indicating that power is being supplied.  If the EnGo still does not turn on, contact Dejero Support.
No network coverage	Move to an area with better network coverage. The device detects an available network automatically.
Modem error: "One or more modems have malfunctioned. Restarting this device may resolve the problem."	To reinitialize the modems: <ol style="list-style-type: none"> <li>1. Turn off the EnGo.</li> <li>2. Disconnect the power source.</li> <li>3. Wait 30 seconds, reconnect the power source, and restart.</li> </ol> If this does not resolve the problem, contact Dejero Support.
EnGo is inactive	Contact your system administrator to activate your transmitter.
EnGo needs to be assigned to a receiver output	Contact your system administrator to assign a receiver output. When assigned, the output destination for the EnGo appears on the <b>Preview</b> screen.
EnGo is disabled	Contact Dejero Support. You will need to restart the EnGo after it is re-enabled.

Problem	Possible solution
Back-up battery in use	<p>If the Power button flashes quickly, or a warning appears in Control, connect the EnGo to a power outlet or connect a fully charged external battery.</p> <p>If the battery power is low, a warning appears on the screen. The battery icon also changes to a red battery with white text. If this warning appears, connect the EnGo to a power source or a fully charged external battery.</p> <p>If the battery temperature is approaching its limit, a warning appears. Contact Dejero Support.</p>

## Video, audio, or transmission problems

Problem	Possible solution
Preview screen is black	<p>A source is not connected to the EnGo. Make sure that the cable from the source is securely connected to the correct input port on the EnGo.</p> <p>The video input might not be specified correctly. For more information, see Configure the video input on page 17.</p>
There is sound, but no picture	The video input might not be specified correctly. For more information, see Configure the video input on page 17.
There is picture, but no sound	The sound is set on your camera. To troubleshoot sound settings, see the camera manufacturer's instructions.
Poor stream health or poor network connectivity	Set the latency to 3 or 8 seconds. For more information, see Configure the latency on page 19.
Device is displaying an error message	For a full list of EnGo error messages and possible solution, see page 40.

## IFB problems

IFB might not be working if you encounter one or more of the following problems:

- No sound is coming through the earpiece
- On the **Preview** screen, the IFB indicator stays at I.
- On the **Preview** screen, the IFB indicator shows X.

To resolve the problems, perform one or more of the following actions:

- Adjust the IFB volume on the receiver.
- Check the IFB connection to the EnGo.

- Verify that the correct capture device is set as the default on the receiver.

If you still encounter errors, the transmitter might have an internal hardware problem. For more information, contact Dejero Support.

## Resilient mode

If there is an issue with the Dejero infrastructure, **Resilient Mode** appears on the **Preview** screen. In Resilient mode, you can still start a transmission or transfer clips or files.

When you start a transmission, the **Confirm Live Assignment** dialog box appears, showing the last receiver and output assignment used for a live transmission.

1. In the **Confirm Live Assignment** dialog box, perform one of the following actions:

- To use the current receiver and output for the current transmission, tap **Go Live**.
- To change the receiver and output assigned, tap **Change Assignment**. Tap one of the last 10 receiver and output assignments. Tap **Select & Go Live**.




**Note:** If you transfer clips or files in Resilient mode, the EnGo uses the last receiver that you assigned for a clip or file transfer.

## Restart the EnGo

Occasionally, you might need to restart the EnGo to assist with support sessions or during troubleshooting.

1. Perform one of the following actions:

- On the EnGo, use the dial to scroll through the menu options. Select **Settings**.
- If you use Remote Control with the EnGo, select  > **Settings**.

2. Select **Operation**.

3. Select **Restart**.



**Note:** If you use Remote Control, when the EnGo restarts, you lose Remote Control access. Wait until the EnGo restarts and Ready appears on the screen. Then, restart the Remote Control session.

## Warning and error messages

The following table outlines possible warning or error messages that you might encounter and possible ways to resolve them. If you call Dejero Support, reference the warning or error number, as listed below.

You can also find a complete list of errors in the Dejero Support Hub at [support.dejero.com](https://support.dejero.com).



Message	Error/warning number	Description	Possible solution
Poor network	Warning 04	There is insufficient connection bandwidth to support the bitrate.	Try repositioning the EnGo for better wireless coverage, or change to a longer latency setting. For more information, see <i>Configure the latency</i> on page 19.
One or more modems have malfunctioned. Restarting this device may resolve the problem.	Error 05	Unable to establish a network connection.	To reinitialize the modems: <ol style="list-style-type: none"> <li>1. Power off the EnGo.</li> <li>2. Disconnect the power source.</li> <li>3. Wait 30 seconds, reconnect the power source, and restart.</li> </ol> If this does not resolve the problem, contact Dejero Support.
Output not assigned	Warning 09	The EnGo might not be assigned to a receiver output in Control.  The assigned receiver output is either turned off or inactive.	Use Control to assign an output. For more information, visit <a href="http://support.dejero.com">support.dejero.com</a> to read the <i>Dejero Control User Guide</i> .
Device is disabled. Please contact Dejero.	Error 10	Either the EnGo or the assigned receiver is disabled in Control.	Enable the EnGo or the assigned receiver in Control. For more information, visit <a href="http://support.dejero.com">support.dejero.com</a> to read the <i>Dejero Control User Guide</i> .

Message	Error/warning number	Description	Possible solution
Device is inactive. Please contact your system administrator.	Error 14	Unable to establish connection with assigned receiver.  This error typically occurs because the receiver IP address is not configured properly or the modems on the EnGo are unable to transmit.	If this occurs, contact your system administrator.
No Ethernet	Warning 16	The Ethernet connection type has been selected but there are no Ethernet connections present.	Connect an Ethernet cable to the EnGo or establish a Wi-Fi connection.
Poor network	Warning 17	Network conditions are too poor to transmit reliably at the current latency setting.	Try repositioning the EnGo for better wireless coverage, or change the latency setting to <b>Adaptive</b> or set a longer latency value. See Configure the latency on page 19.
No disk space	Warning 18	There is not enough space on the EnGo to store an additional clip.	Delete existing clips to free up storage space.
All outputs in use	Warning 19	This error message appears if the EnGo is assigned to an output pool (in Control), but all the outputs in the pool are currently in use or unavailable.	Wait for another user to finish using a receiver output and try again.
Unsupported output	Error 20	The assigned output is set to an unsupported video format.	Use Control to select a different output video format. For more information, visit <a href="http://support.dejero.com">support.dejero.com</a> to read the <i>Dejero Control User Guide</i> .

Message	Error/warning number	Description	Possible solution
Device not licensed	Error 21	This device is not licensed.	Contact Dejero Support.
Device needs to be assigned to a clip receiver. Please contact your system administrator.	Warning 22	The device needs to be assigned to a clip receiver.	Use Control to assign a clip receiver to your EnGo.
Device needs to be assigned to a file receiver. Please contact your system administrator.	Warning 23	The device needs to be assigned to a file receiver.	Use Control to assign a file receiver to your EnGo.
Device not licensed for CellSat. Please disconnect the satellite connection or contact Dejero at 1-519-772-4824.	Error 24	The device is not licensed for CellSat services.	Disconnect the satellite connection or contact Dejero Support.
CellSat is not ready. Please make sure the satellite connection is correctly set up or completely disconnected.	Warning 25	The satellite connection is not ready.	Give the satellite more time to connect. If it has not connected within a suitable time, check that the satellite connection is configured correctly or disconnect it. If the problem persists, contact Dejero Support.
CellSat is not allowed in Ethernet-only mode. Please change the Connection Types setting to 'All'.	Error 26	You cannot use CellSat services in Ethernet-only mode.	Change the Connection Type setting to <b>All</b> . For more information, see Configure the connection type on page 21.

Message	Error/warning number	Description	Possible solution
Satellite capacity is not available at the moment. This message will automatically clear when satellite capacity is available again.	Warning 27	The device cannot establish a satellite connection.	Wait for the satellite connection to become available.
CellSat is not allowed. Please contact Dejero at 1-519-772-4824.	Error 28	The EnGo does not have modems or there are no SIM cards in the modems.	Contact Dejero Support.
Battery Critical	Error 29	The battery level is critically low.	Connect the EnGo to a power outlet or attach a charged auxiliary battery. If you cannot connect the EnGo to a power source, turn off the EnGo to preserve the power. The EnGo turns off automatically if the power level falls below 2%.
Battery Error	Error 30	The EnGo recorded an internal battery fault.	Contact Dejero Support.
Output in use	Warning 100	Could not start the live stream. The assigned receiver output is in use by another device.	Wait for an output to become available and try again. Or, use Control to assign a different output. For more information, visit <a href="http://support.dejero.com">support.dejero.com</a> to read the <i>Dejero Control User Guide</i> .
Check in/out formats	Warning 101	This error message appears if the input/output video format combination is not supported.	Select an input format that is compatible with the output or use Control to select a different output.
Invalid assignment	Warning 109	Could not broadcast. Invalid receiver output assignment.	Contact your system administrator, or use Control to assign a different destination.

Message	Error/warning number	Description	Possible solution
Clip transfer failed	Warning 110	This error message appears if there was an error creating a new Store & Forward clip transfer session.	Attempt to transmit the clip again. If the problem persists, contact your system administrator.  Consider managing the clips on the Dejero receiver to reduce the total number of clips to less than 1000.
File transfer failed.	Warning 111	This error message appears if there was an error creating a new File Transfer session.	Contact your system administrator, or use Control to assign a different destination.
Capacity reached	Warning 112	The assigned output has reached its live stream capacity.	Wait for an output to become available and try again. Or, use Control to assign a different output.
Capacity reached	Warning 113	The assigned output has reached its live stream capacity.	Wait for an output to become available and try again. Or, use Control to assign a different output.
Failed to complete transfer to the assigned receiver – insufficient disk space.	Warning 114	This error message appears if the receiver cannot complete the clip transfer due to insufficient available disk space.	Contact your system administrator to free up some disk space on the receiver.
Failed to start Live stream – the assigned output has malfunctioned.	Warning 115	This error message appears if the receiver did not initialize correctly.	Contact Dejero Support.
Receiver not licensed	Warning 118	Cannot stream to the assigned receiver because the receiver is not licensed.	Contact Dejero Support.

Message	Error/warning number	Description	Possible solution
Receiver incompatible	Error 119	Could not broadcast. The receiver is incompatible and requires a software update.	Contact Dejero Support.
Latency is being adjusted to optimize requested operation. This message will automatically clear when the latency adjustment has completed.	Warning 120	The CellSat service requires a minimum latency of 1.5 seconds. The device is adjusting the latency from a lower level.	Wait for the device to adjust the latency.
Hardware failure	Error 200	The input device has malfunctioned.	Contact Dejero Support.
Software failure	Error 201	The software stopped unexpectedly and was restarted automatically.	Contact Dejero Support.

## Technical specifications

### Video

<b>Resolution</b>	480i 29.97, 576i 25, 720p 50/59.94/60, 1080i 25/29.97/30, 1080p 23.98/25/29.97/30/50/59.94/60 (3G-SDI Level-A)
<b>Encoding</b>	H.264 AVC and H.265 HEVC, adaptive encoding
<b>Inputs</b>	3G-SDI, HDMI 1.3

## Audio

<b>Encoding</b>	Live: Opus 48 kHz, 2,4 or 8-channel, 16-128 kb/s adaptive bitrate, 16-bit audio depth Recording: AAC 48 kHz, stereo or 4-channel
<b>Inputs</b>	Embedded (SDI, HDMI)

## Network connections

<b>Cellular</b>	Up to 6 x 3G/4G/LTE/LTE-A
<b>Ethernet</b>	Dual 1 Gb/s port for LAN, WAN, and portable satellite (including BGAN, Ku-band, Ka-band)
<b>Wi-Fi</b>	Dual-band wireless-AC (802.11 a/b/g/n/ac) Open, WEP, WPA-PSK, and WPA2-PSK

## Power

<b>DC IN</b>	100-240 VAC adapter, 90W (included)
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## Physical

<b>Dimensions</b>	21.8 x 14.2 x 8.4 cm (8.5 x 5.6 x 3.3 inches)
<b>Weight</b>	1.8 kg (4.0 lbs)
<b>Operating Conditions</b>	0°C to 45°C (32°F to 113°F) mounted 0°C to 40°C (32°F to 104°F) in backpack, up to 95% RH (non-condensing)
<b>Storage Conditions</b>	-20°C to 70°C (-4°F to 158°F) < 95% RH (non-condensing)
<b>Connectors</b>	SDI in (BNC), HDMI in (1.3), Mini DisplayPort out, 2 x RJ45 Ethernet, 2 x USB 3.0, IFB (mini-XLR connector), DC In
<b>Adapters (included with the EnGo)</b>	IFB adapter (mini-XLR to XLR adapter), D-Tap adapter (DC In to D-Tap cable)

## Key functions

<b>Live</b>	Transmit broadcast-quality live video over IP networks.
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<b>Store &amp; Forward</b>	Record video for later transfer.
<b>Live and Store &amp; Forward</b>	Transmit live while also recording video for later at a higher quality.
<b>File Transfer</b>	Transfer edited video or other files to Dejero receivers.
<b>Hotspot</b>	Connect laptop, phone, or other devices to the Internet leveraging the EnGo connectivity.
<b>Multiple Output Formats</b>	Reliably transmit to a wide range of outputs including CDN, SDI, MPEG-TS, or SMPTE ST 2110.

\*operating with internal/external battery; up to 40°C with included certified external power adapter.

## Regulatory compliance

<b>Product</b>	EnGo 260
<b>Model</b>	EG260
<b>Compliance</b>	This product is compliant with international EMC and safety standards.

## Additional help

If you still require assistance operating your EnGo:

- Visit the Dejero Support Hub online knowledge base at [support.dejero.com](https://support.dejero.com)
- Email the Dejero technical support team at [support@dejero.com](mailto:support@dejero.com)
- Call the 24-hour technical support number for your region.
  - US & Canada: 1 866 808 3665, ext. 2
  - International: +1 519 772 4824, ext.2

## Document revision history

Version	Date	Changes
001	November 2019	Original release.



# Dejero

**Technical Support:**

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