_____
Company Name

_____
Tail Number

Flight Crew

Supplement to Satcom Users Guide

Just before your flight:

(Perform the following as close to getting on the aircraft as possible to get the most recent information and updates without having to go through Satcom)

- Connect to cellular or a local unmetered hotspot, open your flight planning app and update your database, charts, and download weather and other info along the flight path. Example - ForeFlight will ask you to 'pack' for the trip.

- Perform any updates to your devices.

- Make sure you have Flightstream™ SA on-line portal saved to your favorites for easy access. This will allow you to see data consumption while inflight, in near real-time, and also allow you to change or apply filters and web compression. (username and password for access is in a separate document titled 'Data Usage Details from Data Manager for N*xxxx*')

Onboard:

- Close all open windows on your mobile devices; swipe-up! Open apps will consume data.

- Once the Satcom system is turned on, connect to Wi-Fi, and make sure your Wi-Fi network settings for the aircraft Wi-Fi connection is set to 'Low Data Mode' or 'Metered Network' depending on the device. (instructions are in the Satcom Users Guide that accompanies this document).

- Make sure there are no maintenance computers in the aircraft that are connected to Wi-Fi.

☞ *Optional Consumption Tracking: Our service includes a pop-up window that gives live data consumption information* (pop-up blockers must be turned off, and the feature turned on through Flightstream™ SA)

☞ *Optional Consumption Tracking: Contact Air Sat One to have automated emails when your desired thresholds are met.* (i.e., 100 MB consumed within 24 hours)

- Instruct the passengers to see page 2 (in their manual) 'OPTIMIZED FOR SATCOM' for their devices. (the Wi-Fi must be turned on, passengers connect and set the network to 'metered' or 'low data mode.' Doing this will save data usage and also make internet page loads much faster. Once the aircraft Wi-Fi network is set the passengers won't have to do it on future flights unless a software update on their device wipes out the Wi-Fi network settings, recheck devices occasionally)

⚠ Pre-flight your Phone & Computer!

AirSatOne - Connect your Jet to the Internet - 636-333-9494
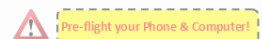
Wi Fi

Network Name: _____   Password: _____

👉 *After logging on to the aircraft's Wi-Fi network, immediately proceed to Wi-Fi settings for your device. Settings in this guide are designed to be optimized for Satcom internet. Failure to do this will result in slow internet service.*

Table of Contents

⚠️ **Pre-flight your Phone & Computer!**

👉 Close all open windows on your mobile devices; swipe-up! Open apps will consume data and **slow down the internet**.

Air Sat One - **Connect your Jet to the Internet** - **636-333-9494**

Worldwide Connectivity

Flightstream SA
by Air Sat One

Intermediate Gain Satcom System

Inmarsat's SwiftBroadband Satellite Network

Reliable Connectivity through Inmarsat Satcom: The US Department of Defense uses Inmarsat for military operations. Air Traffic Control uses it for safety services including SATVOICE and FANS 1/A to maintain aircraft communications and separation over oceanic regions. Inmarsat Satcom Services are used when Reliable Communications are Critical.

Designed For Aircraft: This SwiftBroadband system uses the aircraft GPS, Attitude, and Heading system to always keep the antenna pointed at the satellite. It even adjusts its frequency based on the speed the aircraft is moving from or towards the satellite to correct for doppler effect. All combined, you get the highest throughput possible with an antenna small enough to travel at speeds of 500 mph & over.

Private 2-way Connection: SwiftBroadband is much different than Dish, Direct TV, or XM Radio which broadcast one-way (down) signals to a very large area for antennas to receive. With SwiftBroadband, you are getting your own private two-way connection (up & down) through dedicated satellites. When you connect to the satellite, you are notching out your own segment of bandwidth.

Background IP & Streaming Mode: The Intermediate Gain Satcom system in this aircraft provides 332 kbps of Background IP connectivity as a default and also offer various speeds of Streaming IP. Background IP is the preferred connection because it is charged by the Megabyte. Streaming IP is charged by the minute even when not in use – streaming does not go to Standby Mode like Background IP and can get expensive to use.

Standby Mode: When internet activity is idle for 10 minutes, the satellite link will go to standby mode. When someone starts using Wi-Fi again, it takes 10 seconds for the satellite link to go back to active mode. When this occurs, web pages will seem slower than normal because the system is wakening up.

SwiftBroadband Streaming: The Satcom system on this aircraft includes Inmarsat's Streaming IP connectivity. It offers on-demand streaming data rates up to 128 kpbs. Streaming mode is used when more bandwidth is needed for special mission applications, video conferencing and streaming media. This service must be manually activated to use.

What Air Sat One provides – Satcom Service for this aircraft is provided by Air Sat One and includes our exclusive Flightstream™ SA connectivity platform. Flightstream™ SA offers a full set of Satcom web filtering, compression, management, and consumption tracking features along with a host of cybersecurity and network security applications with the flexibility to satisfy the business jet market and powerful enough for special mission operators. Flightstream™ SA is deployed globally - an important feature for aircraft operating around the world. Being deployed globally is important for efficient data handling to reduce time, distance traveled, and to reduce latency and hops. Milliseconds add up for each data packet sent and received; a shorter distance means fewer hops and faster data. Our backbone and its efficiency matter to the passengers on your aircraft.

Changes can be made through our customer portal at any time to a single aircraft, the entire fleet, or a group of aircraft in the fleet - anywhere in the world without having to gain access to the aircraft. Flightstream™ SA does not require hardware or software to be installed on the aircraft or personal devices and allows flight departments to keep their highly mobile networks under control.

More@ Flightstream™

Air Sat One - **Connect your Jet to the Internet** - **636-333-9494**

SwiftBroadband Coverage Map with services through Air Sat One
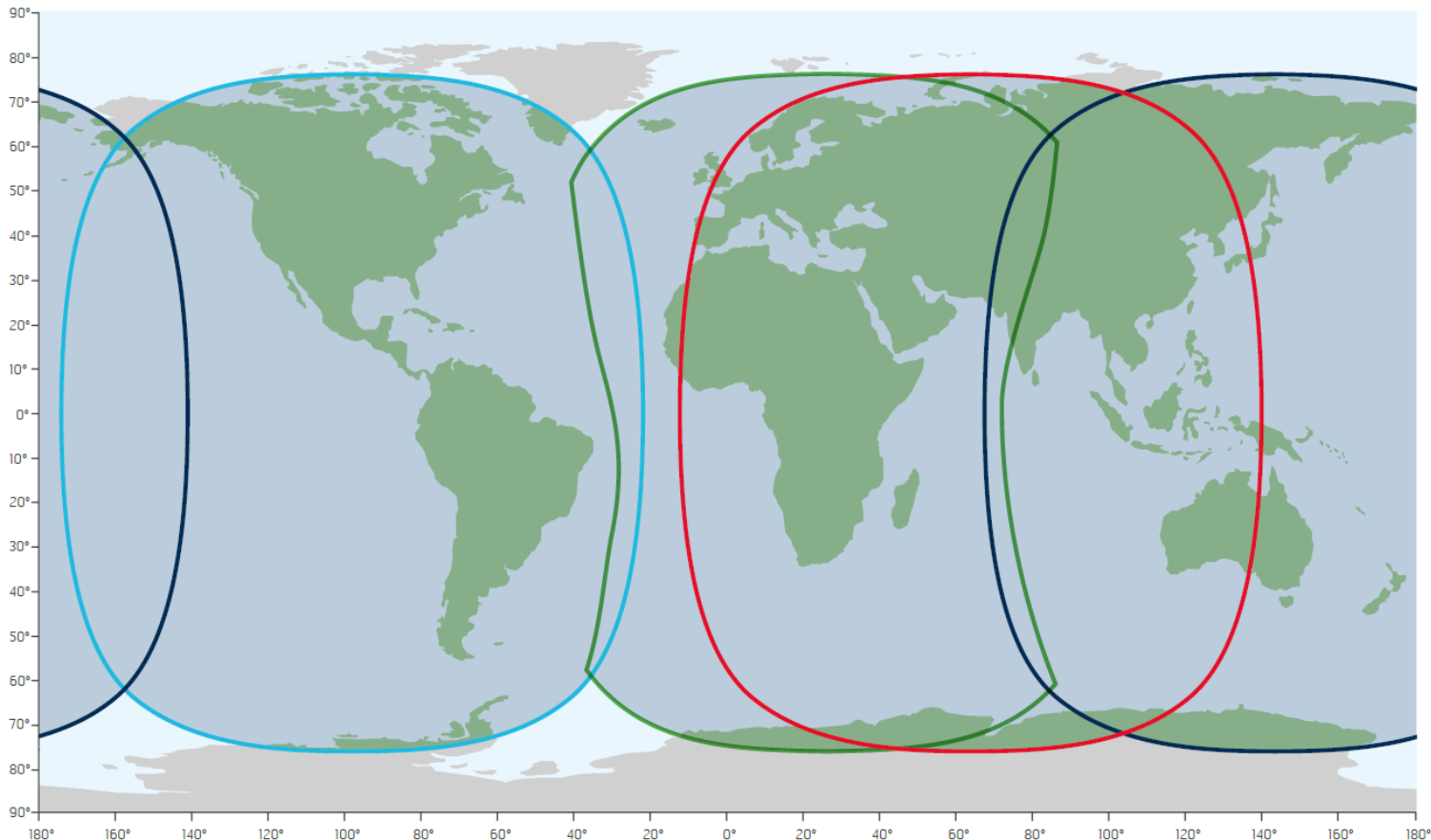
I 4-F3 Americas	Alphasat 4A-F4	I 4-F2 MEAS	I 4-F1 Asia-Pacific
98.4° West	24.9° East	64.4° East	143.5° East
NORAD ID 33278	NORAD ID 39215	NORAD ID 28899	NORAD ID 28628

This map depicts Inmarsat's expectations of coverage following the commercial introduction of Inmarsat's fourth L-band region. It does not represent a guarantee of service. The availability of service at the edge of coverage areas fluctuates depending on various conditions.

Each I-4 satellite combines 228 spot beams with 19 wide beams; capable of providing up to four channels of 432Kbps to a High Gain Antenna. The three I-4 satellites are complemented by Alphasat, which provides additional capacity over 33% of the I-4 coverage area. Two further L-band payloads are scheduled for the early 2020s Inmarsat's I-6 constellation.

Having problems getting connected? Let us know about it and we'll get you back up and running again. Questions or comments? We love hearing from our customers.

- Call us: +1 636-333-9494 or 800-497-1750
- Text 636-233-XXXX
- Email us: support@airsatone.com
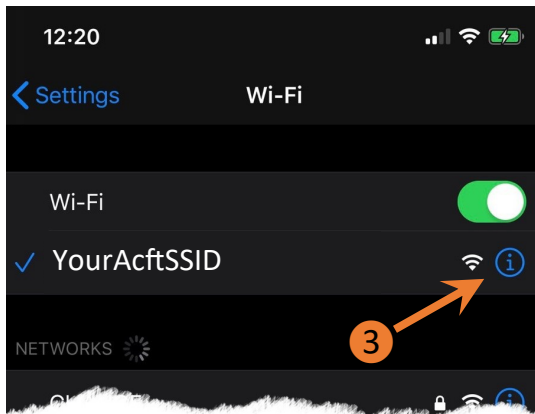- Visit us: www.airsatone.com
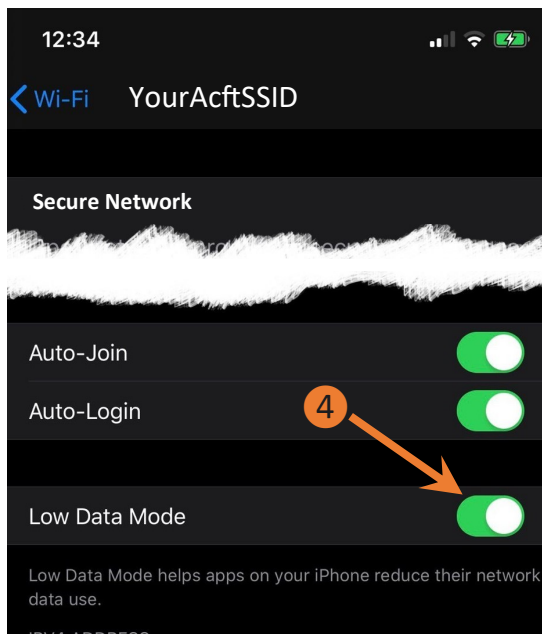
Apple iPhone, iPad & iPod touch

Low Data Mode - Faster Internet, lower consumption.

Aircraft Wi-Fi has limited bandwidth. Low Data Mode reduces the amount of data each device uses & frees up bandwidth, which means faster internet.

---

① Open the Settings app.

② Tap Wi-Fi.

③ Tap the information button ⓘ next to the YourAcftSSID Wi-Fi network

④ Turn on Low Data Mode.

Network setting for Low Data Mode **should only need to be set once.** It is recommended to recheck occasionally to make sure the settings are still in Low Data Mode, especially after an iOS software update. If webpages start to become slower than normal and data usage increases - recheck your settings, tell your fellow passengers to recheck their settings.

☞ Different apps use different ways of reducing data usage in Low Data Mode. In general, here's what you can expect:

- Wi-Fi Calling will still work. (See Wi-Fi calling section for more information)

- Apps might stop using network data when you're not actively using them.

- Background App Refresh is turned off.

- The quality of streaming content might be reduced.

- Automatic downloads and backups are turned off.

- Services such as iCloud Photos pause updates.

Built-in iOS apps and services adapt to Low Data Mode in the following ways:

- App Store: Video auto play, automatic updates, and automatic downloads are turned off.

- Music: Automatic downloads and high quality streaming are turned off.

- Podcasts: The frequency of feed updates is limited, and episodes are downloaded only on Wi-Fi.

- News: Article prefetching is turned off.

- iCloud: Updates are paused, and automatic backups and iCloud Photos updates are turned off.

Having problems getting connected? Let us know about it and we'll get you back up and running again. Questions or comments? We love hearing from our customers.

- Call us: +1 636-333-9494 or 800-497-1750
- Text 636-233-XXXX
- Email us: support@airsatone.com
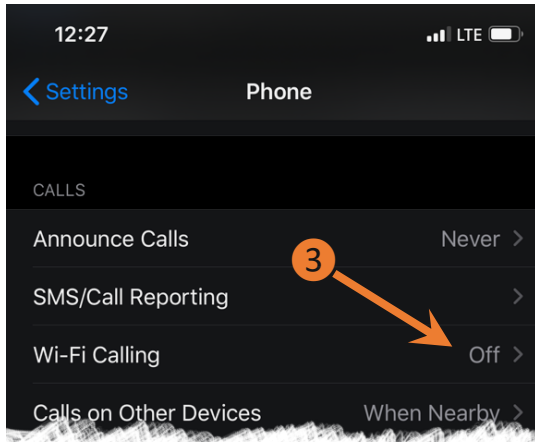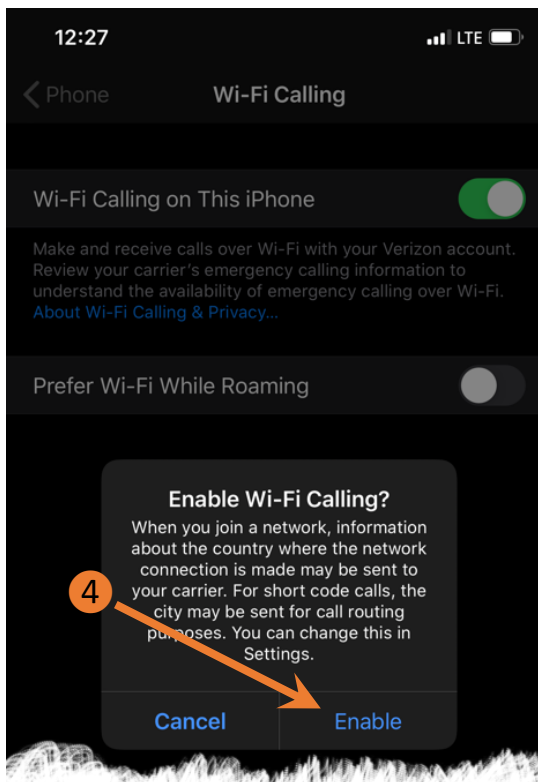- Visit us: www.airsatone.com

Apple iPhone

Phone calls & Text Messaging using Wi-Fi.

By turning on Wi-Fi calling, you can make & receive phone calls using your same cell phone number - even when flying over oceans.

1 Open the Settings app.

2 Select Phone (some devices, select Cellular)

3 Tap Wi-Fi Calling

4 Enable Wi-Fi Calling.

To activate Wi-Fi Calling, you may have to enter your address as part of the 911 system.

Satcom Service is not intended to support or carry emergency calls to any type of hospitals, law enforcement agencies, medical care unit or any other kind of services that connect a user to emergency services personnel or public safety answering points ('Emergency Services').

With Wi-Fi calling activated, when your mobile phone loses cellular coverage, it will automatically connect to the aircraft Wi-Fi for calls and text messages, allowing the phone to work the same as it does every day on the ground. Wi-Fi calling means you can stay in touch at altitude and in remote areas, including over ocean regions.

Talking Tips: Due to the long distance the signal has to travel there will be a slight voice delay when talking. To avoid talking over the other person, it is necessary to pause to allow them time to respond.

Wi-Fi calling does not automatically prioritize voice communications; it treats the call the same as any data going through the Satcom system - if the aircraft bandwidth is at maximum capacity, you may experience interruptions - if this happens, make sure other devices are not using the internet. Handsets in the aircraft that are connected to the Satcom system have a dedicated voice channel, consider using them for critical communications.

Built-in smartphone Wi-Fi Calling uses a technology called Adaptive Multi-Rate Wideband (AMR-WB) which is an audio codec with compression optimized for speech coding. AMR-WB supports dynamic adaptation to network conditions using lower bit rates during network congestion or degradation while preserving audio quality. This technology means that a smartphone with Wi-Fi calling makes adjustments based on the Wi-Fi network it is connected to. Because aircraft Satcom systems have limited bandwidth, when the AMR software detects this, calls are automatically adjusted to a lower bit rate to fit through the pipe which also uses less data.

Having problems getting connected? Let us know about it and we'll get you back up and running again. Questions or comments? We love hearing from our customers.

- Call us: +1 636-333-9494 or 800-497-1750
- Text 636-233-XXXX
- Email us: support@airsatone.com
- Visit us: www.airsatone.com

Android / Galaxy S10 & Tablets

Treat as metered - Faster Internet, lower consumption.

Aircraft Wi-Fi has limited bandwidth. Metered Mode reduces the amount of data each device uses & frees up bandwidth, which means faster internet.

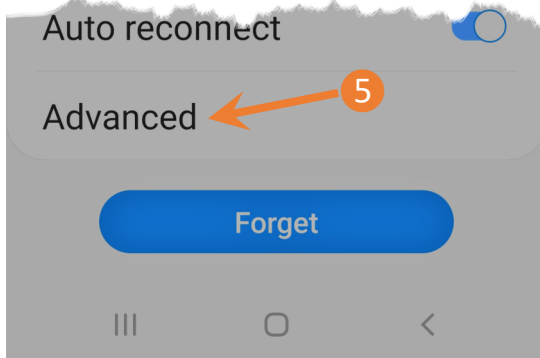1. Swipe down from top two times to reveal settings screen.
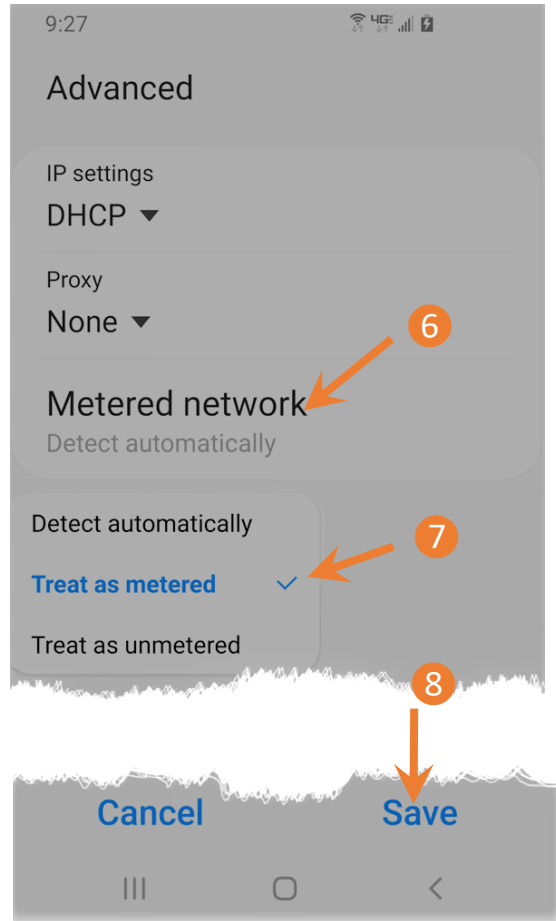
2. Tap under the Wi-Fi icon.

   YourAcftSSID

3. Tap YourAcftSSID

   Current network

   YourAcftSSID
   Connected

   ⚙
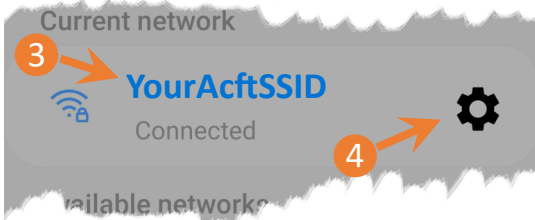
4. Tap the ⚙ button.

5. At the bottom select Advanced.

   Auto reconnect

   Advanced

   Forget

6. Select Metered Network.

7. Click on Treat as metered.

8. Save.

   9:27

   Advanced

   IP settings
   DHCP ▾

   Proxy
   None ▾

   Metered network
   Detect automatically

   Detect automatically
   Treat as metered ✓
   Treat as unmetered

   Cancel   Save

ℹ Network setting for Metered Network Mode **should only need to be set once**. It is recommended to recheck occasionally to make sure the settings are still in Metered Network, especially after an Android software update. If webpages start to become slower than normal and data usage increases - recheck your settings, tell your fellow passengers to recheck their settings.

AirSatOne
Connect Your Jet to the Internet

Having problems getting connected? Let us know about it and we'll get you back up and running again. Questions or comments? We love hearing from our customers.

- Call us: +1 636-333-9494 or 800-497-1750
- Text 636-233-XXXX
- Email us: support@airsatone.com
- Visit us: www.airsatone.com

Android / Galaxy S10 & Tablets

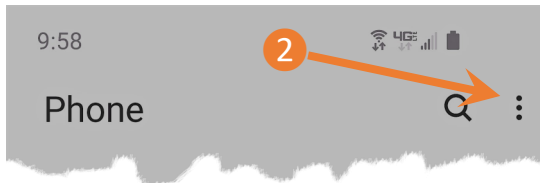## Phone calls & Text Messaging using Wi-Fi.

By turning on Wi-Fi calling, you can make & receive phone calls using your same cell phone number - even when flying over oceans.
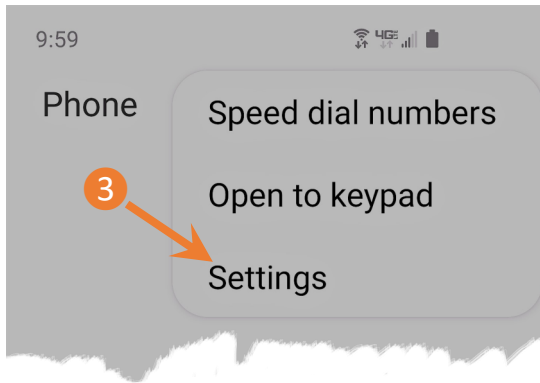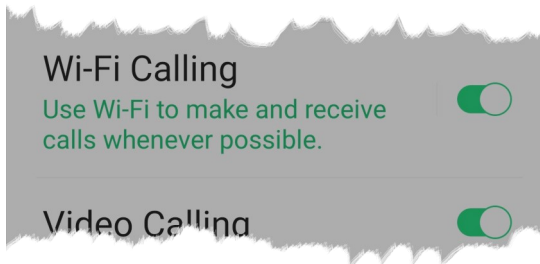
① Tap on the phone icon.

② Tap on the 3 dots.

③ Select Settings.

④ Turn on Wi-Fi Calling.

To activate Wi-Fi Calling, you may have to enter your address as part of the 911 system.

Satcom Service is not intended to support or carry emergency calls to any type of hospitals, law enforcement agencies, medical care unit or any other kind of services that connect a user to emergency services personnel or public safety answering points ('Emergency Services').

With Wi-Fi calling activated, when your mobile phone loses cellular coverage, it will automatically connect to the aircraft Wi-Fi for calls and text messages, allowing the phone to work the same as it does every day on the ground. Wi-Fi calling means you can stay in touch at altitude and in remote areas, including over ocean regions.

Talking Tips: Due to the long distance the signal has to travel there will be a slight voice delay when talking. To avoid talking over the other person, it is necessary to pause to allow them time to respond.

Wi-Fi calling does not automatically prioritize voice communications; it treats the call the same as any data going through the Satcom system - if the aircraft bandwidth is at maximum capacity, you may experience interruptions - if this happens, make sure other devices are not using the internet. Handsets in the aircraft that are connected to the Satcom system have a dedicated voice channel, consider using them for critical communications.

Built-in smartphone Wi-Fi Calling uses a technology called Adaptive Multi-Rate Wideband (AMR-WB) which is an audio codec with compression optimized for speech coding. AMR-WB supports dynamic adaptation to network conditions using lower bit rates during network congestion or degradation while preserving audio quality. This technology means that a smartphone with Wi-Fi calling makes adjustments based on the Wi-Fi network it is connected to. Because aircraft Satcom systems have limited bandwidth, when the AMR software detects this, calls are automatically adjusted to a lower bit rate to fit through the pipe which also uses less data.

Having problems getting connected? Let us know about it and we'll get you back up and running again. Questions or comments? We love hearing from our customers.

- Call us: +1 636-333-9494 or 800-497-1750
- Text 636-233-XXXX
- Email us: support@airsatone.com
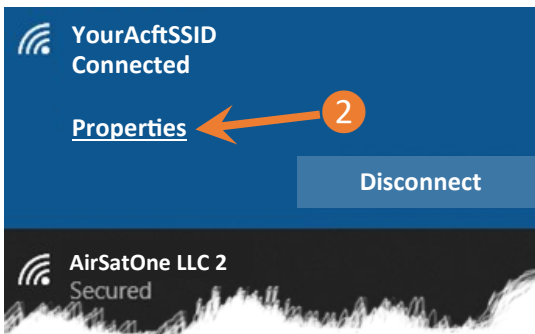- Visit us: www.airsatone.com

9

Windows 10

Metered Connection - Faster Internet, lower consumption.

Aircraft Wi-Fi has limited bandwidth. Low Data Mode reduces the amount of data each device uses & frees up bandwidth, which means faster internet.
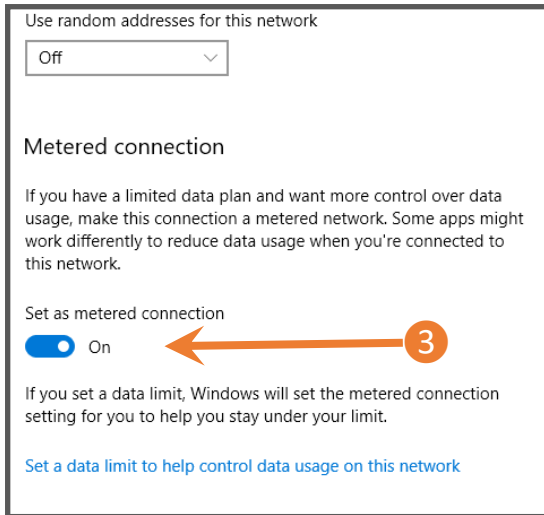
① Click on the Wi-Fi icon - typically found on the bottom right side.

② On the YourAcftSSID network, click Properties.

③ Under Metered Connection - set metered connection to On.

Network setting for Metered Connection **should only need to be set once.** If webpages start to become slower than normal and data usage increases - recheck your settings, tell your fellow passengers to recheck their settings.

Windows 10 is designed for PCs with unlimited Internet connections, & it normally uses as much bandwidth as it wants. Setting a connection as metered is essential when using any type of aircraft Satcom internet service. It gives you more control over your connection & prevents Windows from gobbling bandwidth – which means faster internet & less data usage.

Setting a connection as metered prevents Windows from automatically using bandwidth in many ways, normal operation will resume automatically when connected to any other unmetered network.

Here's exactly what it does:

- Disables automatic downloading of most Windows updates while using aircraft Wi-Fi, critical security updates will still be downloaded.

- Disables automatic downloading of app updates.

- Disables peer-to-peer uploading of updates. Windows 10 won't use Satcom bandwidth to share updates with other PCs over the Internet.

- Tiles may not update. Live tiles on your Start menu or Start screen "may" stop updating while using aircraft Wi-Fi in the metered connection mode.

- Other apps may behave differently: Apps—particularly apps from the Windows Store—could potentially read this setting and behave differently.

- Outlook Email will be taken offline - simply choose the "Connect Anyway" button.

- Most Security Programs will switch to "economy network usage" mode.

Having problems getting connected? Let us know about it and we'll get you back up and running again. Questions or comments? We love hearing from our customers.

- Call us: +1 636-333-9494 or 800-497-1750
- Text 636-233-XXXX
- Email us: support@airsatone.com
- Visit us: www.airsatone.com

WiFi

Air Sat One Flight Operations

N123ASO

AirSatOne

ASFO

Connect Your Jet to the Internet