

# Next-gen ATG

The next-generation Air-to-Ground solution



# An ATG evolution

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Gogo® Next-gen ATG represents a significant change to our North American network. By delivering more data than our current ATG4 technology, passengers will enjoy connection speeds similar to what they experience on the ground, including streaming video.

Low equipment costs, low total cost of ownership, short install times, and reduced drag compared to satcom antennas make this ground-based technology optimal for narrow-bodies, regional jets, and private aircraft operating in the US and Canada.

And with a leap in bandwidth, Gogo's North American network will be able to meet the increasing connectivity demands of passengers and airline operations.

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# Inside the technology

One of the key aircraft components that makes this next generation solution possible is the blade antenna. This narrow, lightweight piece of avionics hardware sits on the belly of the plane and aggregates available spectrum in the 2.4 GHz band to deliver exceptional throughput.

The blade antenna also works in conjunction with our proven ATG4 solution, which provides fallback capacity over congested metropolitan areas — similar to how, in certain areas, an LTE connection falls back to 3G to provide constant connectivity on your mobile network.

## A leap in performance

- › Multi-carrier LTE signal to enable more bandwidth than our ATG4 solution
- › Boosts both upload and download speeds
- › Excellent equipment weight to throughput ratio
- › Small equipment footprint
- › Significantly better latency than satcom solutions

## Key features



### **Capacity where it counts**

In addition to Next-gen ATG delivering more data to the plane, our existing ATG4 technology provides redundancy and fallback capacity in congested areas to deliver uninterrupted connectivity



### **Expandable**

Next-gen ATG leverages Gogo's existing network of cell sites. Additional cell towers can be built in key geographic areas to meet your specific coverage needs and growing bandwidth demands.



### **Rapid installations**

With minimal aircraft out-of-service time, you can implement this breakthrough connectivity solution with little disruption to daily operations.

# Coverage



## Redundancy — where it matters most

Because it's built on a foundation of dedicated frequency, our next-generation ATG leverages ATG4 to perform even over congested cities, while also providing

fallback capacity across the entire coverage area. Typically, any air-to-ground solution that relies on available spectrum will suffer around metropolitan areas due to signal

noise. This is where the Gogo network offers a critical advantage.



# Advances in the in-cabin network

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Gogo's Next-gen ATG solution leverages our existing in-cabin network. With simple changes to manage the performance

capabilities of the new blade antenna, this new solution represents a generational leap in ATG technology.

### **An optimized server**

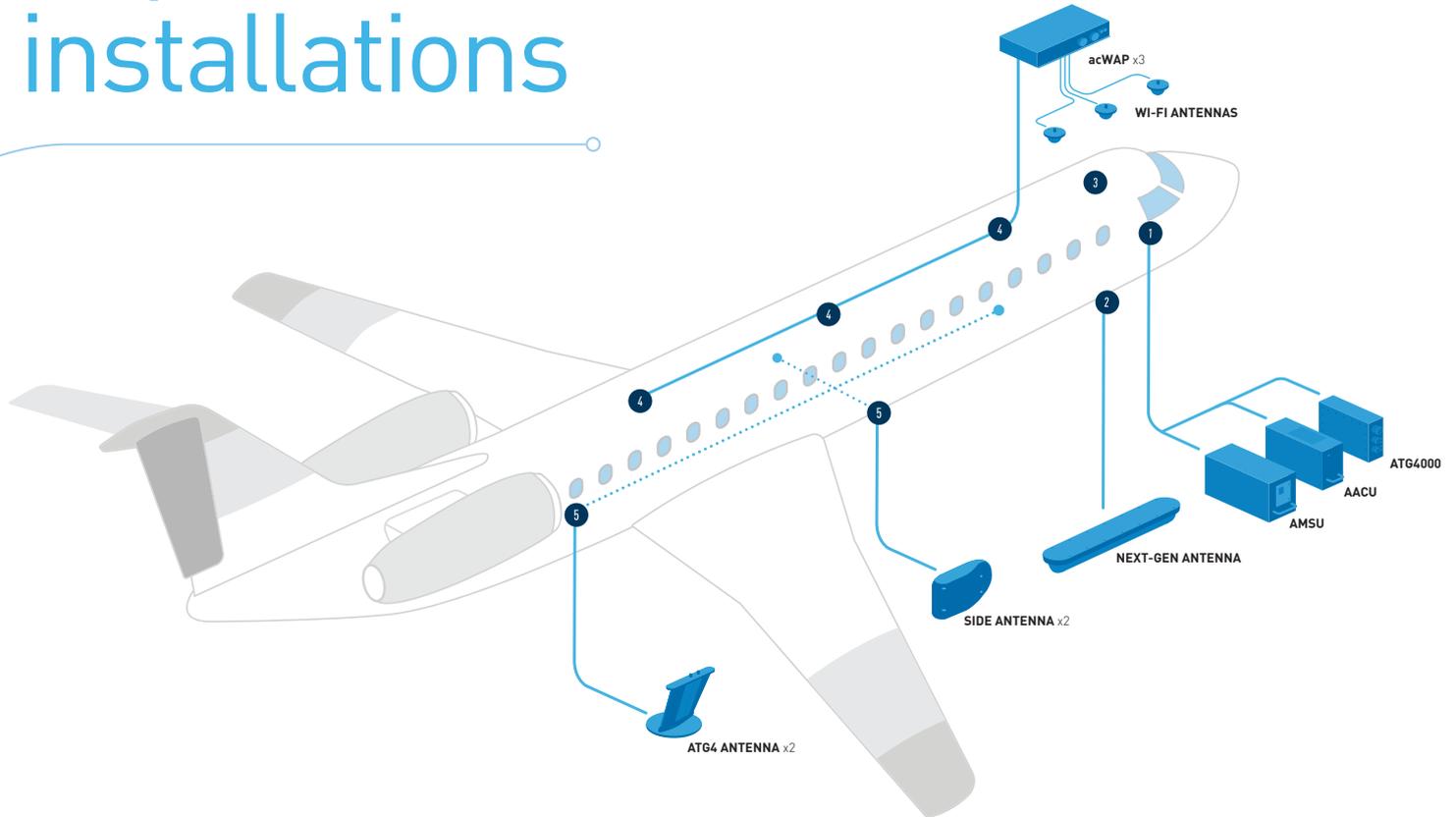
As part of Gogo's in-cabin network, the Airborne Modem Server Unit (AMSU) is the onboard server that delivers the reliable connectivity and entertainment your passengers are looking for. This new server enables a new standard — and new possibilities, including wireless entertainment and live broadcasts — for the passenger experience.

The form factor for the AMSU is the same as the current Airborne Control Processing Units (ACPU1 or ACPU2), meaning installs can be completed after a few changes to the unit's harness.

### **LTE Modem**

The LTE modem, housed in the AMSU, is a new design that supports the full 2.4GHz spectrum and aggregates 60MHz of bandwidth to achieve high data rates on both the send and receive paths.

# Rapid installations



## 1 Next-gen ATG AMSU

Head-end server unit with solid state storage, integrated terrestrial modem, and Wi-Fi client.



## 2 Next-gen ATG Antenna

This is a phased-array antenna with one transmit and receive beam. It also has a second independent receive beam steerable in 360 degrees.



## 3 Gogo In-Cabin WAP

Wireless Access Points (WAP) provide the Wi-Fi signal to devices in the cabin. They support the latest 802.11 standards, including 802.11ac. Each ac WAP supports 60 concurrent streams. NB require 3 WAPs, while WB require 6.



## 4 Wi-Fi Antennas

Devices that generate the in-cabin Wi-Fi signal; antenna placement is optimized for each aircraft type.



## 5 ATG4 Antenna

The ATG4 antenna system is comprised of two directional antennas mounted on the belly of the aircraft (fore and aft), as well as two side mount directional antennas for full 360 degree coverage.



### Full installation equipment

*(Next-gen ATG AMSU, Next-gen ATG antenna, Gogo In-Cabin WAP, Wi-Fi antennas, ATG4 antenna)* Aircraft without connectivity will require the ATG4 system along with the Next-gen ATG system equipment.

### Add-on equipment

*(Next-gen ATG AMSU, Next-gen ATG antenna)* Aircraft already equipped with ATG4 will require the Next-gen ATG add-on package, which can be installed overnight.

# Let's go F A R T H E R

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