

To Whom it May Concern,

The AEC115 is a device which requires professional installation.

When the device is installed into the aircraft, the following antennas must be used by the professional installer:

- Wi-Fi Antenna – **Taoglas FXP.830.09.0100C**

- Maximum Gains: See Below

Frequency	2.4GHz	5.8GHz
Peak Gain (free space)	2.55dBi	4.66dBi
Peak Gain (on plastic*)	3.32dBi	6.11dBi
Average Gain (free space)	-3.0dBi	-0.6dBi
Average Gain (on plastic)	-3.0dBi	-0.7dBi
Efficiency (free space)	50%	86%
Efficiency (on plastic)	50%	84%

- Cellular Antenna – **Taoglas FXUB66.07.0150C**

- Maximum Gains: See Below

Frequency (MHz)	600-960	1390-1435	1575.42	1710-1990	1755-2170	2400-2500	2500-2700	3300-3800	4800-6000
Peak Gain (dBi)									
2mm ABS	0.2dBi	2.5dBi	4.1dBi	2dBi	1.6dBi	2.8dBi	2.6dBi	3.5dBi	4.8dBi
Average Gain (dB)									
2mm ABS	-2.7dB	-2.6dB	-1.3dB	-2.1dB	-2.5dB	-2dB	-1.8dB	-1.8dB	-2.4dB
Max VSWR									
2mm ABS	3.5:1	3.5:1	1.1:1	3:1	3.3:1	2.2:1	2:1	2.2:1	3:1
Max Return Loss(dB)									
2mm ABS	-5dB	-5dB	-20dB	-6dB	-5.5dB	-7dB	-10dB	-7dB	-6dB
Efficiency									
2mm ABS	60%	48%	73%	61%	56%	63%	65%	66%	57%

This list of antennas is provided in the "Installation Procedures and Equipment Limitations" (282300-PLI) provided to the professional installer. This document is not provided to the end-customer.

The AEC115 is a device which is designed for and installed specifically in air vehicles controlled by Code of Federal Regulations (CFR) Title 14. Due to this the installation, modification, and maintenance of the device all must comply with the Federal Aviation Association (FAA) regulations. This is in compliance with CFR Title 14, Chapter 1, Subchapter C, Part 43 - specifically 14 CFR § 43.3 and 14 CFR § 43.7. (See <https://www.law.cornell.edu/cfr/text/14/43.3> and <https://www.law.cornell.edu/cfr/text/14/43.7>).

The AEC115 interfaces with other avionics equipment installed on the air vehicle, and uses a non-standard connector with a custom pin-out for power and communication. Installation requires custom cables (unique to each family of aircraft the device is approved for use with), along with carefully considered cable routing, device placement, and antenna placement. Special training is required to properly install the AEC115, interface the AEC115 with the rest of the aircraft's devices, install the antennas, and connect the AEC115 with the antennas. This is also in compliance with the FAA regulations.

For these reasons, the device is not sold to consumers or marketed to the general public. The AEC115 is sold exclusively to OEMs and Authorized Dealers, such as aircraft manufacturers, who are responsible for both approving the product to be installed / used with the target aircraft and the installation of the product into that aircraft. Both, OEMs and Authorized Dealers are required to certify all aircraft modifications in accordance with CFR Title 14, Chapter 1, Subchapter C, Parts 23, 25, 27 and 29 respectively.

30 November 2022

Signature of Authorized Person Filing:



Thomas Geboy  
Title: Chief Engineer CAS  
Date: November 30, 2022