

Cover letter – Additional information

The above product will be subject to a number of modifications which have been initiated by potential part obsolescence. The upgrade has also been used as an opportunity to improve the robustness of the product.

The new sub-assemblies have been created and are ready for introduction to the production units.

This document outlines the planned modifications to the Artemis sub-assemblies to assist with an application for a permissive change.

General Arrangement

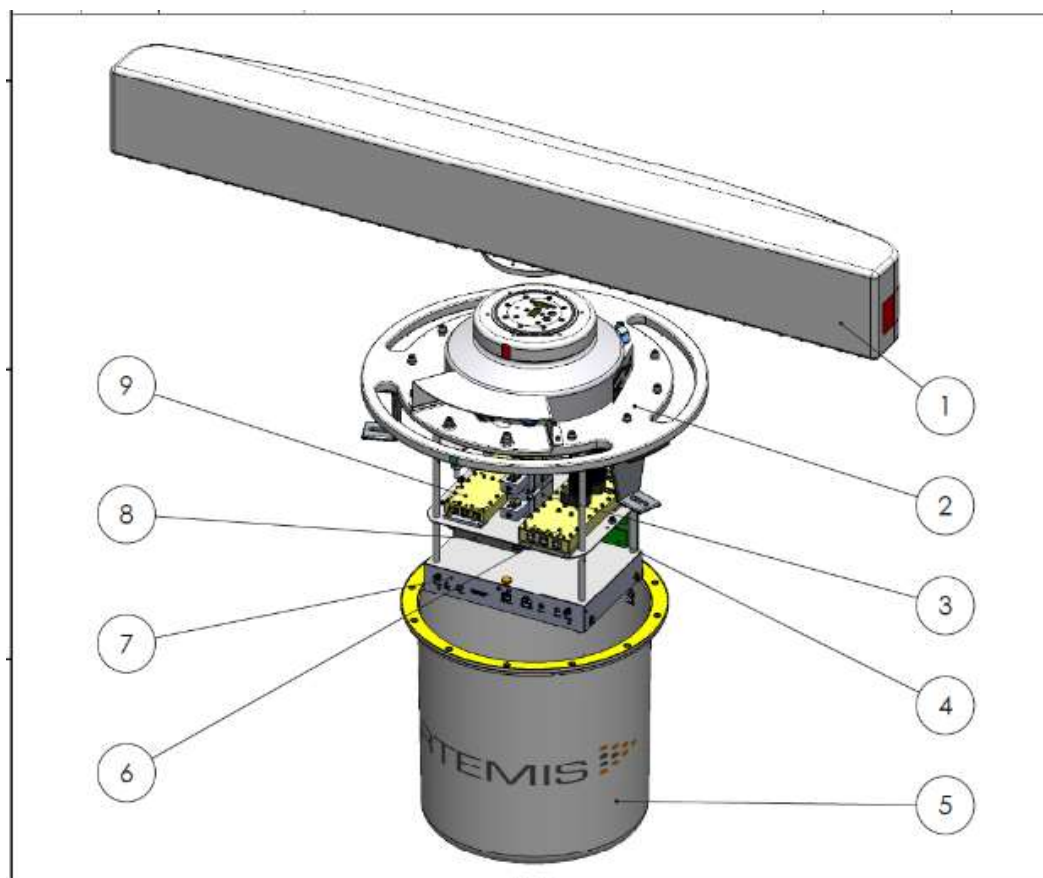
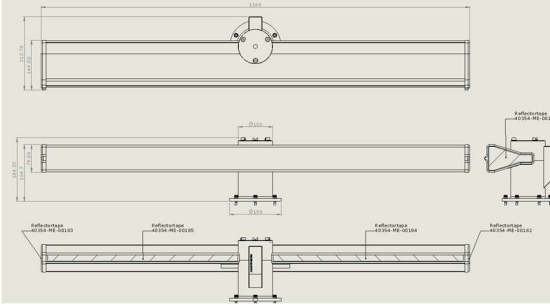
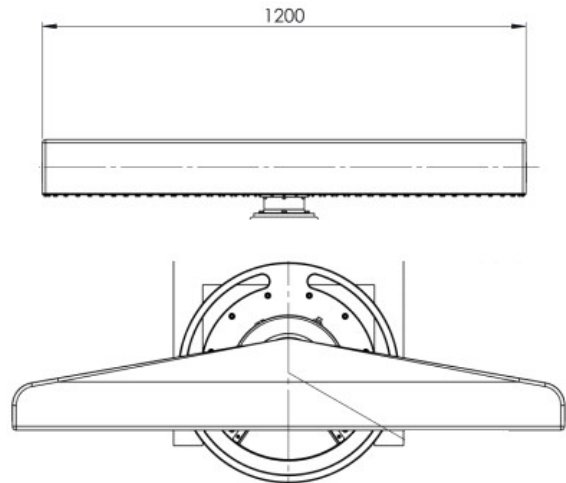




Table of change

General Assembly: Date of Grant -see Sec 10.			General Assembly: Proposed Modification-see Sec 11. (Shown in dwg above)		
1	20-0212-4	Artemis MK6 Antenna	1	21-0530	Artemis Monopulse Antenna Mk2
2	21-0466	Artemis Mk6 Base Assembly	2	21-0466	Artemis Mk6 Base Assembly
3	21-0420-3	Mk6 Flange Rotary Joint Encoder	3	21-0559	Mk6 Flange Rotary Joint Encoder
4a	30-0339-4	Inter-connection PCBA	4a	30-0339-4	Inter-connection PCBA
4b	34-0031-4	Server Control PCBA	4b	34-0031-4	Server Control PCBA
5	21-0436-3	Bottom Cover Assembly	5	21-0436-3	Bottom Cover Assembly
6	21-0433-3	IPA Assembly	6	21-0537	Solid-state RF-IF Assembly
7	21-0435	AUP Assembly	7	21-0517	AUP Mk2 Assembly
8	21-0423-3	Power Supply Assembly	8	21-0423-3	Power Supply Assembly
9	21-0434-3	Synthesizer Assembly	9	21-0434-3	Synthesizer Assembly

1. Antenna

20-0212-4 Artemis Mk6 Antenna	21-0530 Artemis Mono-pulse Antenna Mk2
	
	
Antenna type: Slotted Waveguide	Antenna type: Slotted Waveguide
Antenna Gain = 28dBi	Antenna Gain = 28dBi

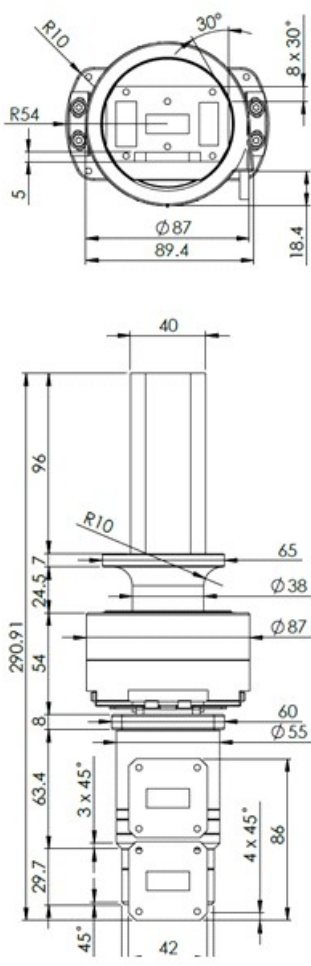
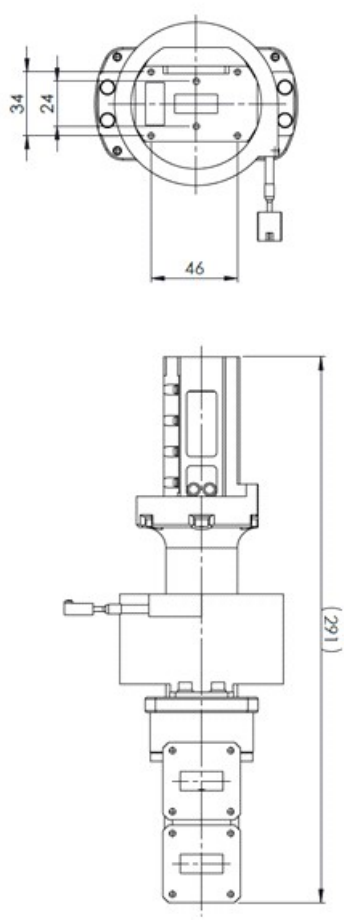
Reason for change of 20-0214-4 to 21-0530

Improvements to components and simplification of manufacture/assembly.

2. Base assembly

Unchanged within proposed modification.

3. Flange and Rotary Joint and Encoder Assembly

<p>21-0420 = 21-0419+Flange</p> <p>21-0419 Rotary joint and Encoder (shown below)</p>	<p>21-0559 = 21-0556 + Flange (21-0557)</p> <p>21-0556 Rotary Joint and Encoder (shown below)</p>
	

Reason for Change of 21-0240 to 21-0559.

Improvements to components and simplification of manufacture and assembly. All interfaces and fixings are identical

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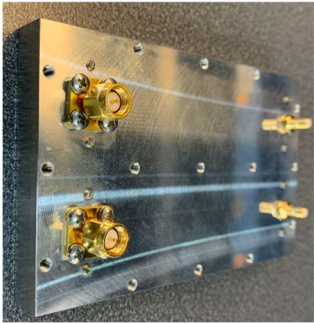
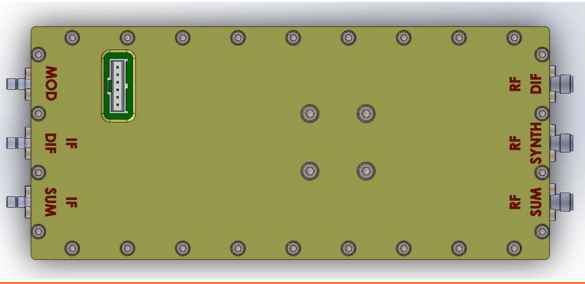
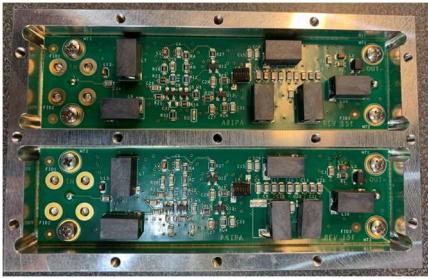
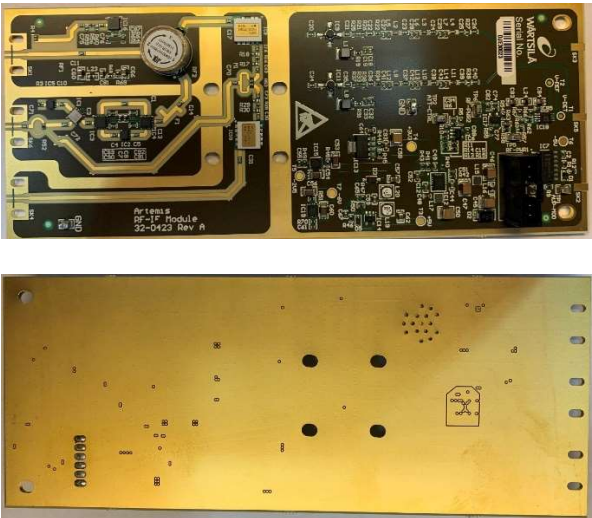
4. Inter-connection and Servo PCBA

Unchanged within proposed modification

5. Bottom Cover Assembly

Unchanged within proposed modification.

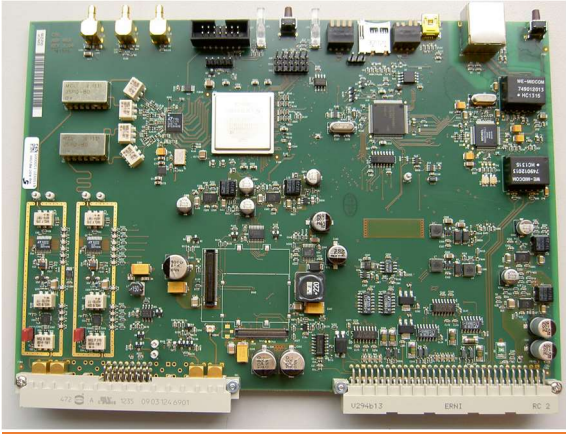

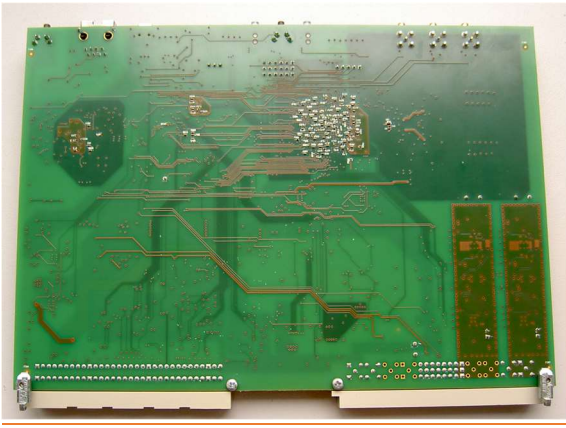

6. Input Pre-Amplifier to Solid state RF-IF Assembly

21-0433-3 Input pre-amplifier sub assembly	21-0537 Solid-state RF-IF Assembly
	
PCB-6AIPA	30-0423 Solid state RF-IF PCB front and back
	

Reason for change

The 21-0433-3 Input pre-amplifier, which consists of waveguide circuitry has potential cost, supply and performance issues. Improvements can be gained from a solid-state electronics version. The assembly 21-0537 also has the benefit of amplifiers that have lower noise performance when compared to the waveguide circuitry.

7. Antenna Unit Processor revision to Mk2

<p>21-0435-3 AUP Assembly 30-0337-4 PCB Front</p>	<p>21-0517 AUP Mk2 Assembly 30-0414 PCB front and back</p>
	
<p>30-0337 PCB Back</p>	<p>30-0414 PCB back</p>
	

Reason for change

Component obsolescence, opportunity for streamline the design with updated electronic components

8. Power Supply Assembly

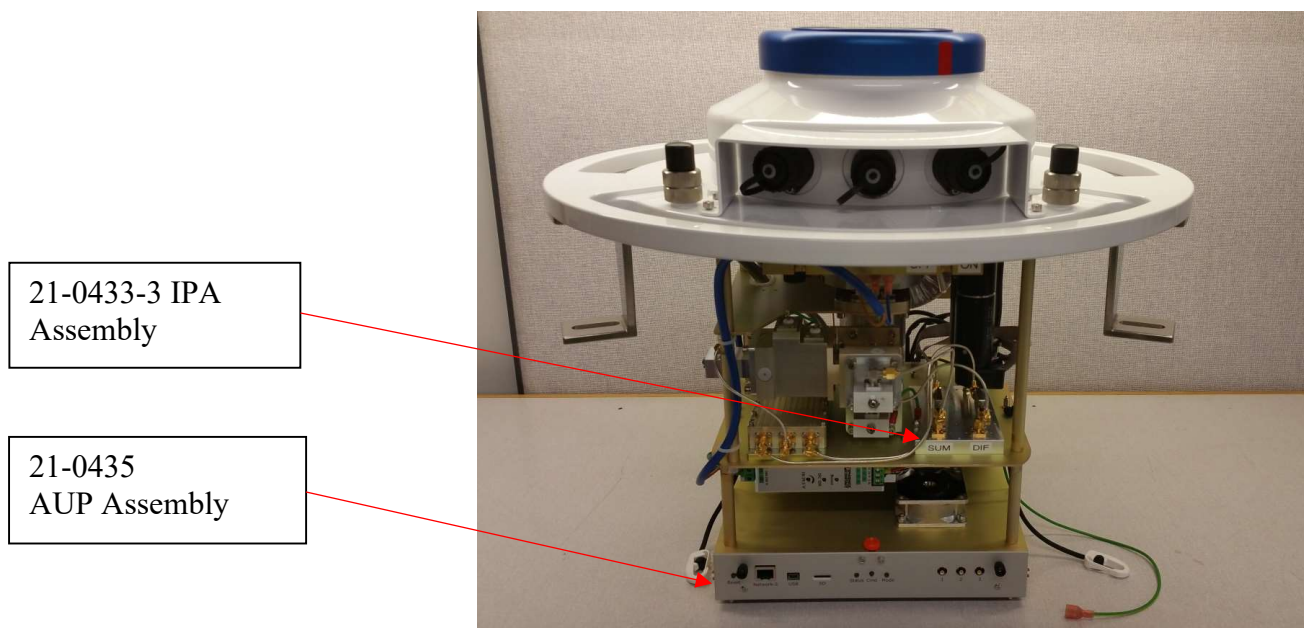
Unchanged within proposed modification

9. Antenna Unit processor revision to Mk2

Unchanged within proposed modification.

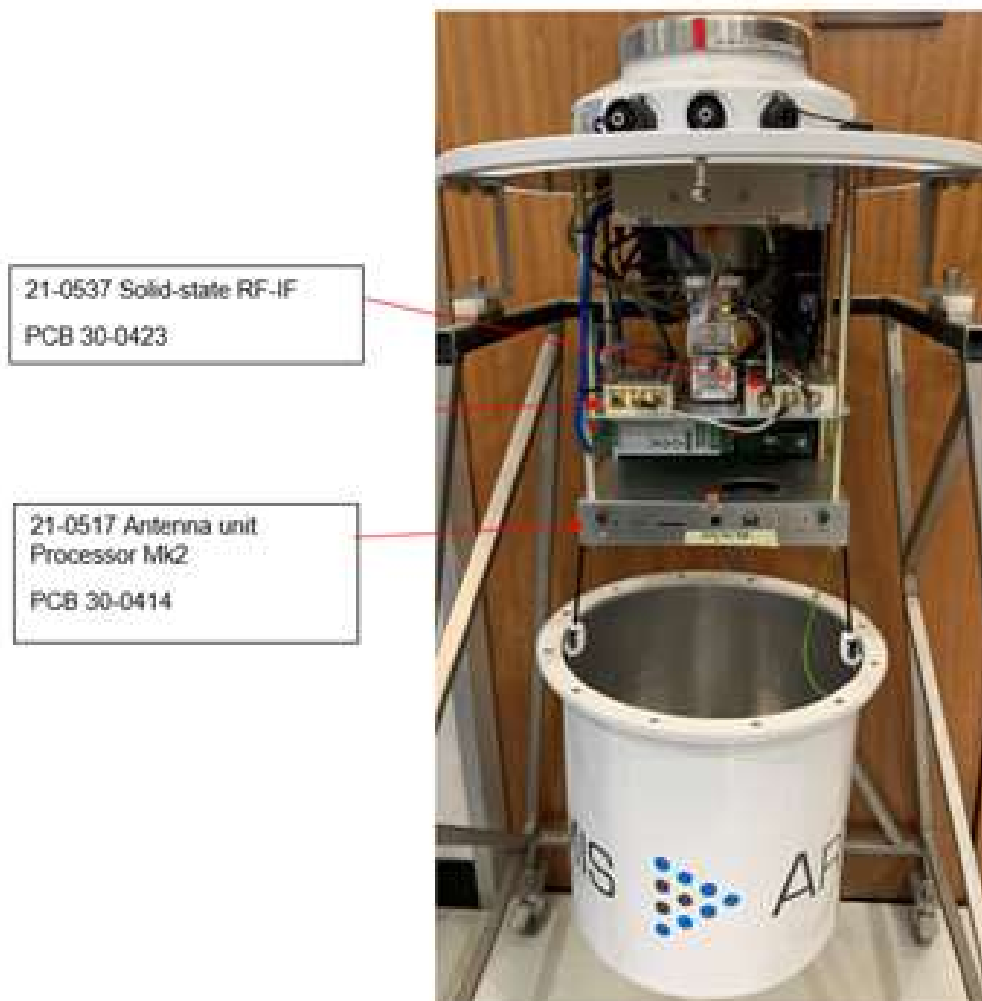
10. General Assembly: Date of Grant

The sub-assemblies that are to be upgraded in the current design are identified in the picture below.



11. General Assembly: Proposed Modification

The General Arrangement with the modified sub-assemblies are shown in the picture below.



Approved by



Mr. Tom Coggins
General Manager, Engineering