

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

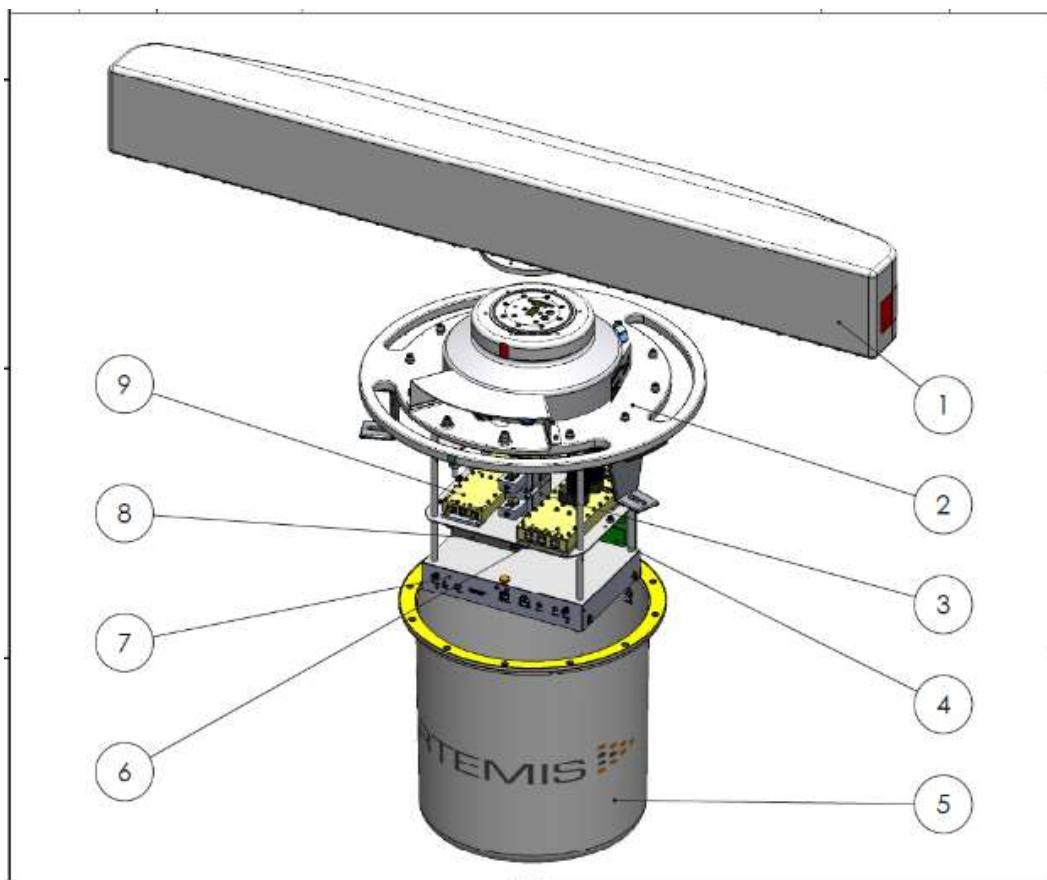
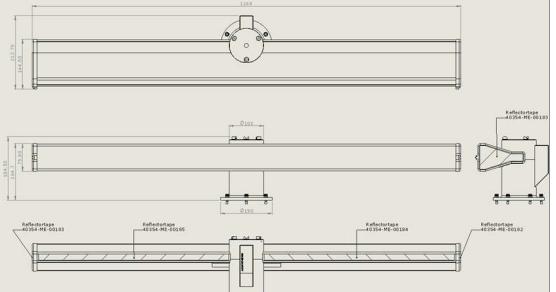
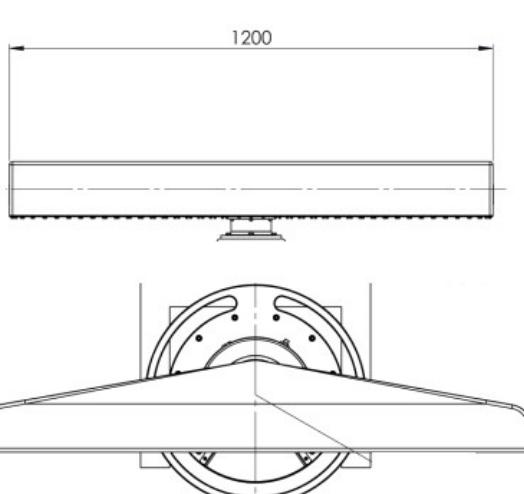


Table of change

| 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 |

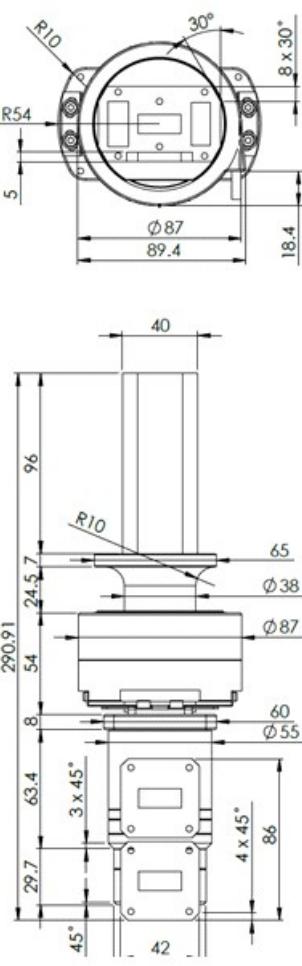
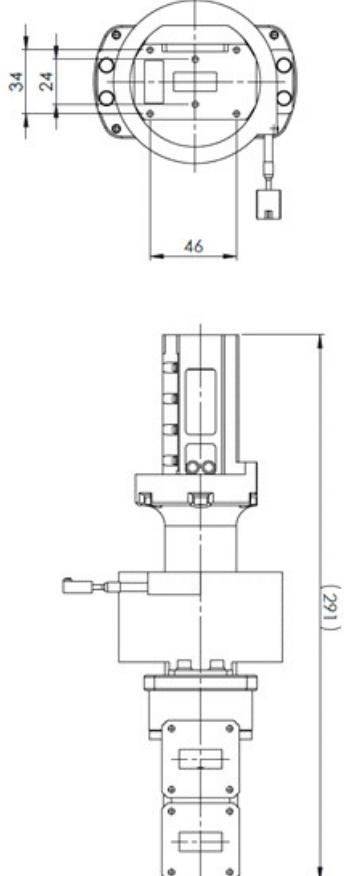
Reason for change of 20-0214-4 to 21-0530

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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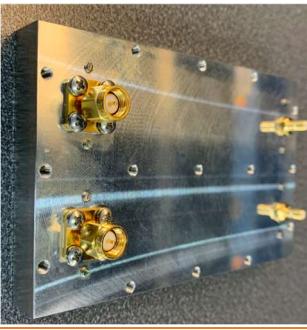
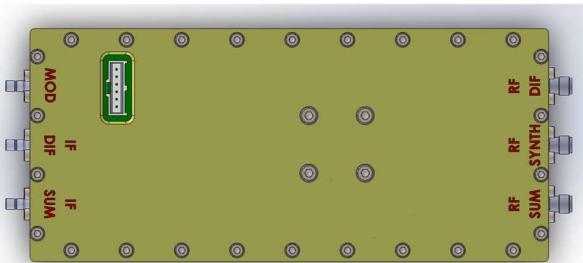
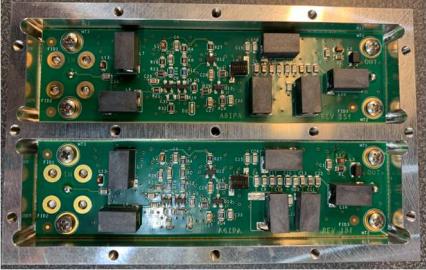
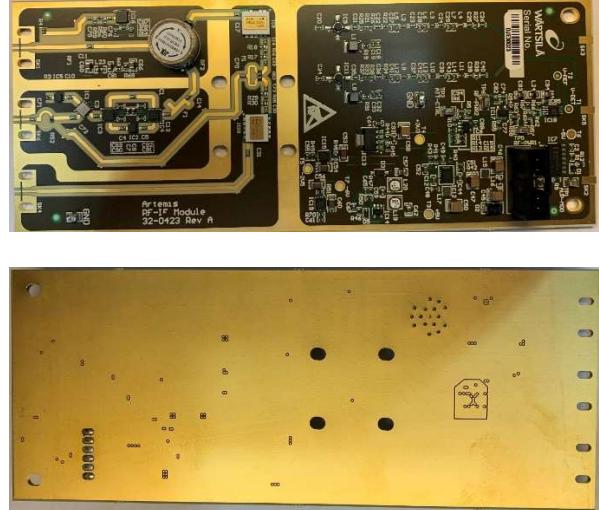
4. Inter-connection and Servo PCBA

Unchanged within proposed modification

5. Bottom Cover Assembly

Unchanged within proposed modification.

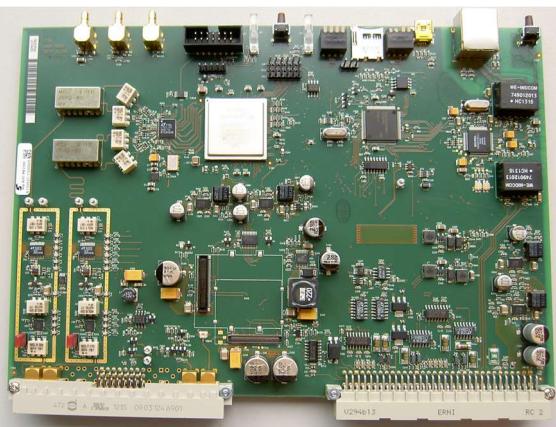
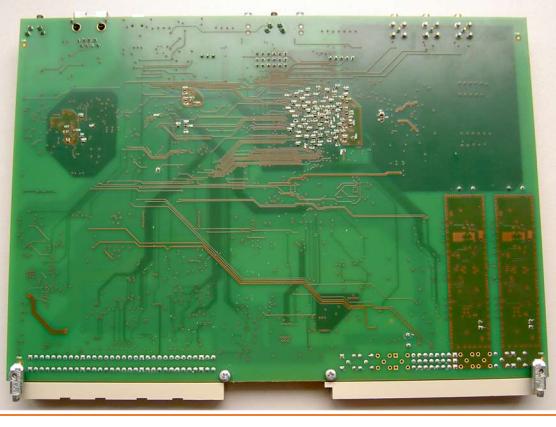
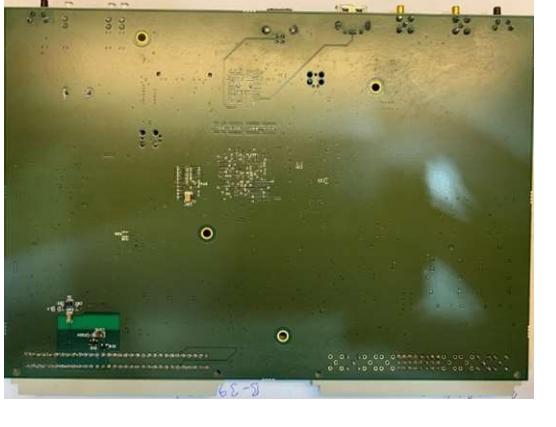
6. Input Pre-Amplifier to Solid state RF-IF Assembly

| 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

| | |
|---|--|
| 21-0435-3 AUP Assembly 30-0337-4 PCB Front | 21-0517 AUP Mk2 Assembly 30-0414 PCB front and back |
|  |  |
| 30-0337 PCB Back | 30-0414 PCB back |
|  |  |

Reason for change

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

8. Power Supply Assembly

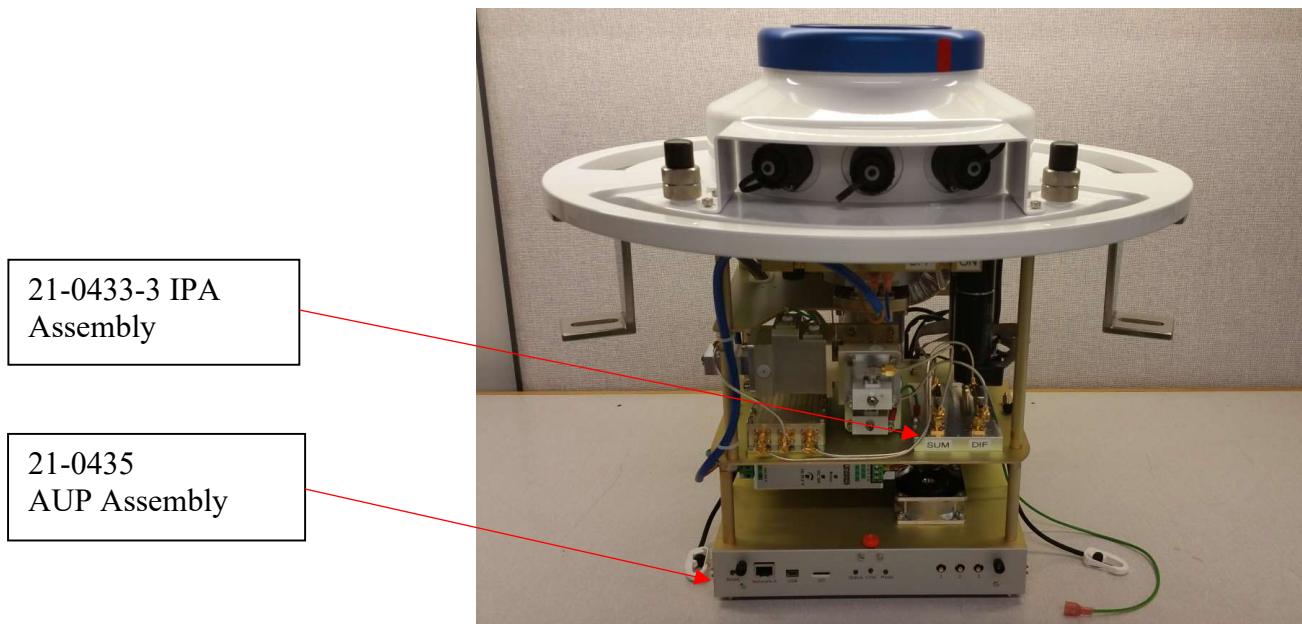
Unchanged within proposed modification

9. Antenna Unit processor revision to Mk2

Unchanged within proposed modification.

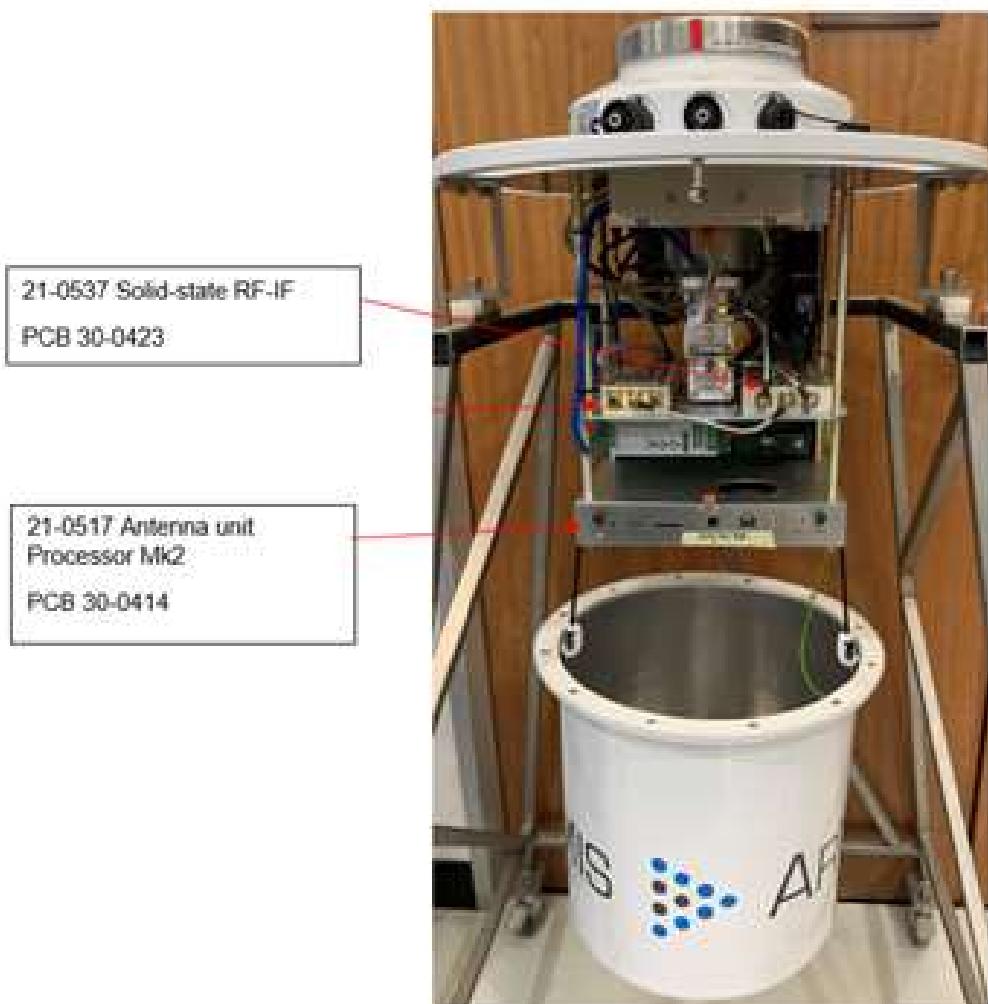
10. General Assembly: Date of Grant

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