**MWS Pod**

**Statement of work**

Index

[1. Scope 2](#_Toc272661373)

[1.1 Identification 2](#_Toc272661374)

[1.2 System overview 2](#_Toc272661375)

[1.3 Document overview 2](#_Toc272661376)

[2. Requirements 2](#_Toc272661377)

[2.1 Functional requirements 2](#_Toc272661378)

[2.1 Performance requirements 3](#_Toc272661379)

[2.2 Environment requirements 3](#_Toc272661380)

[2.3 Interface requirements 3](#_Toc272661381)

**History**

|  |  |  |  |
| --- | --- | --- | --- |
| **Date** | **Description** | **Name** | **Version** |
| 18-09-2010 | Initial document | kpi | 1 |
| 18-09-2010 | Formatted headings | kpi | 2 |
| 18-09-2010 | Work started in 1.1 and 1.2 | kpi | 3 |
| 19-09-2010 | Updated 1.1 & 1.2  Revised chapter 2.  Added abbreviations | Kpi | 4 |
| 19-09-2010 | Adde requirements.  Uopdated 1.1.  Added abbreviations. | kpi | 5 |

**References**

|  |  |  |
| --- | --- | --- |
| **ID** | **Document Name** | **Version** |
| Ref-1 | Therma case.pdf | 1 |

**Abbreviations**

|  |  |
| --- | --- |
| UR | User Requirement |
| SOW | Statement of work |
| UFR | User Functional REQ |
| UPR | User Performance REQ |
| UIR | User Interface REQ |
| UER | User Environment REQ |
| TBD | To Be Determined |
| TBR | To Be Reviewed |
| TBS | To Be Supplied - Awaiting input |
| MWS | Missile Warning System |

# Scope

## Identification

The system to which this document applies is a pod that can be attached to the F-16 combat aircraft using standard T-hooks spaced by 13 inches.

The dimensions and shape of the system shall be defined by manufacturer and shall be in compliance with the MIL\_STD standards.

The pod has eight compartments for chaff/flare magazines. It houses an electronic control unit and has suspensions for power/data cables, connectors and six sensor units.

The manufacturer shall identify the placement of the six sensors.

The system is able to keep the temperature of the MWS inside the pod below 70 degree Celsius.

The pod structure and attachments is able to withstand high g-forces and high temperatures especially on the front part and still be operational.

All requirements are verified by subcontractor.

## System overview

The pod is part of a self protection suite for the F-16 combat aircraft. The system is made up of subsystems which are:

* An intelligent cockpit control unit.
* A missile warning system (MWS) consisting of six sensor and an electronic control unit.
* A pod which incorporates eight magazines, six sensors and housing the MWS.

## Document overview

*Empty.*

# Requirements

## Functional requirements

|  |  |
| --- | --- |
| UFR-1 | The weight of the pod shall not exceed 175 Kg. |
| UFR-2 | The pod shall have eight dispensers. |
| UFR-3 | The pod shall dispense forward.  -15 ̊ Relative to z-axis.  -15 ̊ Relative to y axis. |
| UFR-4 | The pod shall dispense sideward.  -90 ̊ Relative to z-axis.  -45 ̊ Relative to y axis. |
| UFR-5 | The pod shall dispense downwards.  -90 ̊ Relative to x-axis.  -90 ̊ Relative to y axis. |
| UFR-6 | The dimensions of the pod shall comply to the MIL\_STD\_xx1 **TBD** |
| UFR-7 | The system shall include a hardware implemented safety interlock to prevent dispensing on ground. |

## Performance requirements

|  |  |
| --- | --- |
| UPR-1 | The pod structure shall be without any failures after being exposed to a steady state acceleration of 5g fore. |
| UPR-2 | The pod structure shall be without any failures after being exposed to a steady state acceleration of 2.5g aft. |
| UPR-3 | The pod structure shall be without any failures after being exposed to a steady state acceleration of 25g up. |
| UPR-4 | The pod structure shall be without any failures after being exposed to a steady state acceleration of 11g down. |
| UPR-5 | The six sensors shall be located to cover all angles which are not shaded by the aircraft. |

## Environment requirements

|  |  |
| --- | --- |
| UER-1 | The pod structure shall be operational at temperatures of 95 ̊C on the outer skin for 25 minutes. |
| UER-2 | The pod structure shall be operational at temperatures of 102 ̊C on the leading edge for 25 minutes. |
| UER-3 | The pod structure shall be operational at temperatures of 134 ̊C on the outer skin for 3 minutes. |
| UER-4 | The pod structure shall be operational at temperatures of 151 ̊C on the leading edge for 3 minutes. |

## Interface requirements

|  |  |
| --- | --- |
| UIR-1 | The attachment to the aircraft shall be done using the MIL\_STD\_xx2 T-hooks. |
| UIR-2 | The pod shall provide a MIL\_STD\_xx3 connector which includes 115VAC/400Hz power and 6 data wires. |