



User Manual

PREDATOR 150 MkIII

General information
Installation instructions
Operation instructions
Maintenance instructions
Regulatory information

Please read this manual thoroughly and pay special attention to installation, operational and maintenance instructions.

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This manual also contains important safety information and instructions in specially formatted callouts with accompanying graphic symbols:



WARNING: WARNINGS ALERT YOU TO THE POSSIBILITY OF PERSONAL INJURY OR DEATH IF THESE INSTRUCTIONS ARE NOT FOLLOWED.



CAUTION: CAUTIONS ALERT YOU TO THE POSSIBILITY OF EQUIPMENT OR PROPERTY DAMAGE IF THESE INSTRUCTIONS ARE NOT FOLLOWED.



Notice: Notes provide helpful information.

Revision History

DOCUMENT VERSION	DATE	PAGE NUMBER	CHANGE DESCRIPTION
1.0.	01/14/22	NA	First release.

Related Documents

DOCUMENT VERSION	DOCUMENT ID	DOCUMENT NAME
V1.0	atm-DATASHEET-2022-01-PREDATOR_150_MkIII_V1.0	DATA SHEET
V0.5.0+beta1	atm-CP-V0.5.0+beta1-2022	ATMOLAB GIMBAL COMMUNICATION PROTOCOL
V1.0	atm-ICD-2022-01-PREDATOR_150MkIII_V1.0	INTERFACE CONTROL DOCUMENT

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LISTS OF ACRONYMS AND GLOSSARY

<i>PREDATOR 150 MkIII</i>	<i>synonyms used: gimbal, unit, system</i>
<i>User</i>	<i>synonyms used: operator, customer</i>
<i>EO sensor</i>	<i>Electro-Optical sensor</i>
<i>AOV</i>	<i>Angle of View</i>
<i>LRF</i>	<i>Laser Range Finder</i>
<i>LWIR</i>	<i>Long Wave Infra-Red thermal camera module</i>
<i>MPEG</i>	<i>An international standard for encoding and compressing video images</i>
<i>LAN</i>	<i>Local Area Network</i>
<i>WAN</i>	<i>Wide Area Network</i>
<i>CG</i>	<i>Center of Gravity</i>
<i>VDC</i>	<i>Voltage Direct Current</i>
<i>IP</i>	<i>Ingress Protection or Internet Protocol</i>
<i>GND</i>	<i>Ground or GND is where the electrical level is at 0 Volts</i>
<i>GCS</i>	<i>Ground Control Station</i>
<i>RF signals</i>	<i>Radio Frequency signals</i>
<i>ICE engine</i>	<i>Internal Combustion Engine</i>
<i>TGT</i>	<i>Target</i>
<i>HUD</i>	<i>Head up display</i>
<i>SGI</i>	<i>Sensor to ground intersection point</i>
<i>DEM</i>	<i>Digital Elevation Model</i>
<i>IMU</i>	<i>Inertial measurement unit</i>
<i>PID</i>	<i>PID controller for Proportional, Integral, Derivative</i>

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1. GENERAL INFORMATION

1.1 INTRODUCTION

PREDATOR 150 MkIII is a compact and lightweight multi-sensor 3-axis mechanical stabilized optical system designed for moving platforms which are exposed to unwanted vibrations and/or operate in a harsh environment. Composed of a high zoom day/low light FULL HD camera, high-resolution Radiometric thermal camera and a laser range finder. The gimbal can provide perfect aerial, ground or marine vehicle optical stabilized image results. PREDATOR 150 MkIII is a unique multi-axis stabilized system, designed for top performance in all sensor positions and platform angles.

1.2 APPLICATIONS

PREDATOR 150 MkIII is a professional multi-sensor camera system engineered for the following applications:

- Daylight, low light, night and haze surveillance and monitoring
- Night surveillance and monitoring
- Automated object tracking
- Marine/shipboard sensor systems
- Harbor and port security
- Border security & law enforcement
- Highway & transportation monitoring
- Search and rescue operations
- Military operations
- Facility inspection
- Aerial mapping

Possible mounting platforms:

- Unmanned aerial vehicle (UAV)
(hereinafter referred to as "PLATFORM")

1.3 PREDATOR 150 MkIII PACKAGE CONTENTS

1. 1 x durable case
2. 1 x PREDATOR 150 MkIII unit
3. 1 x gimbal cable
4. 1 x GPS antenna
5. 1 x PREDATOR 150 MkIII User Manual (this document)
6. 1 x PREDATOR 150 MkIII ICD and other documentation