



GA-ASI AIRCRAFT CONFIGURATION GUIDE

General Atomics Aeronautical Systems, Inc.

14200 Kirkham Way, Poway, CA 92064 • (858) 312 2810 • www.ga-asi.com

© 2017, All product names copyright or trademark protected.

Approved for public release. This brochure does not contain technical data per ITAR 22 CFR parts 120-130

PREDATOR B CONFIGURATIONS

FEATURES	BLOCK 1	BLOCK 5	MQ-9B
Wing Span	66 ft (20m)	66 ft (20m)	79 ft (24m)
– With ER Big Wing Kit	79 ft (24m)	79 ft (24m)	– –
Length	36 ft (11m)	36 ft (11m)	38 ft (11.7m)
Weight (MGTOW)	10,500 lb (4763 kg)	10,500 lb (4763 kg)	12,500 lb (5670 kg)
– With ER Fuel Tanks Kit	11,700 lb (5307 kg)	11,700 lb (5307 kg)	– –
Fuel Capacity	3,800 lb (1724 kg)	3,800 lb (1724 kg)	6,000 lb (2721 kg)
– With ER Fuel Tanks Kit	6,450 lb (2925 kg)	6,450 lb (2925 kg)	– –
– With ER Big Wing Kit	6,100 lb (2766 kg)	6,100 lb (2766 kg)	– –
Max Payload	*3,850 lb *(1746 kg)	4,600 lb (2086 kg)	5550 lb (2177 kg)
– Internal	850 lb (386 kg)	850 lb (386 kg)	800 lb (363 kg)
– External	3,000 lb (1360 kg)	3,750 lb (1700 kg)	4750 lb (1814 kg)
Hardpoints	7	7	9
– With ER Big Wing Kit	9	9	–
Max Endurance	27 hr	26 hr	40 hr
– With ER Fuel Tanks Kit	35 hr	34 hr	–
– With ER Big Wing Kit	42 hr	42 hr	–
Max Altitude	45,000 ft MSL	45,000 ft MSL	40,000+ ft MSL
Max Air Speed	240 KTAS	240 KTAS	210 KTAS
Power System	9 kW	45 kVA capable	45 kVA
– Backup Power	2 kW backup	4 kVA backup	2 kW backup
Powerplant	Honeywell TPE331-10 Turboprop 3-blade ER kit: 4-blade	Honeywell TPE331-10 Turboprop 3-blade ER kit: 4-blade	Honeywell TPE331-10 Turboprop 4-blade

MQ-9B SkyGuardian

CIVILIAN AIRSPACE COMPLIANT



MQ-9B

CHARACTERISTICS

- High Definition EO/IR
- GA-ASI Lynx Multi-mode Radar
- Precision guided munitions
- Dual VHF/UHF certified radios
- DO-178 and DO-254 design assurance for software and avionics
- Sense and Avoid (TCAS/ADS-B/IFF – with provisions for Due Regard Radar)

- De-ice/Anti-ice system
- STANAG 4671-compliant type certifiable design
- 40,000 hour design service life
- All weather capable
- Damage tolerant airframe
- Lightning protection
- Automatic takeoff and land
- Fire protected engine bay
- Other customer specific payloads
 - Automatic Information System (AIS)

OPERATORS

Royal Air Force

SeaGuardian

CIVILIAN AIRSPACE COMPLIANT



MQ-9B

CHARACTERISTICS

- High Definition EO/IR
- GA-ASI Lynx Multi-mode Radar
- Dual VHF/UHF certified radios
- DO-178 and DO-254 design assurance for software and avionics
- De-ice/Anti-ice system
- Sense and Avoid (TCAS/ADS-B/IFF – with provisions for Due Regard Radar)

- 40,000 hour design service life
- STANAG 4671-compliant type certifiable design
- All weather capable
- Damage tolerant airframe
- Lightning protection
- Automatic takeoff and land
- Fire protected engine bay
- Other customer specific payloads
 - SeaGuardian Mission Kit: (Optional)
 - Multimode 360° Maritime Surface Search Radar
 - Automatic Information System (AIS)

OPERATORS

BLOCK 1 — MQ-9A REAPER

PERSISTENT MULTI-MISSION ISR AND STRIKE

BLOCK 1



CHARACTERISTICS

- Raytheon MTS-B EO/IR
- GA-ASI Lynx Multi-mode Radar
- Precision guided munitions
- Other customer specific payloads

OPERATORS

United States Air Force
 USSOCOM/AFSOC
 Italian Air Force
 Royal Air Force
 French Air Force

BLOCK 1/5 ER

BLOCK 5

BLOCK 1



CHARACTERISTICS

- One or two external fuel tanks mounted on inboard wing hard points
- Improved landing gear
- Alcohol-water injection kit
- Supports mixed loadout of one or two fuel tanks and precision guided munitions

OPERATORS

United States Air Force

BLOCK 5 — MQ-9A REAPER

PERSISTENT MULTI-MISSION ISR AND STRIKE

BLOCK 5



CHARACTERISTICS

- Raytheon MTS-B EO/IR
- GA-ASI Lynx Multi-mode Radar
- Precision guided munitions
- Other customer specific payloads
- Dual ARC-210 UHF/VHF radios with wingtip antennas
- Separate payload computer (Mission Control Module)
- Improved landing gear
- High capacity 45 kVA capable power system
- High definition full motion video

OPERATORS

United States Air Force
 USSOCOM/AFSOC
 French Air Force
 Spanish Air Force

GUARDIAN/MARITIME SURVEILLANCE

MARITIME SECURITY, DISASTER RELIEF, AND HUMANITARIAN ASSISTANCE

BLOCK 1



CHARACTERISTICS

- Raytheon MTS EO/IR with laser illuminator and marker
- Raytheon SeaVue Multi-mode Maritime Radar
- ADS-B/TCAS
- Detect and Avoid Radar
- Dual ARC-210 radios
- Inmarsat backup BLOS data link
- Auto takeoff and land
- Dual law enforcement radio system and relay

OPERATORS

United States Customs and Border Protection Agency

IKHANA

SCIENTIFIC RESEARCH, PAYLOAD INTEGRATION, AND DEVELOPMENT

BLOCK 1



CHARACTERISTICS

- Raytheon MTS-B EO/IR
- Improved landing gear
- Dual ARC-210 radios

OPERATORS

NASA

BORDER PROTECTION CONFIGURATION

BORDER SECURITY, DISASTER RELIEF, HUMANITARIAN ASSISTANCE

BLOCK 1



CHARACTERISTICS

- Raytheon MTS-B EO/IR
- GA-ASI Lynx Multi-mode radar
- Northrop Grumman VADER payload
- Dual law enforcement radio system and relay
- Backup BLOS SATCOM datalink

OPERATORS

United States Customs and Border Patrol Protection Agency

ADDITIONAL CAPABILITIES

CIVILIAN AIRSPACE COMPLIANT



MQ-9B/Sky and SeaGuardian will become the first RPA certified to fly in civilian airspace, NATO STANAG (4671) and DEFSTAN (00970) compliant, easing the certification and airspace integration process for other Allied nations.

FEATURES	BLOCK 1	BLOCK 5	MQ-9B
Datalinks	C-Band LOS Analog Ku-Band BLOS	C-Band LOS Analog Ku-Band LOS / BLOS	C-Band LOS – Digital X-, Ku- or Ka-Band BLOS, Backup BLOS Capable
VHF/UHF Radios	Single Radio	Dual Radios	Dual Certified Radios
Auto Takeoff & Land	Optional	Optional	Standard
De-ice/Anti-ice	Optional	Optional	Standard
Sense and Avoid (TCAS, ADS-B, Due Regard Radar)	Optional	Optional	Standard

GRAY EAGLE CONFIGURATIONS

FEATURES	GRAY EAGLE	GRAY EAGLE ER
Wing Span	56 ft (17 m)	58 ft (18 m)
Length	28 ft (9 m)	28 ft (9 m)
Weight (MGTOW)	3600 lb (1633 kg)	4200 lb (1905 kg)
Fuel Capacity	575 lb (261 kg)	900 lb (408 kg)
Max Payload – Internal	380 lb (172 kg)	500 lb (227 kg)
Max Payload – External	500 lb inboard hardpoints (227 kg) 250 lb outboard hardpoints (113 kg)	500 lb inboard hardpoints (227 kg) 350 lb outboard hardpoints (159 kg) 500 lb centerline hardpoint (227 kg)
Hardpoints	4 wing hard points	4 wing hard points centerline hardpoint
Max Endurance	25 hr	40+ hr
Max Altitude	29,000 ft MSL (8839.2 m)	29,000 ft MSL (8839.2 m)
Max Air Speed	167 KTAS	167 KTAS
Power System – Backup Power	9 kW	9 kW
Powerplant	HFE-160 HP heavy-fuel engine	HFE-180HP heavy-fuel engine
Weapons	4 Hellfire missiles	4 Hellfire missiles
Payloads	EO/IR SAR/GMTI Communications relay	EO/IR SAR/GMTI Communications relay

MQ-1C GRAY EAGLE

PERSISTENT MULTI-MISSION ISR AND STRIKE



CHARACTERISTICS

- Controllable from U.S. Army Universal Ground Control Station or GA-ASI GCS
- Triple-redundant flight control system
- Redundant flight control surfaces
- Automatic takeoff and landing
- De-ice wings and tails
- TCDL line-of-sight communications
- TCDL air data relay communications
- Over 90% system operational availability
- C-130 transportable

OPERATORS

United States Army

MQ-1C GRAY EAGLE ER

PERSISTENT MULTI-MISSION ISR AND STRIKE



CHARACTERISTICS

- Controllable from U.S. Army Universal Ground Control Station or GA-ASI GCS
- Triple-redundant flight control system
- Redundant flight control surfaces
- Automatic takeoff and landing
- De-ice wings and tails
- TCDL line-of-sight communications
- Over-the-horizon Ku-Band SATCOM
- TCDL air data relay communications
- Over 90% system operational availability
- C-130 transportable
- Dual rail hellfire
- Triple UHF/VHF SINCGARS radios with winglet antennae
- Fault tolerant tails
- Engine reliability upgrades
- 10,000 hrs brushless servo

OPERATORS

United States Army

PREDATOR XP CONFIGURATIONS

FEATURES	PREDATOR XP	IMPROVED XP
Wing Span	55 ft (17 m)	55 ft (17 m)
Length	27 ft (8 m)	27 ft (8 m)
Weight (MGTOW)	2550 lb (1157 kg)	2550 lb (1157 kg)
Fuel Capacity	595 lb (270 kg)	595 lb (270 kg)
Auto Takeoff & Land	Yes	Yes
Max Payload – Internal	325 lb (147 kg)	325 lb (147 kg)
Max Endurance	35 hr (10,000 ft MSL)	35 hr (10,000 ft MSL)
Max Density Altitude	25,000 ft (7620m)	25,000 ft (7620m)
Max Air Speed	120 KTAS	120 KTAS
Power System – Backup Power	4.8 kW	4.8 kW
Powerplant	Rotax 914 Turbo	Rotax 914 Turbo
Payloads	EO/IR SAR/GMTI AIS	EO/IR SAR/GMTI AIS
Remote Video Transmitter	Analog Standard Definition Single Waveform (C-band)	Digital High Definition Multiple Waveform Selection AES 256 Encryption
Air-to-Air Video Transmission	No	Yes

PREDATOR XP



PREDATOR XP

CHARACTERISTICS

- High definition EO/IR
- GA-ASI Lynx Multi-mode radar
- Triple-redundant flight control system
- Redundant flight control surfaces
- Fault-tolerant tails
- Automatic takeoff and landing system
- Electronic Fuel Injected-Turbo Charged, Rotax 914 with twin ignition sources

- Optimized fuel mapping for greater fuel efficiency
- High capacity oil system
- 10,000 hrs brushless servos
- Dual alternator power system with redundant power bus avionics
- Next Generation INS/GPS
- Improved propeller with fault-tolerant hydraulic governor
- Blended winglets with LED navigation lights and integral UHF/VHF antenna
- Automatic Identification System (AIS)

OPERATORS

UAE Armed Forces

IMPROVED XP



IMPROVED XP

CHARACTERISTICS

- High definition EO/IR
- GA-ASI Lynx Multi-mode radar
- Triple-redundant flight control system
- Redundant flight control surfaces
- Fault-tolerant tails
- Automatic takeoff and landing system
- Electronic Fuel Injected-Turbo Charged, Rotax 914 with twin ignition sources
- Optimized fuel mapping for greater fuel efficiency

- High capacity oil system
- 10,000 hrs brushless servos
- Dual alternator power system with redundant power bus avionics
- Next Generation INS/GPS
- Improved propeller with fault-tolerant hydraulic governor
- Blended winglets with LED navigation lights and integral UHF/VHF antenna
- Automatic Identification System (AIS)
- Digital remote video transmitter with AES 256 encryption
- Air-to-Air video transmission allows for Manned Unmanned Teaming (MUM-T)

OPERATORS

Unannounced

AVENGER CONFIGURATIONS

FEATURES	AVENGER ER	ANGEL ONE
Wing Span	76 ft (23 m)	66 ft (20 m)
Length	44 ft (13 m)	40 ft (12 m)
Weight (MGTOW)	18,900 lb (8573 kg)	13,100 lb (5942 kg)
Fuel Capacity	9500 lb (4309 kg)	4300 lb (1950 kg)
Max Payload	6000 lb (2722 kg)	3500 lb (1588 kg)
– Internal	3860 lb (1751 kg)	3500 lb (1588 kg)
– External	6000 lb (2722 kg)	-
Max Endurance	20 hr	6 hr
Max Altitude	50,000 ft (15240 m)	50,000 ft (15240 m)
Max Air Speed	400 KTAS	400 KTAS
Standard Dash	350 KTAS	350 KTAS
Power System – Backup Power	21 kW	9 kW
Powerplant	Pratt & Whitney PW545B turbofan	Pratt & Whitney PW545B turbofan
Weapons	Hellfire missiles GBU-12/49, GBU-31 GBU-32, GBU-38 JDAM GBU-39, GBU-16/48	Designed for humanitarian purposes
Payloads	EO/IR Lynx Multi-mode Radar SIGINT/ESM System Communications relay	EO/IR Lynx Multi-mode Radar Communications relay

AVENGER ER

NEXT-GENERATION MULTI-MISSION ISR AND STRIKE AIRCRAFT



CHARACTERISTICS

- Jet performance and reliability
- Reduced detection features
- Internal stores carriage
- Multiple payload capacity
- Retractable EO/IR gimbal
- Triple-redundant avionics
- Heavyweight landing gear
- Dual-redundant flight controls
- Hybrid electro/mechanical anti-lock brake system
- Six external hard points
- Compatible with all GA-ASI GCS
- C-5/C-17 transportable (or self-deploy)

ANGEL ONE

DELIVERING HUMANITARIAN AID



CHARACTERISTICS

- Jet performance and reliability
- Reduced detection features
- Internal stores carriage
- Multiple payload capacity
- Retractable EO/IR gimbal
- Triple-redundant avionics
- Dual-redundant flight controls
- Hybrid electro/mechanical anti-lock brake system
- Six external hard points
- Compatible with all GA-ASI GCS
- C-5/C-17 transportable (or self-deploy)

