

Ruggedized mobile GPS Repeater for aircrafts

Art.-No.: MGRK-ECII-Q



- Provides **L1/L2-GPS coverage** in every aircraft
- **Situational awareness** for parachutists and airdrop
- **Combat proven** and MIL certified Technology
- **Easy installation** and **100 % compatibility** with your GPS equipment

Description:

The reception of GNSS-signals in aircraft is very limited or even impossible under normal circumstances. To solve this problem our GNSS repeater kit MGRK-ECII-Q has been developed specifically for mobile use in aircraft. The focus of development was on security, ease of use and a universal purpose of application. It offers reliable reception for GPS L1 and L2 signals inside the cargo bay of transportation aircraft of all kinds. Whether the signal is needed for paratrooper readiness or for joint precision airdrops (JPADS) – the signal is there when you need it. The central unit is embedded in a hard case, together with two powerful batteries / battery packs to guarantee an independent, reliable power supply during missions. The system is fully compatible with aircraft like the C-130, C-17, A3xx series, A400M, Transall, SkyVan, CH53, NH90, H-47 Chinook and many more.

The kit includes an active antenna for reception, which can be attached to the central windshield of the cockpit via suction cup. The rest of the unit stays in the hard case in the cargo bay. The two (or optionally four) transmitting antennas can be attached to almost any spot in the aircraft during flights via the universal mount / bracket.

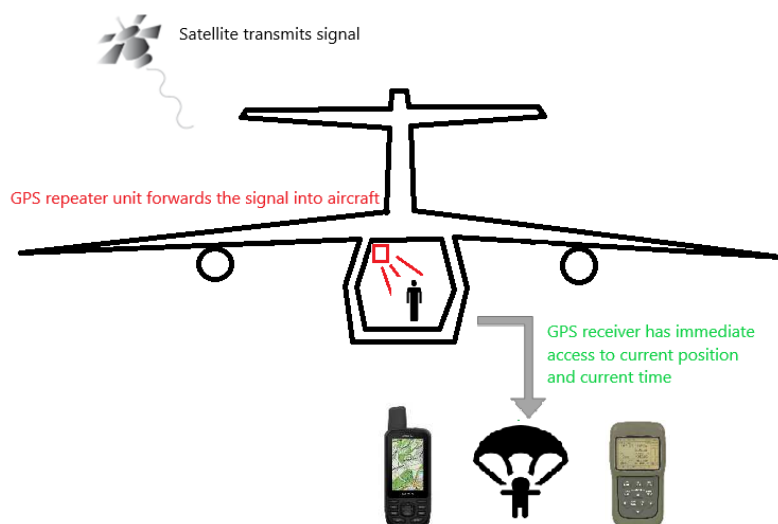
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Continued Description:

The included coaxial cable comes in lengths of 5, 10, 15 and 20 meters and is fitted with a special, heavy duty cable jacket that resists external and environmental interference. The controller unit is equipped with a system for automatic signal monitoring that reliably prevents signal oscillation and signal interferences. Via the integrated monitoring tool with LED-display the user of the kit gets a full overview of the system's status at all times. The GPS-repeater kit is fully MIL-qualified and comes with a safety of flight approval by the USAF. Optionally the system can be plugged into additional sensors via an external port, for example to attach it to the switch for the cargo bay hatch.

Schematic overview:



**SITUATIONAL
AWARENESS FOR YOUR
PNT EQUIPMENT**

**WORKS FOR ALL KINDS
OF AIRCRAFT USED IN
NATO !**

Technical data:

GNSS-Frequencies	GPS L1 (1575 MHz) and GPS L2 (1227 MHz) incl. M-Code, Glonass (1607 MHz, optional)
Signal Strength	Adjustable from 1 to 10 for a signal range of 3 - 6 m per antenna (conical)
Signal Outputs	TNC-plugs for one to four passive antennas for transmission
Signal Input	TNC-plug for one active GPS-antenna with monitoring
Coaxial Cable	2 x 5 m, 1 x 10 m, 1 x 15 m, 1 x 20 m with halogen free specialized cable jacket
Interface / Display	Push buttons with LED-display (front facing)
Power Supply	1 x lithium ion battery 12 V / 20 000 mAh for approx. 7-8 hours of battery life 1 x battery compartment (integrated into rear side of the hard case) for 20 mignon cells (Type 2A/AA) for approx. one hour of battery life
Optional Add-ons	Ports for 28 V DC, RS232/465, Ethernet, Additional Sensors or GPS direct connection
Measurements	56 x 35 x 22 cm – packaged in Pelicase 1510
Weight	Up to 15 kg (varies, depending on ordered feature set)
Certificates	SoFA (USAF) and EN ETSI302645 (European norm for GPSR), no ITAR

Images:



Delivery contents: MGRK-ECII-Q:

- GPS repeater unit in a red Pelicase 1200 with lithium ion battery and a secondary battery compartment for 20 2A/AA mignon cells
- Secondary lithium ion battery with charger (USB, 12 V, 110/230V)
- 4 x antenna for transmission with milled mounting plate (aluminum)
- 4 x mount with rail-attachment-system, velcro and adhesive for antennas for transmission
- 5 x coaxial cable - 2 x 5 m, 1 x 10m, 1 x 15 m, 1 x 20 m
- 1 x receiving antenna with mounting plate and suction cup
- 1 x Pelicase 1510, black, padded, with CoC, manual and quick start guide

Image 1: shows all items delivered for GPSRK-ECII-Q with four antennas for transmission



Image 2: receiving antenna with suction cup mount



Image 3: LED-display with the system's status information

Optional Add-ons for MGRK-ECII-Q:

- DC power cable for 28 V DC with open ends (-DCA28)
- Additional GPS direct connection port TNC (-GPS1DTF)
- I/O for RS232 / 485 (-GPSRS232/485)



Joint Precision Airdrop
(JPADS) from Airbus
A400M

Image: Pascal Pigeyre/ Airbus
Grp.

Paratroopers dropping from A400M



Image: Airbus Group

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