

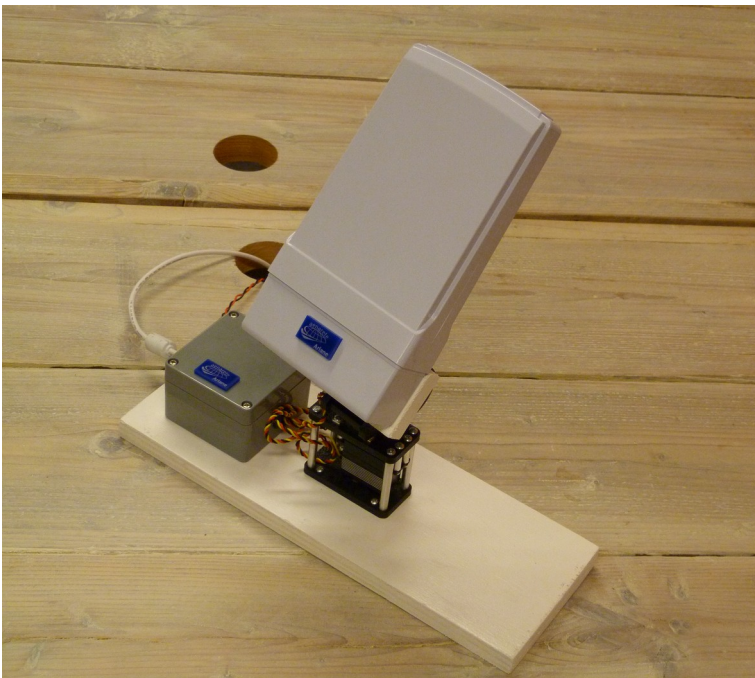
Ariane – Fast and Reliable Wireless Link



For a number of reasons it is useful to have a fast, wireless link as part as the control system:

- Ground based sensors can be used to determine the position of the kite, the tether force and the wind speed and direction;
- live video data can be transferred to the ground, which allows a monitoring of the wing during the development and can help to avoid crashes;
- fast logging with a high sample rate is much easier on the ground;
- some control algorithms can be implemented on the ground which makes the development process faster and easier.

Properties of the Ariane – Wireless Link

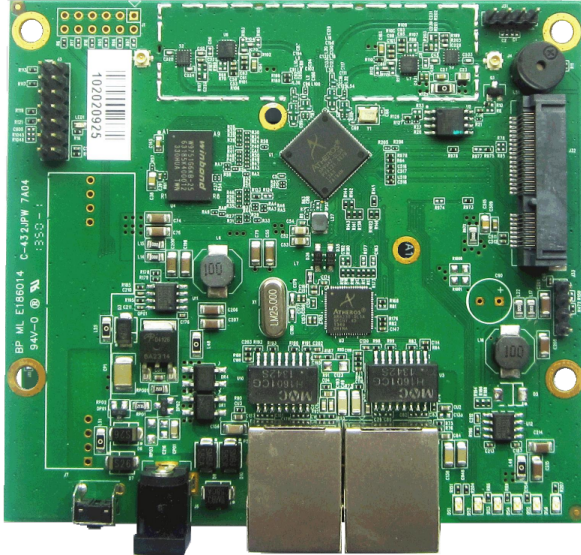


Link properties

- Range: 1 km line of site; different values on demand;
 - Net data rate: at least 1 MBit/s for full range, higher values on a shorter distance;
 - License free frequencies in the 5 GHz range are used;
 - Antenna misalignment: Any misalignment is allowed to achieve the specified performance;
 - Antenna orientation misalignment: 360°;
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- Maximal round trip delay: 10 ms; package losses for packages with a size < 512 Bytes: less than 0.1%;
 - Per default UDP packages are exchanged via Ethernet; on request serial (TTL-level) communication is also possible;

Flying components

1. Receiver: Size: 105 x 95 x 18 mm; weight: 98g; Power consumption: 1.57 W average, 4W peak; Voltage: 12 .. 24 V; other values on request;
2. Antenna: Size: Two short, unbreakable antennas:



Ground components

1. Directed wireless modem: Size: 278.5mm x 122.2mm x 94.5mm; weight: 0.6 kg; power supply: 12-24V;
2. Pan and tilt system without rain protection. Rain protection (dome) on request.
3. Servo driver with USB or Ethernet interface.

The pan and tilt system requires a connection to a host computer, that must provide the estimated angular position of the wing. Software driver in C is provided, other programming languages on request.

Price: 990,00 EUR plus VAT. Prices for higher quantities on request.

More infos: info@aenarete.eu