World Advanced Research Agency (WARPA) - TeraDrone

Peter Lobner, 9 September 2022

1. Introduction

WARPA was founded in 2018 in Toulouse, France, by Jean-François Geneste, a former Vice-President and Head of the Scientific Department of the European Aeronautic Defense and Space (EADS) group. The firm describes itself as follows, “WARPA is an R&D company whose goal is to design disruptive concepts which are game changers. Our industrial positioning is to be a prime contractor. Once the concept is designed, we perform the final assembly while developing and producing key parts.” One of their concepts is the autonomous TeraDrone multi-role, heavy load transportation, autonomous airship that is intended to be “a strong contributor to green globalization.” The WARPA website is here: https://www.warpa.net

2. TeraDrone

WARPA’s TeraDrone is a design concept for large, twin-hull (catamaran), autonomous airship that is scaleable for carrying 100 to 1,000 metric ton (110 to 1,100 ton) payloads on worldwide point-to-point transportation routes. Potential applications include goods transportation linking remote populations with worldwide markets, flying hospital, fighting wildfires, and border security. Passenger transportation also is a possibility.

Bow-on view of TeraDrone flying in an urban setting.
Source: WARPA

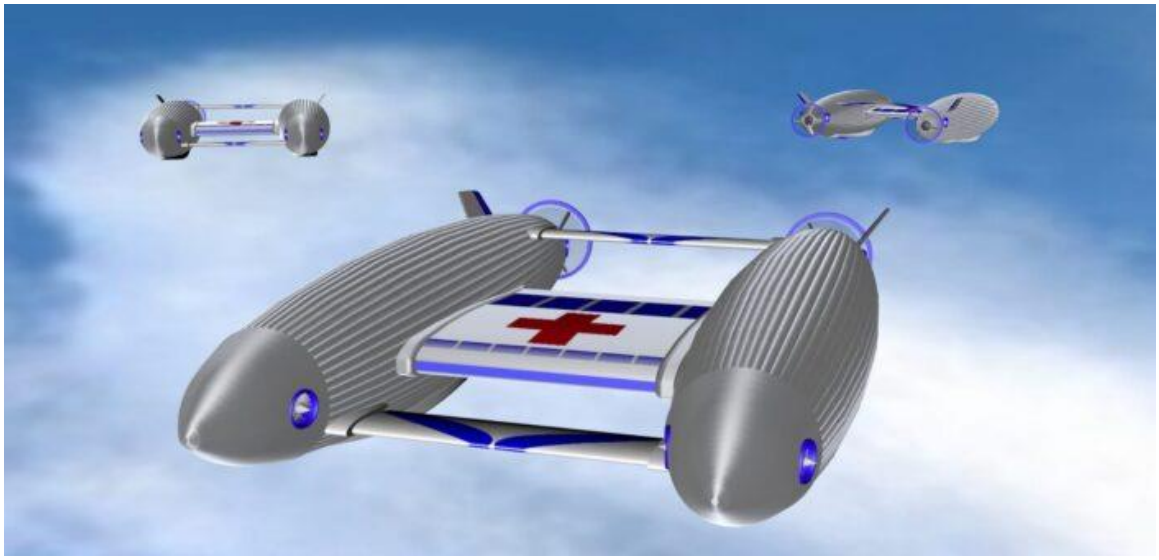
General characteristics of the TeraDrone are the following

- All weather
- All terrain, without a need for ground infrastructure
- No hangar needed for parking
- Zero carbon emissions
- Hydrogen lifting gas
- Autonomous
- Maximum altitude: 7,000 m (22,966 ft)
- Maximum speed: 150 kph (93.2 mph)
- Range: Worldwide, 60,000 km (37,282 miles)
- Transportation cost: 0.1 €/metric ton-km

As a cargo carrier, the TeraDrone combines the advantages of a dry container ship and a high cube container ship.

With its great range (about 1.5 times the circumference of the Earth), virtually all locations on Earth are accessible.

WARPA estimates that three years would be required to construct and receive type certification for a TeraDrone.



Three views of a TeraDrone flying hospital. Source: WARPA

TeraDrone, viewed from below.
Source: WARPA

Renderings of TeraDrone in flight.
Source, both graphics: WARPA

3. For more information

- Jean-François Geneste & Pierre Franklin Tavares, “L’Agenda africain 2063 : Trois projets innovants pour accélérer l’histoire de l’Afrique,” (in French), Afrimag, 30 July 2022: https://afrimag.net/agenda-africain-2063-trois-projets-innovants-pour-accelerer-lhistoire-de-lafrique/

Other *Modern Airships* articles

- *Modern Airships - Part 1*: https://lynceans.org/all-posts/modern-airships-part-1/
    - *Aereon Corporation – Aereon III*
    - *Walden Aerospace / LTAS – Twin hull yacht*

- *Modern Airships - Part 2*: https://lynceans.org/all-posts/modern-airships-part-2/
    - Buoyant Aero – twin hull tech demonstrator
    - Dolphin Luftschiff
    - Leningrad OKB – Multi-hull heavy-lift airship
    - MDBA – Armatus
    - Nautilus SpA – Elettra Twin Flyer
- *Modern Airships - Part 3*: https://lynceans.org/all-posts/modern-airships-part-3/
    - Lazzarini Design Studio – Air yacht