

iDMN-FHS

Dynamic Mesh Communication Network Flying Hotspot with Camera based Observation Capability

The iDMN-FHS "Flying Hotspot" is a quick and flexible way of providing a mesh network hotspot for the iDMN Dynamic Mesh Communication Network when installation of a mast mounted hotspot is not feasible. The iDMN-FHS is easy to fly and offers GNSS-based position and altitude hold as well as waypoint navigation and autonomous return-to-home and landing. In waypoint navigation mode the iDMN-FHS can autonomously take-off, fly to and can automated hold position and altitude at a predetermined waypoint. When the battery charge reaches a minimum level, the aircraft returns automatically to and lands at a designated landing area without any interaction of the pilot.

The remote controller is equipped with an ultra bright 7.85" monitor that displays extensive telemetry data and a live video stream of the proving ground from an light-weight gimbal mounted camera. The video stream can optionally also be shown on an external screen connected to the handheld controller via HDMI and is stored on a Micro SD card in the camera.

- iDMN-FHS is based on an DJI Matrice 600 Pro airframe
- Dimensions: 1668 mm x 1518 mm x 727 mm
- Take-off weight (with iDMN-FHS payload): 9.5 kg (13 kg)
- Maximum take-off weight: 15.5 kg
- Flight time with iDMN-FHS payload: up to 20 min or as an option unlimited operation¹
- Charging time of batteries: 1.5 h
- Flyable in winds up to 8 m/s, max. speed (w/o wind) 65 km/hr
- Operating temperature: -10°C - 40°C
- Service ceiling: 2'500 m (4'500 m with optional high-altitude propellers); allowed altitude depending on local regulations
- Maximum distance from remote controller: FCC compliant: 5 km, CE compliant: 3.5 km
- Hovering accuracy: vertical: +- 0.5 m, horizontal: +- 1.5 m
- Recommended maintenance interval: 50 flights or 20 flight hours
- Pilot experience: can be obtained by simple training; only standard pilot license for UAV required

The iDMN-FHS can stay airborne for up to 20 minutes per battery charge in free-flight mode. The charging time is approximately 90 minutes meaning that with four sets of batteries it can be in the air almost continually.

The iDMN-FHS is stored in a rugged transport case and can be unpacked and prepared for flight in less than 15 minutes. The time needed to store the aircraft is approximately 10 minutes.



The iDMN-FHS can be seamlessly integrated into the [iDMN](#) communication network. It is used e.g. to monitor the activities on a proving ground while performing automotive tests with [ISWACO-ARGUS](#).

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¹ iMAR offers the option to operate the iDMN-FHS via a tethered mode to apply power continuously via a light weight cable

