

USE CASE

SPORT EVENT BROADCASTING

ÅRE 2019 - Ski World Championship with Safe-T



Context

For the third time, Åre in Sweden hosted the IFS (International Federation of Ski) Alpine World Ski Championships from 4-17 February 2019. With 74 participating countries and over 700 million viewers, this is the biggest winter sports event in the world after the Winter Olympics.

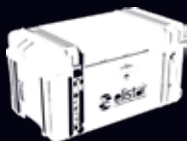
SVT (Sweden's national public broadcaster) and their partners, Net Insight and Grass Valley, undertook remote IP production to broadcast the show. The set up consisted of multiple cameras, deployed to capture the races from every conceivable angle. Images were instantly transmitted to SVT's headquarters in Stockholm, 600 km away, and subsequently streamed live to global audiences. Aerocam, an aerial film and photography production company was tasked by SVT to provide live aerial imagery. Equipped with an Elistair Safe-T Tether and a DJI M600 drone they were able to provide unique, live aerial images of the slopes.

“With a drone you can get access to higher angles and in more difficult terrain. Like a camera crane but with more flexibility.”

Stefan Söderström, Aerocam CEO

1 Safe-T

Coupled with a DJI M600 drone and designed to meet demanding missions in the safest conditions. The Elistair Safe-T tether station was essential in obtaining UAV flight authorization for an event of this size.



120k Attendees

Known as the second largest winter sports event in the world after the winter Olympics, the Alpine Ski World cup gathered 120 000 attendees, athletes, and staff.



700M Viewers

1500 broadcasters gathered at Are 2019 to provide instant newsfeed to over 700 million people worldwide. Aerocam's aerial feed was instantly delivered to SVT's Stockholm headquarters.



-15 °C

Built to endure extreme environments,, Elistair Safe-T tethering station proved its robustness. It was able to power the DJI M600 continuously in extreme temperatures down to -15C°.



5 Days

During the two weeks of the competition, the M600 was deployed for 5 days. Live from the slopes, it accumulated up to 5 hours of flight per day, operating at heights of 25 to 30m and covering 300 meters of pistes.



Live Broadcast

Two 100 Gbps fiber circuits delivered a total of 53 hours live broadcast to 3 control rooms at the Sveriges Television (SVT).



ISSUES & NEEDS

Uninterrupted Live Aerial Video

With more than 700 million expected viewers worldwide, the FSI and SVT (Sweden's national public broadcaster) opted for a brand new system of remote IP production. In total, more than 80 cameras feeds from the course were delivered to three broadcast control rooms in Stockholm through two 100 Gbps fiber circuits.

Objective: instantly providing spectators with the highest quality pictures from all possible angles, including aerial views.

Airspace restrictions: During the entire show, the airspace over Åre was subject to a strict restriction applying to all types of aircrafts including model airplanes, paragliding or any UAVs.

Extreme temperatures: All attendees, participants and staff had to face extreme weather conditions with temperatures falling down to -20°C in the first week. This deteriorated further with winter storms and strong winds in the second week. Another big challenge to overcome was the restrictive location of the site.



Airspace restrictions, altitude, extremely low temperatures, difficult access, were as many obstacles to overcome.



Without the Safe-T we would not be able to work at the World Cup at all. According to FIS regulations, all drones positions were inspected every morning.
Stefan Söderström, Aerocam CEO

SOLUTION

Equipped with a DJI M600 drone, Aerocam combined its UAV with Elistair Safe-T to ensure unlimited and safe flights during the competition.

Secured tethered flight: While tethered to the station through a Kevlar reinforced micro-tether, the drone was secure in a safe flight area, which ensured the safety of the crowds. This is why the Swedish Civil Aviation granted Aerocam unique UAV flight authorization on the event.

Designed for the field: Ruggedized and transportable, the station was easily transported via snowmobile and sled to reach the location of the deployment.

Unlimited flight autonomy: Permanently powered by the Safe-T tether station, the drone accumulated up to 5 flight hours per day in a high altitude environment.

MISSION PROCESS

All equipment, including the Safe-T, the drone, and the generator, fitted on a sled and 2 snow mobiles to climb the 1000m slopes.

Set up: Once arrived, Aerocam had to build up a start and landing surface to compensate the slope of the ground. a few minutes later, the station was powering the drone flying above the runs and streaming footage to SVT and the 700 Million viewers.

Video feed: With a Paralinx system reaching up to 600 meters, full HD images of 1080p and 50fps, with 0,1 seconds of latency were sent by fibre to a TV control center after being converted from HDMI/SDI to LAN/IP .

Results: Thanks to the Safe-T, Aerocam obtained the only drone flight authorization, and provided persistent, high quality, live aerial images of this high profile sporting event.