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Sales & Marketing***

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Welcome to the first issue of CAS News from Cobham Antenna Systems

Inspired by the richness of late-spring, we decided to launch this bi-monthly newsletter, to help keep everyone informed of all the exciting developments going on here at Cobham Antenna Systems (CAS), in Newmarket, UK.

In this issue, the first of many to come, we cover our presence at two recent key industry exhibitions: AUVSI/Xponential 2019 in Chicago, USA, and EW-E 2019 in Stockholm, Sweden. At these shows we introduced a new antenna that is topically relevant, designed to extend the broad range of products we have developed as key components for C-UAS (that is, Counter-Unmanned Airborne Systems). UAS includes illegally-flown commercial drones, like those that threatened the restricted airspace at Gatwick airport in the UK, and other airports, earlier this year.

We also take a look at how our antennas and our expertise are helping Professor Alan Wilson of The Royal Veterinary College with his challenging research into animal behaviour in the wilds of Africa (as featured on TV).

But first of all, we'd like to take this opportunity to re-introduce our Sales Team, especially for those of you who haven't yet had the chance to 'put faces to names' by actually meeting them in person.

Hello from the Sales Team at Cobham Antenna Systems



Based in Newmarket, UK, and operating worldwide, our Sales professionals are on-hand to help you with all your microwave antenna system needs. The team comprises individuals who have all been involved in the microwave industry for many years, working at CAS for the majority of these.

For more information about us and our products and services, please do get in touch:

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www.european-antennas.co.uk

www.cobham.com/antennasystems/microwaveantennas

CAS at AUVSI and EW-E 2019

Showing our new C-UAS Helix antenna

Cobham Antenna Systems has just launched a new C-UAS antenna, extending its wide range of proven Counter-Drone products.

This triple-band Helix, directional antenna, was displayed, for the first time, on the Cobham stand at the unmanned vehicle show, AUVSI XPONENTIAL 2019, in Chicago, USA, 30 April – 1 May 2019.

Within two weeks, the new Helix then had its second outing, on the Cobham stand at Electronic Warfare – Europe (EW-E) in Stockholm, Sweden, 13 May – 15 May 2019.

CAS antenna model number
TAMH-1.6-2.4-5.8/2453



The new Helix is designed to SWaP principles – improved performance while reducing its Size, Weight, and system Power requirement.

This is achieved by housing three antennas in one radome, covering the three most popular commercially used bands: 1.6GHz (GPS), 2.4GHz and 5.8GHz. It is of particular benefit to portable systems, being lighter and easier to handle. Furthermore, for fixed installations, its SWaP efficiencies make using it much more straightforward than mounting three antennas in close proximity. Its three-into-one configuration also reduces wind-loading.

These benefits meet Counter-Drone System (or C-UAS; Counter-Unmanned Aerial Systems) requirements – especially important following the recent and much reported hazardous incursions into restricted airspace over airports by illegally flown commercial drones.

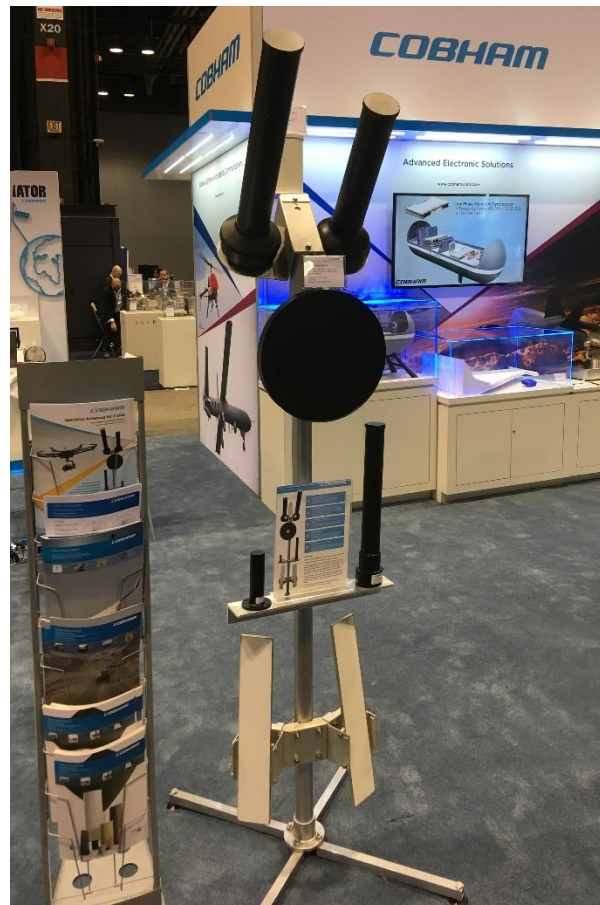
All three of the antennas within the radome are Helix (i.e. circular-polarised), which ensures the greatest probability of coupling with the antenna on the target drone, under most flight conditions. Each provides 13dBiC gain and narrow, 33-degree beam-widths, which reduces the possibility of it interfering with non-hostile systems operating in the same vicinity.

This new model is the latest of Cobham's many similar products. CAS is investing in producing further versions, which will extend the low band to cover the 915MHz to 1.6GHz band and to include all GPS bands (L1 – L5).

Meet "The Hat Stand"!

The newly extended "Hat Stand" makes its debut appearance at AUUVSI/Xponential 2019

The new triple-band Helix directional antenna model number TAMH-1.6-2.4-5.8/2453 is top-left on the display stand



The new antenna has been added to our display stand, mounted alongside other Helix, Omni and Sector CAS antennas.

The display, fondly known by some as "The Hat Stand", now shows off eight antennas – all representative of our range of C-UAS-suitable products, as featured on the Cobham booths at AUUVSI and EW-E 2019.

For more information, [click this link to view and download our Specialist Antennas for C-UAS brochure.](#)

Antennas in the Savannah

CAS' expertise supports the RVC's research in Africa

Professor Alan Wilson, of The Royal Veterinary College (The University of London), leads the RVC LOCATE project team of researchers in the southern African savannah. The aim of LOCATE is to identify how speed, manoeuvring and habitat impact the hunting and evasion practices of carnivores and their prey, non-invasively.

This exciting research is really taking off

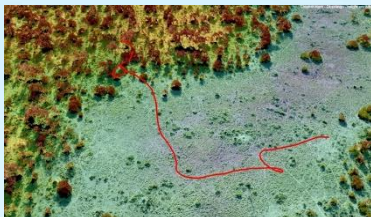
The Professor and his team utilize the RVC Structure and Motion Lab Research Aircraft to take their study airborne. This aerial data acquisition platform collects location and analysis information from RVC-designed and engineered tracking collars (with which target animals have been previously fitted, by RVC). This data helps the team to understand more about the animals' behaviour and locomotion, and is revealing new insights into how they interact with their natural environment (which will aid conservation and land management).



No runway required!



Wild Cheetah wearing one of the collars.



Cheetah track: A 3-D terrain map created from aerial survey data, overlaid with cheetah collar running data.

The collars contain high-accuracy GPS, accelerometers, gyroscopes and compasses. The aerial data acquisition platform is equipped with high-speed, high-resolution video, to automatically track and film hunting in action, by 'locking onto' the GPS co-ordinates of the collars (as featured recently in a BBC1 "Big Cats" documentary that was broadcast in January 2019, and also in the Telegraph newspaper, and Heat magazine).

High-performance antennas are key enablers for the research project's success

The Research aircraft's radio systems, used for tracking and managing the animals' GPS collars, include the following RF equipment:

- >> VHF (148 MHz) Direction Finding antenna and receiver
- >> 868 MHz LoRa receiver system for long-range positional telemetry to/from the GPS-IMU collars
- >> 2.4 GHz transceiver system, built into the wing-tip, for downloading nearby collar data and uploading collar configurations and firmware to them.

It is with this equipment that Cobham has been helping the project.



Inside the wing-tip of the experimental aircraft G-SMLI modified for survey work and wildlife tracking, showing the CAS antenna, with electrical tilt-ability.

Cobham Antenna Systems' advice and support has proved invaluable

Since meeting with Professor Wilson and some of his team, in mid-2017, to review the specification and performance of the collar's transceiver, Cobham Antenna Systems has been providing advice and guidance on the type, positioning and specification of the antennas.

CAS is now looking into the project's requirement for an enhanced 868 MHz low-profile antenna, and designing a unit that offers dual polarisation and increased gain, thereby providing greater Rx sensitivity and improving effective operational range.

The project is on-going, with the completion of antenna production anticipated for mid-2019.

"Cobham Antenna Systems has been invaluable in support of our project, providing antenna expertise as and when we've needed it. The Cobham team's enthusiasm for our efforts has been greatly appreciated."

— Professor Alan Wilson, RVC.



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