Cobham Mission Equipment
Providing Mission Capability and Support

The most important thing we build is trust
Cobham Mission Equipment is the market leader for Air-to-Air Refuelling, providing innovative fifth generation nose to tail solutions to defence customers worldwide. The unique refuelling capabilities available embrace the man-machine interface for crew operations on the flight deck, from the integration of avionics equipment in tanker aircraft cockpits, through to the refuelling probes in the receiver aircraft. To date, Cobham Mission Equipment has delivered more than 2,000 Air-to-Air Refuelling Systems for buddy-buddy refuelling and for tactical and strategic tanking for fixed and rotary wing aircraft in response to customers’ unique operational requirements. Aerial refuelling expertise has now extended into the development of autonomous Air-to-Air Refuelling solutions.

The Company also provides a ‘Wingtip to Wingtip’ capability offering a comprehensive range of weapons carriage and release equipment for fast jets, rotorcrafts and UAVs. Products include Air-to-Air and Air-to-Ground systems employing both pneumatic and pyrotechnic ejection systems. Systems integration resources and through life support services are provided to fully meet customer requirements.

Cobham Mission Equipment, operating at a global level, remains at the forefront of engineering and production for the aerospace and defence industry. Centres of excellence for design, test and manufacturing are located in the UK and USA and provide an unparalleled reputation for innovation, quality and reliability.
Refuelling Systems

Refuelling Systems include hydraulic, fuel/air, and electric solutions to refuel both helicopters and fixed-wing aircraft. Wing Pods, Fuselage Refuelling Units, Probes, and Buddy stores are available to suit customers’ individual operational requirements.

Wing-mounted aerial refuelling pods are designed as a ready interface for aircraft tanker conversion. The pods feature a hose-and-drogue refuelling system.

Adaptable to many different platforms, Cobham’s centreline hose reels also provide tanker to receiver probe and drogue refuelling for increased aircraft range and mission capability.

New technology programmes are in progress for the integration of Air-to-Air Refuelling solutions to satisfy FSTA and A400M requirements.

Qualified Air-to-Air Refuelling equipment in service with:
- C-130 / HC-130 / MC-130 / KC-130
- KC-10 / DC-10
- F-18 / Tornado / SLU-30
- C-135FR / KC-135R
- A310 MRTT
- A330 MRTT
- VC-18, Tristar
- Boeing 707

Probes

A comprehensive range of qualified probes are available for fast jets and rotorcraft.

Full design, qualification, and certification support is provided for Air-to-Air Refuelling probes, including programmes such as:
- Fixed (EH-101)
- Actuated (F-35)
- Telescopic (V-22, Gripen)

Test facilities include fuel system, vibration and full environmental qualification.

Drogues

- Robust, fixed and Variable Drag Drogue (VDD) designs covering the low and high speed flight envelope
- Unique, patented low Foreign Object Damage Construction eliminates parts that would cause receiver engine damage in case of breakage
- VDD Technology provides a robust and stable refuelling platform over a wide speed range:
  - Low speed VDD: 100-180 kts
  - High Speed VDD: 180-325 kts

Compatibility with NATO STANAG 3447 compliant probes

All Speed VDD is in development to provide a single fast jet and rotary wing refuelling solution.

External/Internal Aircraft Fuel Tanks

Cobham designs and manufactures fuselage and wing, centreline wing, and a complete line of double-walled, internal fuel tanks for commercial aircraft.

Cobham has designed and manufactured more than one million tanks for F-16, F-15, F/A-18, F/A-22 and C-130 transport.

Aircraft Special Purpose Pods and Pylons

Special Purpose Pods and Pylons are used as permanent or temporary installations on applicable aircraft for special missions. All pods and pylons are built to military specifications containing the mounting structure to secure the mission payload components. Cobham has built over 1,000 pods with functions covering reconnaissance, jamming, data link, instrumentation, electro optical and other functions.
Air-to-Ground

Air-to-Ground products are compatible with a range of smart and dumb munitions including Small Diameter Bomb, Brimstone and Hellfire missiles.

Cobham Mission Equipment is instrumental in the advancement of proprietary weapons carriage and release. Recent developments:

- Pneumatic store ejection: gas cartridge, compressor or gas bottle
- World class ground firing test facilities approved for both high pressure cold gas and pyrotechnic cartridge development and testing
- Qualification for ejector and cartridge performance
- Environmental testing (thermal) to MIL-STD-810

Air-to-Air Capability

Air-to-Air products are compatible with a variety of short, medium and beyond visual range air-to-air missiles: AIM-9L, ASRAAM, IRIS-T, A-Darter, AMRAAM, Meteor, R-Darter.

Auxiliary Mission Equipment

Release Unit

Installed in aircraft bomb bays, wings or fuselage pylons, units provide pneumatic or pyrotechnic ejection for bombs and role equipment.

Practice Bomb Carriers

Cost effective practice bombing can be achieved with either hot or cold gas ejection.

Multiple Store Carriers

Self replenished or bottled pneumatic ejection of smart or dumb bombs provided to enhance air to ground capability.

Air-to-Ground Missile Launchers

Cobham's AGML III triple rail Brimstone launcher is fielded on Tornado and Harrier.

Eject Launchers

High velocity long stroke missile ejection. Cobham's Missile Eject Launcher (MEL) was developed for Eurofighter Typhoon.

Defensive Aids

Cobham Mission Equipment is the design authority for the Eurofighter Typhoon's defensive countermeasures systems and is qualified to the latest nuclear hardening and vibration standards.
Cobham Mission Equipment has more than 25 years experience managing UAS projects and continues to commit investment to advancing future technology and maintain a leading role in this field.

Working in collaboration with government agencies and industry partners in both the USA and UK, Cobham Mission Equipment is pioneering development for UAVs in a number of areas:

- Application of in-service light weight weapon ejection systems onto the MALE class of UAVs
- Advancement of Weapons Carriage and Release systems for emerging novel micro-munitions
- Development of weapon bay ejectors for stealthy UCAVs
- Autonomous Air-to-Air Refuelling systems to significantly extend the range and persistence for many classes of UAV
- Autonomous navigation, engagement and landing systems in GPS denied environments

Partnerships
Cobham is a partner in the ASTRAEA consortium, a pioneering aerospace programme which addresses key technological and regulatory issues in order to open up non-segregated airspace to UAVs.

Cobham is also a major subcontractor to Northrop Grumman on DARPA’s KQ-X Global Hawk Air-to-Air Refuelling programme.
Aftermarket

A comprehensive range of through-life support services to meet individual customer requirements

Comprehensive Through-Life Services
- Scheduled Maintenance/Repair/New Spares Supply
- Asset Management of Spares & Rotable Pools

In Country Managed Services
- Establishment of Depot Level Workshop Capability
- Reduced Logistic Footprint
- ‘On Hand’ Technical Support

Availability Based Contracting Options
- Contractor Logistic Support (CLS)
- Performance Based Logistics (PBL)
- Optimised ‘Tailored’ Support, Maximum Operational Equipment Availability

Deployed Operations and Technical Support
- Worldwide Field Service Support by Equipment Specialists
- Rapid ‘Design Authority’ Support to Equipment User or Maintainer
- 24/7 Technical Enquiry Support

Full Design Authority Capability
- Modification and Upgrade Programmes
- Configuration Management
- Technical Documentation Supply and Support (All formats supported)
- Comprehensive Training Development and Delivery (Traditional through to Full CBT)

1 Cobham Mission Equipment has over 70 years experience as a specialist provider of systems and support services to aerospace and defence markets worldwide

2 Bespoke customer solutions are delivered to support a wide range of platforms

Key
- Cobham Mission Equipment offices
- Customer base
Customers around the world put their trust in Cobham