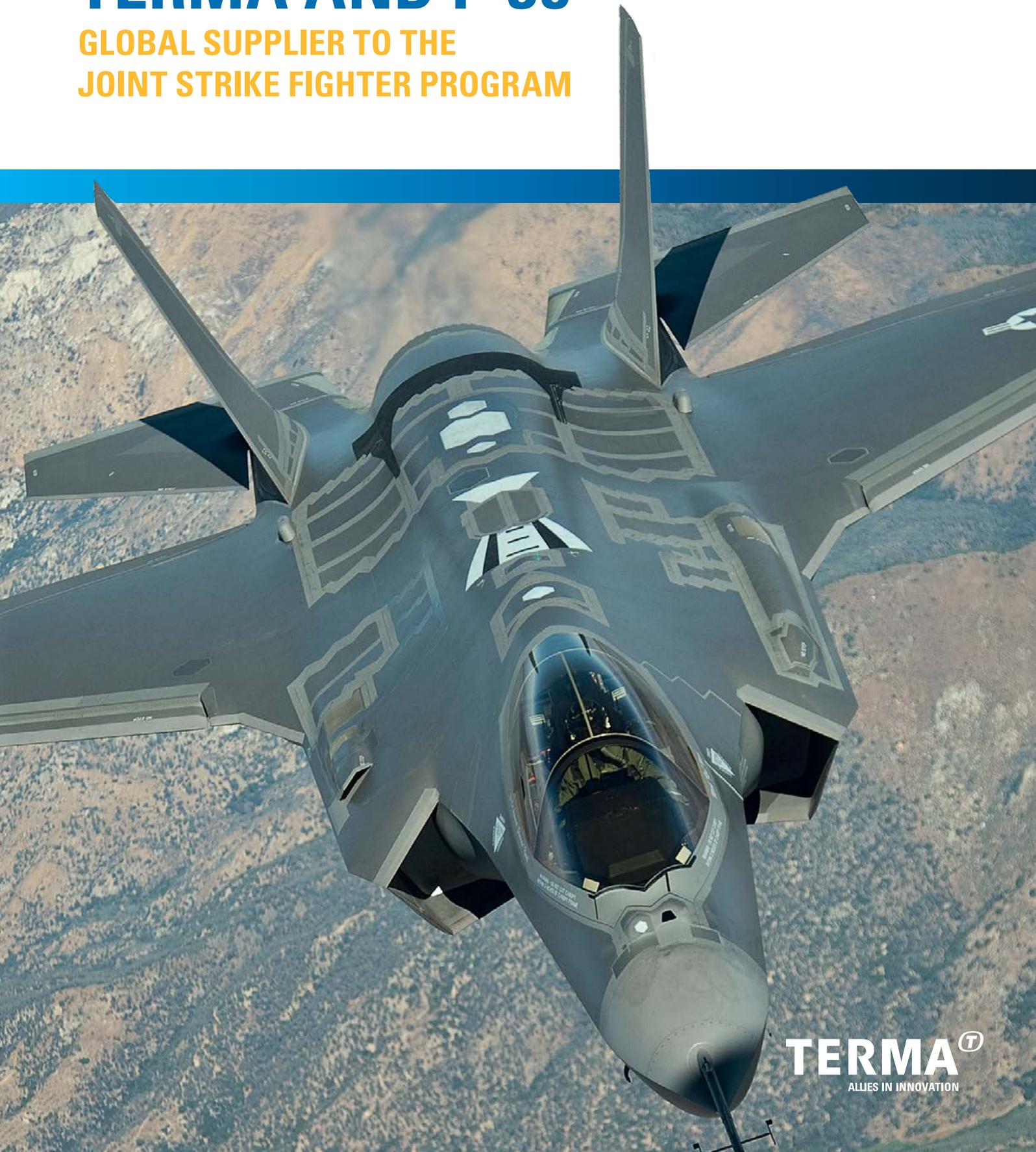




TERMA AND F-35

GLOBAL SUPPLIER TO THE
JOINT STRIKE FIGHTER PROGRAM



TERMA[®]
ALLIES IN INNOVATION



The World's Largest Defense Industrial Project

The F-35 project is headed by Lockheed Martin, with Northrop Grumman and BAE Systems as principal partners. Nine nations are partnering in the F-35's system development and demonstration (SDD) phase: The United States, United Kingdom, Italy, the Netherlands, Turkey, Canada, Denmark, Norway, and Australia.

Together with the F-22 Raptor, the F-35 Lightning II is the only true fifth generation fighter aircraft, and it utilizes the latest technologies within advanced aerostructures, design, sensor systems, electronics, and stealth capabilities.

Global Supplier to the Joint Strike Fighter

Terma has participated in the F-35 development since 2004 and provides complex composite structures and electronics to the program's prime contractors and pods and pylons to other key suppliers. Terma is a major supplier to the F-35 Lightning II (Joint Strike Fighter), a role that highlights Terma's unique position on the program.

F-35 work is awarded on a best-value basis, and Terma's extensive participation is the result of world-class high-tech solutions at competitive prices and conditions. Terma currently delivers more than 70 mission-critical parts for the F-35.

Lockheed Martin expects to manufacture more than 3,000 aircraft, and when full-rate production commences, Terma will produce parts for around 170 aircraft per year.

Capabilities

Terma is a leading aerospace and defense company with more than 50 years of experience in the design and manufacture of advanced aerostructures, electronics, and self-protection systems. With our experienced engineering staff and cutting-edge composite facilities, we manufacture parts for fighters, commercial airliners, business jets, rotorcraft, and missiles. Beyond Build-to-Print (BTP) manufacturing, we create value for our customers by offering a full range of design and engineering services and have established ourselves as a low-risk, high-quality provider of composite structures at commercial terms and pricing.

Design and Engineering

Terma offers design and build based on a long tradition for solutions to military aircraft and commercial platforms. We provide design and manufacturing that consistently meet or exceed customer requirements. Our constant focus on production innovation and quality assurance in all aspects of the process enables us to deliver unique solutions from concept to final delivery.

One-Stop Shop

Terma's aerostructures manufacturing capabilities include composite part layout, high precision composite machining, manufacturing of complex metal structures, surface treatment, and assembly. Our facilities are continuously modernized to stay industry leading and now comprises more than 30,000 m².



Airborne Electronics

Terma develops and produces complex electronics solutions for aircraft, satellites, and missiles. Our solutions are used in mission-critical applications such as aircraft survivability equipment or satellite mission control computers. In addition to the production capability, our know-how and test facilities are used to provide maintenance service and upgrades for previously delivered equipment.

Affordability

At Terma, we live by continuous improvements. In all areas of our company, we strive for improved processes and efficiency. The target is zero defects on quality, on time delivery, and pricing in line with customer expectations. Our high commitment to quality and on-time delivery has won us numerous Raytheon 3-Star Excellence Awards, the Northrop Grumman Platinum Source Award, and most recently, in April 2019, a Lockheed Martin F-35 supplier award for exceptional quality and on-time delivery.

Partnerships

We know that close, long-term strategic partnerships with our key customers, suppliers, and partners are a precondition for success and for remaining at the technological edge. Terma is well positioned as a global player with an expanding international presence. Each partnership is unique and built on the capabilities, requirements, and strategic needs of our partner. When working with Terma, you will experience our dedicated engineering and manufacturing organization, which forms an agile company that accepts the challenges of meeting even the most stringent requirements.

Fighter Competition in Denmark

On 9 June 2016, the Danish Ministry of Defence declared that Denmark will acquire 27 F-35As that are expected to be fully operational in the Royal Danish Air Force from 2027 as replacement for Denmark's F-16s. Delivery of the first Danish F-35 to Luke Air Force Base, Arizona, is scheduled for 2021, with the first jet arriving in Denmark in 2023.

Terma's Journey to Become a World-Class Manufacturing Facility



2017/18	Implementation of additional precision milling, coordinate measurement, and ultrasonic test machines finalized. Capacity is now ready for the full-rate pace of up to 170 aircraft per year.	↑
2016/17	Considerable expansions completed, including new layup room, tool warehouse, and autoclave area.	↑
2016	The Danish Ministry of Defence declares that Denmark will acquire 27 F-35As as replacement for the F-16s.	↑
2009	More than MDKK 300 is invested to upgrade manufacturing capabilities and infrastructure.	↑
2004	Terma starts development of complex composite structures for the F-35.	↑

Terma's Involvement in F-35





Gun Pod

Flight Test Pod (weapons bay)

Radar Electronics

Composite Fuselage Panels

EO DAS Modules



Partnerships

Terma currently runs nine F-35 production programs and manufactures advanced composite and metal aerostructures and electronics. Terma has been on program since 2004, when we entered into the first contract with General Dynamics for the design and development of the Gun Pod.

Production

Following years of significant investment in buildings, equipment, and training, Terma's production facility in Grenaa, Denmark, has evolved into one of the most advanced composites manufacturing facilities in the world. The facility is ready to meet peak F-35 production and fulfill our obligations towards customers and partners, such as Lockheed Martin, Northrop Grumman, BAE Systems, Marvin Engineering, and General Dynamics.

Terma delivered parts for 57 and 92 aircraft in 2017 and 2018 and will support the production of 141 F-35s in 2019 – a figure that will further increase to an expected full rate production of 170 aircraft.

Terma's involvement in the F-35 program comprises the following products:

- Composite Leading Edges for the aircraft Horizontal Tails
- Center Fuselage composite panels
- Horizontal and Vertical Tail composite skins
- Missionized Gun Pods for STOVL and CV variants
- Air-to-Ground Pylons
- Data Acquisition Pods for Flight Test Instrumentation
- Engine Element Rings
- Radar modules
- EO DAS modules

Partners

Lockheed Martin Aeronautics

With first delivery in 2008, Terma manufactured a series of Flight Test Instrumentation Pods for the F-35 for Lockheed Martin Aeronautics (LM), Fort Worth, Texas. The Flight Test Instrumentation Pods provide a structurally and environmentally protected housing in aluminum for the flight test data acquisition system on the mission systems test aircraft during flight testing of all F-35 variants. Contracted in 2009, also by LM, Terma supplies composite Leading Edges for the aircraft's Horizontal Tails, parts which require highly skilled employees and cutting-edge technology.

BAE Systems

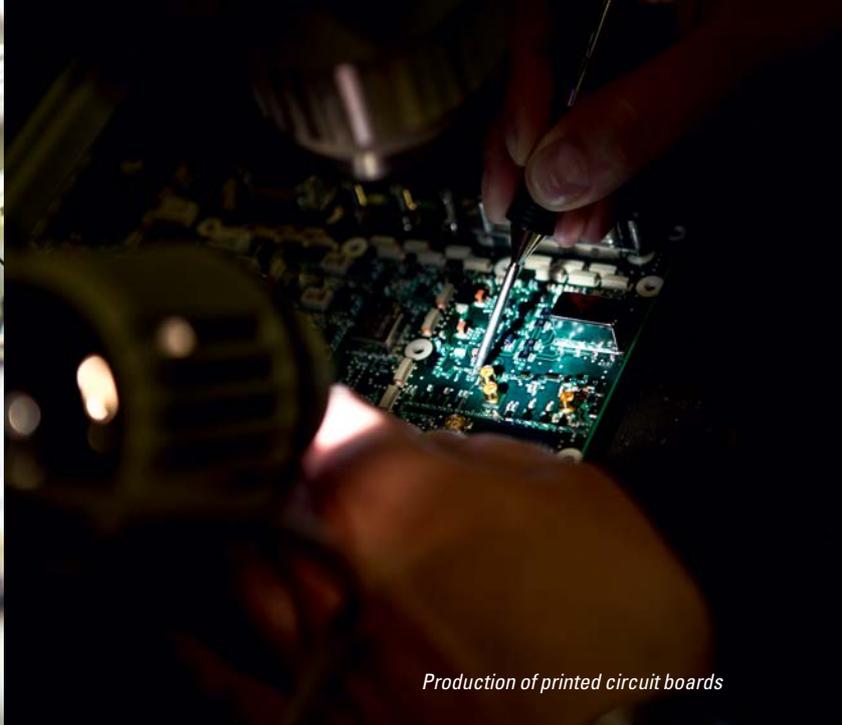
Based on an initial contract signed in 2009 with BAE Systems, for the production of machined aluminum parts for the Horizontal Tail for the STOVL version of the aircraft, Terma today provides BAE Systems with large composite skins for the Horizontal and Vertical Tail across all variants.

General Dynamics

In 2004, General Dynamics Armament and Technical Products awarded Terma a contract for the design, development, and manufacture of the Missionized Gun Pod for the F-35B (STOVL) and F-35C (CV) variants. The Gun Pod is a highly complex and several meters long container, produced in both metal and composite materials to house the 25 mm gun system. In the F-35A (CTOL) variant, the gun is integrated into the aircraft. In the STOVL and CV versions, the gun is mounted in Terma's Gun Pod, which is located on the aircraft centerline.

Marvin Engineering Company

Based on Terma's multi-year experience from the manufacture of more than 15,000 F-16 pylons, Terma collaborates with Marvin Engineering



Production of printed circuit boards

Company (MEC) and manufactures air-to-ground pylons, which are complex, precision machined aluminum structures. The air-to-ground pylons are mounted on aircraft structural 'hard points' and are used to carry munitions and external stores. In 2003, Terma entered into a preliminary agreement with MEC to manufacture Air-to-Ground Pylons for all three F-35 variants. MEC is responsible for managing and supporting the Alternate Mission Equipment package on the F-35.

Northrop Grumman Corporation

In 2012, Terma entered into a long-term contract with Northrop Grumman Corporation (NGC) for the manufacture of parts for the Center Fuselage. The contract covers production of composite structures, including doors, panels, skin assembly, and straps for all three aircraft variants.

Following fierce competition, NGC in 2012 selected Terma among five international companies as supplier of electronics for the EO DAS sensors (Electro Optical Distributed Aperture System). It is an advanced infrared sensor-based EW system for the F-35. The EO DAS protects the aircraft and pilot from attacks from enemy aircraft and missiles, but it also provides data for navigation and situational awareness purposes in general.

In 2006, Terma joined the SDD phase with NGC for F-35 radar modules. Since then, we have delivered five different electronics modules for the AN/APG-81 radar during the LRIPs. The modules are applied in all three F-35 variants.

Supplier Partnerships

Dedicated partnerships with our suppliers are an essential part of Terma's growth strategy and our way of doing business. Terma has extended relations with several Danish and international suppliers in

crucial niche areas. To develop efficient and reliable high-tech solutions, we depend on Best-in-Class sub-suppliers. In recent years, Terma has developed close ties with several Danish companies which have transformed into true partnerships. As part of the outsourcing strategy, we have subcontracted some of our manufacturing tasks to partners who have demonstrated the ability and willingness to complete tasks better and more cost effectively than we are capable of in Terma.

Sustainment

Next to our design and production activities, Terma is ambitious to add all its knowledge and expertise in the upcoming sustainment cycles of the F-35. We focus on maximum added value by means of innovative solutions that add to the affordability and availability of the aircraft.

In 2018, Terma and Scandinavian Avionics teamed up and formed Avionics Test Center Denmark (ATCD). In February 2019, through the F-35 Joint Program Office, ATCD was selected to maintain 16 avionics avionics components for the F-35. The components include electronic control units, power supplies, sensors, and electro-mechanical devices.

Terma has sustainment facilities in Denmark; at the Woensdrecht Air Base, the Netherlands, next to the European F-35 warehouse; and in the U.S. outside the Warner Robins Air Force Base. Leveraging our own OEM Avionics and EW products, Terma aims to be a key partner in testing and repairing F-35 avionic components as well as using our production expertise for repairing composite structures in future repair cycles. The same principle applies to our partnership with MEC in which we aim to establish a European sustainment solution for Alternate Mission Equipment.



Operating in the aerospace, defense, and security sector, Terma supports customers and partners all over the world. With more than 1,600 committed employees globally, we develop and manufacture mission-critical products and solutions that meet rigorous customer requirements.

At Terma, we believe in the premise that creating customer value is not just about strong engineering and manufacturing skills. It is also about being able to apply these skills in the context of our customers' specific needs. Only through close collaboration and dialog can we deliver a level of partnership and integration unmatched in the industry.

Our business activities, products, and systems include: command and control systems; radar systems; self-protection systems for ships and aircraft; space technology; and advanced aerostructures for the aircraft industry.

Terma has decades of hands-on know-how in supporting and maintaining mission-critical systems in some of the world's most hostile areas. Terma Support & Services offers through-life support of all our products to maximize operational availability, enhance platform lifetime, and ensure the best possible cost of ownership.

Headquartered in Aarhus, Denmark, Terma has subsidiaries and operations across Europe, in the Middle East, in Asia Pacific as well as a wholly-owned U.S. subsidiary, Terma North America Inc., headquartered in Washington D.C. and with offices in Georgia and Texas.

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