



DEPARTMENT OF DEFENSE

Office of the Secretary

[Transmittal No. 22-14]

Arms Sales Notification

AGENCY: Defense Security Cooperation Agency, Department of Defense (DoD).

ACTION: Arms sales notice.

SUMMARY: The DoD is publishing the unclassified text of an arms sales notification.

FOR FURTHER INFORMATION CONTACT: Neil Hedlund at neil.g.hedlund.civ@mail.mil or (703) 697-9214.

SUPPLEMENTARY INFORMATION: This 36(b)(1) arms sales notification is published to fulfill the requirements of section 155 of Public Law 104-164 dated July 21, 1996. The following is a copy of a letter to the Speaker of the House of Representatives, Transmittal 22-14 with attached Policy Justification and Sensitivity of Technology.

Dated: May 8, 2024.

Aaron T. Siegel,

Alternate OSD Federal Register Liaison Officer,

Department of Defense.



DEFENSE SECURITY COOPERATION AGENCY
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ARLINGTON, VA 22202-5408

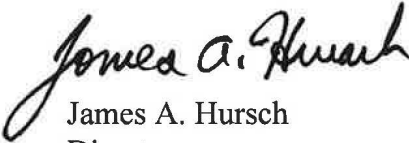
April 4, 2022

The Honorable Nancy Pelosi
Speaker of the House
U.S. House of Representatives
H-209, The Capitol
Washington, DC 20515

Dear Madam Speaker:

Pursuant to the reporting requirements of Section 36(b)(1) of the Arms Export Control Act, as amended, we are forwarding herewith Transmittal No. 22-14, concerning the Air Force's proposed Letter(s) of Offer and Acceptance to the Government of Bulgaria for defense articles and services estimated to cost \$1.673 billion. After this letter is delivered to your office, we plan to issue a news release to notify the public of this proposed sale.

Sincerely,


James A. Hursch
Director

Enclosures:

1. Transmittal
2. Policy Justification
3. Sensitivity of Technology

Notice of Proposed Issuance of Letter of Offer
Pursuant to Section 36(b)(1)
of the Arms Export Control Act, as amended

(i) Prospective Purchaser: Government of Bulgaria

(ii) Total Estimated Value:

Major Defense Equipment*	\$0.978 billion
Other	<u>\$0.695 billion</u>
TOTAL	\$1.673 billion

Funding Source: National Funds

(iii) Description and Quantity or Quantities of Articles or Services under Consideration for Purchase:

Major Defense Equipment (MDE):

Four (4) F-16 C Block 70 Aircraft

Four (4) F-16 D Block 70 Aircraft

Eleven (11) F100-GE-129D Engines (8 installed, 3 spares)

Eleven (11) Improved Programmable Display Generators (iPDG) (8 installed, 3 spares)

Eleven (11) AN/APG-83 Active Electronically Scanned Array (AESA) Scalable Agile Beam Radars (SABR) (8 installed, 3 spares)

Eleven (11) Modular Mission Computers (MMC) 7000AH (8 installed, 3 spares)

Eleven (11) LN-260 or equivalent Embedded Global Positioning System (GPS) Inertial Navigation Systems (INS) (EGI) with Selective Availability Anti-Spoofing Module (SAASM) and Precise Positioning Service (PPS) (8 installed, 3 spares)

Nineteen (19) Advanced Medium Range Air-to-Air Missile (AMRAAM) AIM-120C-7/C-8 or equivalent Missiles

Two (2) AMRAAM Guidance Sections

Forty-eight (48) LAU-129A Launchers (40 installed, 8 spares)

Twenty-eight (28) GBU-39/B Small Diameter Bombs (SDBs)

Two (2) SDB Guided Test Vehicles (GTVs)

Eleven (11) M61A1 Vulcan Cannons (8 installed, 3 spares)

Four (4) AN/AAQ-33 Sniper Advanced Targeting Pods (ATPs)

Twelve (12) Multifunctional Information Distribution System with Joint Tactical Radio Systems (MIDS-JTRS) (aircraft terminals and ground station terminals) (10 installed, 2 spares)

Twenty (20) AIM-9X Block II Missiles

Eight (8) AIM-9X Block II Captive Air Training Missiles (CATMs)

Four (4) AIM-9X Block II Tactical Guidance Units

Four (4) AIM-9X Block II CATM Guidance Units

Twenty-four (24) FMU-139 or FMU-152 Fuze Systems

Twelve (12) KMU-572 Joint Direct Attack Munition Tail Kits for 500LB GBU-38 or Laser JDAM GBU-54

Twelve (12) MXU-650 Air Foil Groups (AFGs) for Enhanced Paveway II EGBU-

Twelve (12) MAU-210 Enhanced Computer Control Groups (ECCGs) for EPII
EGBU-49
Twenty-four (24) MK-82 or BLU-111 or equivalent Bomb Bodies
Six (6) MK-82 Inert Bombs
Two (2) GBU-39 SDB I Practice Bombs

Non-MDE:

Also included are AN/ARC-238 radios; AN/APX-126 or equivalent Advanced Identification Friend or Foe (AIFF) with Combined Interrogator Transponders (CIT); Joint Helmet Mounted Cueing System II (JHMCS II) or Scorpion Hybrid Optical-based Inertial Tacker (HOBIT) helmet mounted displays; AN/ALQ-254 Viper Shield or equivalent Electronic Warfare (EW) systems; AN/ALE-47 Countermeasure Dispenser Systems (CMDS), KY-58M Cryptographic Devices, KIV-78 Cryptographic Devices, and Simple Key Loaders (SKLs); Joint Mission Planning Systems (JMPS) or equivalent; AIM-120 Captive Air Training Missiles (CATM); PGU-28 High Explosive Incendiary (HEI) ammunition; PGU-27 training rounds (non HEI); ARD-446 impulse cartridges; ARD-863 impulse cartridges; BBU-36/B impulse cartridges; BBU-35/B impulse cartridges; MK-124 smoke flares; MJU-7/B flare cartridges L463 or MJU-53 or equivalent; Common Munitions Built-in-Test (BIT) Reprogramming Equipment (CMBRE); ADU-890 adapter for CMBRE; ADU-891 adapter for CMBRE; Night Vision Devices (NVD); NVD Spare Image Intensifier Tubes; Remote Operated Video Enhanced Receiver (ROVER) 6i units; Tactical Network ROVER Kit; DSU-38 laser sensors for GBU-54; Cartridge Actuated Device/Propellant Actuated Devices (CADs/PADs); GBU-39 tactical training rounds; BRU-57 bomb racks; BRU-61 bomb racks; MAU-12 bomb racks and TER-9A triple ejection racks; other chaff and flare, ammunition, and pylons; launcher adaptors and weapons interfaces; fuel tanks and attached hardware; travel pods; aircraft and weapons integration, test, and support equipment; electronic warfare database and mission data file development; precision measurement and calibration laboratory equipment; secure communications; cryptographic equipment; precision navigation equipment; aircraft and personnel support and test equipment; spare and repair parts; repair and return services; maps, publications, and technical documentation; studies and surveys; classified/unclassified software and software support; personnel training and training equipment; facilities and facility management, design and/or construction services; U.S. Government and contractor engineering, technical and logistics support services; and other related elements of logistical and program support.

- (iv) Military Department: Air Force (BU-D-SAD) and Navy (BU-P-AAH, BU-P-LBC)
- (v) Prior Related Cases, if any: BU-D-SAB
- (vi) Sales Commission, Fee, etc., Paid, Offered, or Agreed to be Paid: None known at this time
- (vii) Sensitivity of Technology Contained in the Defense Article or Defense Services Proposed to be Sold: See Attached Annex
- (viii) Date Report Delivered to Congress: **April 4, 2022**

*As defined in Section 47(6) of the Arms Export Control Act.

POLICY JUSTIFICATION

Bulgaria – F-16 C/D Block 70 Aircraft

The Government of Bulgaria has requested to buy four (4) F-16 C Block 70 aircraft; four (4) F-16 D Block 70 aircraft; eleven (11) F100-GE-129D engines (8 installed, 3 spares); eleven (11) Improved Programmable Display Generators (iPDG) (8 installed, 3 spares); eleven (11) AN/APG-83 Active Electronically Scanned Array (AESA) Scalable Agile Beam Radars (SABR) (8 installed, 3 spares); eleven (11) Modular Mission Computers (MMC) 7000AH (8 installed, 3 spares); eleven (11) LN-260 or equivalent Embedded Global Positioning System (GPS) Inertial Navigation Systems (INS) (EGI) with Selective Availability Anti-Spoofing Module (SAASM) and Precise Positioning Service (PPS) (8 installed, 3 spares); nineteen (19) Advanced Medium Range Air-to-Air Missile (AMRAAM) AIM-120C-7/C-8 or equivalent missiles; two (2) AMRAAM Guidance Sections; forty-eight (48) LAU-129A launchers (40 installed, 8 spares); twenty-eight (28) GBU-39/B Small Diameter Bombs (SDBs); two (2) SDB Guided Test Vehicles (GTVs); eleven (11) M61A1 Vulcan Cannons (8 installed, 3 spares); four (4) AN/AAQ-33 Sniper Advanced Targeting Pods (ATPs); twelve (12) Multifunctional Information Distribution System with Joint Tactical Radio Systems (MIDS-JTRS) (aircraft terminals and ground station terminals) (10 installed, 2 spares); twenty (20) AIM-9X Block II missiles; eight (8) AIM-9X Block II Captive Air Training Missiles (CATMs); four (4) AIM-9X Block II Tactical Guidance Units; four (4) AIM-9X Block II CATM Guidance Units; twenty-four (24) FMU-139 or FMU-152 fuze systems; twelve (12) KMU-572 Joint Direct Attack Munition (JDAM) Tail Kits for 500LB GBU-38 or Laser JDAM GBU-54; twelve (12) MXU-650 Air Foil Groups (AFGs) for Enhanced Paveway II EGBU-49; twelve (12) MAU-210 Enhanced Computer Control Groups (ECCGs) for EPII EGBU-49; twenty-four (24) MK-82 or BLU-111 or equivalent Bomb Bodies; six (6) MK-82 Inert Bombs; and two (2) GBU-39 SDB I Practice Bombs. Also included are AN/ARC-238 radios; AN/APX-126 or equivalent Advanced Identification Friend or Foe (AIFF) with Combined Interrogator Transponders (CIT); Joint Helmet Mounted Cueing System II (JHMCS II) or Scorpion Hybrid Optical-based Inertial Tacker (HObIT) helmet mounted displays; AN/ALQ-254 Viper Shield or equivalent Electronic Warfare (EW) systems; AN/ALE-47 Countermeasure Dispenser Systems (CMDS), KY-58M Cryptographic Devices, KIV-78 Cryptographic Devices, and Simple Key Loaders (SKLs); Joint Mission Planning Systems (JMPS) or equivalent; AIM-120 Captive Air Training Missiles (CATM); PGU-28 High Explosive Incendiary (HEI) ammunition; PGU-27 training rounds (non HEI); ARD-446 impulse cartridges; ARD-863 impulse cartridges; BBU-36/B impulse cartridges; BBU-35/B impulse cartridges; MK-124 smoke flares; MJU-7/B flare cartridges L463 or MJU-53 or equivalent; Common Munitions Built-in-Test (BIT) Reprogramming Equipment (CMBRE); ADU-890 adapter for CMBRE; ADU-891 adapter for CMBRE; Night Vision Devices (NVD); NVD Spare Image Intensifier Tubes; Remote Operated Video Enhanced Receiver (ROVER) 6i units; Tactical Network ROVER Kit; DSU-38 laser sensors for GBU-54; Cartridge Actuated Device/Propellant Actuated Devices (CADs/PADs); GBU-39 tactical training rounds; BRU-57 bomb racks; BRU-61 bomb racks; MAU-12 bomb racks and TER-9A triple ejection racks; other chaff and flare, ammunition, and pylons; launcher adaptors and weapons interfaces; fuel tanks and attached hardware; travel pods; aircraft and weapons integration, test, and support equipment; electronic warfare database and mission data file development; precision measurement and calibration laboratory equipment; secure communications; cryptographic equipment; precision navigation equipment; aircraft and personnel support and test equipment; spare and repair parts; repair and return services; maps, publications, and technical

documentation; studies and surveys; classified/unclassified software and software support; personnel training and training equipment; facilities and facility management, design and/or construction services; U.S. Government and contractor engineering, technical and logistics support services; and other related elements of logistical and program support. The estimated total cost is \$1.673 billion.

This proposed sale will support the foreign policy and national security objectives of the United States by helping to improve the security of a NATO ally that is a force for political stability and economic progress in Europe.

The proposed sale will improve Bulgaria's capability to meet current and future threats by enabling the Bulgarian Air Force to deploy modern fighter aircraft routinely in the Black Sea region. The acquisition of these aircraft would provide Bulgaria a NATO interoperable platform and allow the Bulgarian Air Force to operate more frequently alongside other regional F-16 operators, promoting common doctrine and operations. Bulgaria has shown a commitment to modernizing its armed forces and will have no difficulty absorbing these aircraft and services into its armed forces.

The proposed sale of this equipment and support will not alter the basic military balance in the region.

The principal contractor will be Lockheed Martin, Greenville, South Carolina. There are no known offset agreements proposed in connection with this potential sale.

Implementation of this proposed sale will require the assignment of U.S. contractor representatives (fewer than 20) to Bulgaria for a duration of thirty-six (36) months to support secure storage requirements of critically controlled assets and provide on-site contractor logistics support.

There will be no adverse impact on U.S. defense readiness as a result of this proposed sale.

Transmittal No. 22-14

Notice of Proposed Issuance of Letter of Offer
Pursuant to Section 36(b)(1)
of the Arms Export Control Act

Annex
Item No. vii

(vii) Sensitivity of Technology:

1. The F-16 Block 70 weapon system is a fourth generation single-engine supersonic all-weather multirole fighter aircraft and features advanced avionics and systems. It contains the General Electric F110-129D engine, AN/APG-83 radar, digital flight control system, embedded internal global navigation system, Joint Helmet Mounted Cueing Systems (JHMCS) II or Scorpion Hybrid Optical-based Inertial Tracker (HOBIT) with Night Vision Device (NVD) compatibility, internal and external Electronic Warfare (EW) equipment, Advanced IFF, LINK-16 datalink, operational flight trainer, and software computer systems.

2. The General Electric F110-129 engine is an afterburning turbofan jet engine that powers the F-16.
3. The Improved Programmable Display Generator (iPDG) and color multifunction displays utilize ruggedized commercial liquid crystal display technology that is designed to withstand the harsh environment found in modern fighter cockpits. The display generator is the fifth generation graphics processor for the F-16. Through the use of state-of-the-art microprocessors and graphics engines, it provided orders of magnitude increases in throughput, memory, and graphics capabilities.
4. The Scalable Agile Beam Radar (SABR) APG-83 is an Active Electronically Scanned Array (AESA) radar upgrade for the F-16. It includes higher processor power, higher transmission power, more sensitive receiver electronics, and Synthetic Aperture Radar (SAR), which creates higher-resolution ground maps from a greater distance than existing mechanically scanned array radars (e.g., APG-68). The upgrade features an increase in detection range of air targets, increases in processing speed and memory, as well as significant improvements in all modes.
5. The Modular Mission Computer (MMC) 7000AH is the central aircraft computer of the F-16. It serves as the hub for all aircraft subsystems and avionics data transfer.
6. The Embedded GPS-INS (EGI) with Selective Availability Anti-Spoofing Module (SAASM) is a self-contained navigation system that provides the following: acceleration, velocity, position, attitude, platform azimuth, magnetic and true heading, altitude, body angular rates, time tags, and coordinated universal time (UTC) synchronized time. SAASM enables the GPS receiver access to the encrypted P(Y) signal providing protection against active spoofing attacks.
7. The LAU-129 Guided Missile Launcher is capable of launching a single AIM-9 (Sidewinder) family of missiles or AIM-120 Advanced Medium Range Air-to-Air Missile (AMRAAM). The LAU-129 launcher provides mechanical and electrical interface between missile and aircraft.
8. The M61A1 Vulcan Cannon is a six-barreled automatic cannon chambered in 20x120mm with a cyclic rate of fire from 2,500-6,000 shots per minute. This weapon is a hydraulically powered air cooled Gatling gun used to damage/destroy aerial targets, suppress/incapacitate personnel targets and damage or destroy moving and stationary light material targets.
9. The AN/AAQ-33 Sniper Advanced Targeting Pod (ATP) is a single, lightweight targeting pod for military aircraft that provides positive target identification, autonomous tracking, Global Positioning System (GPS) coordinate generation, and precise weapons guidance from extended standoff ranges. It incorporates a high definition mid-wave Forward-looking infrared (FLIR), dual-mode laser, visible-light High Definition television (HDTV), laser spot tracker, video data link (VDL), and a digital data recorder.
10. The Multifunctional Information Distribution System Joint Tactical Radio Systems (MIDS-JTRS) Link-16 is an advanced command, control, communications, and intelligence (C3I) system incorporating high capacity, jam-resistant, digital communication links for exchange of near real-time tactical information, including both data and voice, among air, ground, and sea elements. It provides the warfighter key theater functions such as surveillance, identification, air control, weapons engagement coordination, and direction for all services and allied forces. With modernized cryptography, Link 16 will ensure interoperability into the future.

11. AN/ARC-238 radio with HAVE QUICK II is a voice communications radio system that is equipped with HAVE QUICK II, which employs cryptographic technology. Other waveforms may be included as needed.

12. The AN/APX-126 or equivalent Advanced Identification Friend or Foe (AIFF) Combined Interrogator Transponder (CIT) is a system capable of transmitting and interrogating Mode V. Mode IV and Mode V anti-jam performance specifications/data, software source code, algorithms, and tempest plans or reports will not be offered, released discussed, or demonstrated.

13. The Joint Helmet Mounted Cueing System II (JHMCS II) or Scorpion Hybrid Optical-based Inertial Tracker (HOBIT) is a device used in aircraft to project information to the pilot's eyes and aids in tasks such as cueing weapons and aircraft sensors to air and ground targets. This system projects visual targeting and aircraft performance information on the back of the helmet's visor, enabling the pilot to monitor this information without interrupting his field of view through the cockpit canopy. This provides improvement for close combat targeting and engagement.

14. The AN/ALQ-254 Viper Shield or equivalent Integrated Electronic Warfare (EW) Suite provides passive radar warning, wide spectrum Radio Frequency (RF) jamming, and control and management of the entire EW system. This system is anticipated to be internal to the aircraft although mounted pod variants are used in certain circumstances.

15. The AN/ALE-47 Countermeasure Dispenser Set (CMD5) provides an integrated threat-adaptive, computer controlled capability for dispensing chaff, flares, and active radio frequency expendables. The system is internally mounted and may be operated as a stand-alone system or may be integrated with other on-board Electronic Warfare (EW) and avionics systems. The AN/ALE-47 uses threat data received over the aircraft interfaces to assess the threat situation and determine a response. Expendable routines tailored to the immediate aircraft and threat environment may be dispensed using one of four operational modes.

16. The KY-58M is a lightweight terminal for secure voice and data communications. The KY-58M provides wideband/ narrowband half duplex communication.

17. The KIV-78 is a crypto applique for IFF. It can be loaded with Mode 5 classified elements.

18. The Simple Key Loader (SKL) is a ruggedized, portable, hand-held device, for securely receiving, storing, and transferring data between compatible cryptographic and communications equipment.

19. Joint Mission Planning System (JMPS) is a multi-platform PC based mission planning system.

20. The AIM-120C-8 Advance Medium Range Air-to-Air Missile (AMRAAM) is a supersonic, air launched, aerial intercept, guided missile featuring digital technology and micro-miniature solid-state electronics. AMRAAM capabilities include look-down/shootdown, multiple launches against multiple targets, resistance to electronic countermeasures, and interception of high- and low-flying and maneuvering targets. This potential sale will include AMRAAM Guidance Section spares. The AIM-120C-8 is a form, fit, function refresh of the AIM-120C-7 and is the next generation to be produced.

21. The AIM-9X Block II SIDEWINDER Tactical is a short-range, air-to-air missile. The AIM-9X Block II SIDEWINDER Missile provides a high off-boresight seeker, enhanced countermeasure rejection capability, low drag/high angle of attack airframe and the ability to integrate the Helmet Mounted Cueing System. This potential sale includes Tactical Guidance Unit Spares.

22. The AIM-9X Block II Captive Air Training Missile (CATM) is a flight certified inert mass simulator with a functioning Guidance Unit (GU). The CATM is the primary aircrew training device providing all pre-launch functions as well as realistic aerodynamic performance that equate to carrying a tactical missile. The CATM provides pilot training in aerial target acquisition and use of aircraft controls/displays. This potential sale includes CATM Guidance Unit Spares.

23. The Joint Programmable Fuze FMU-139 or FMU-152 fuzes are multi-delay sensors compatible with weapon guidance kits, tail kits, high-explosive bombs, and reduced collateral damage weapons which provide all arming and detonation event functions combined in a single fuze system.

24. Laser JDAM (Joint Direct Attack Munitions) (GBU-54) converts existing unguided free-fall bombs into precision guided smart munitions by adding a new tail section containing Inertial Navigation System (INS) guidance/Global Positioning System (GPS) guidance and adds a Semi-active laser seeker. This allows the weapon to strike targets moving at up to 70 mph. The LJDAM weapon consists of a DSU-38 sensor, a JDAM guidance set installed on bomb body and a fuze. The DSU-38 consists of a laser spot tracker (same size and shape as a DSU-33 proximity fuze), a cable connecting the DSU-38 to the basic JDAM guidance set, a cable cover, cable cover tie down straps, modified tail kit door and wiring harness, and associated modified JDAM software that incorporates navigation and guidance flight software to support both LJDAM and standard JDAM missions.

The KMU-572 is the tail kit for a GBU-54, 500LB Laser JDAM.

25. The Enhanced Paveway II (EP II) Laser Guided Bomb (LGB) is a maneuverable, all-weather, free-fall weapon that guides to a spot of laser energy reflected off the target. The “enhanced” component is the addition of GPS-aided Inertial Navigation Systems (GAINS) guidance to the laser seeker. Laser designation for the LGB can be provided by a variety of laser target markers or designators. The EP II consists of an MAU-210 Enhanced Computer Control Group (ECCG) that is not warhead specific and a warhead-specific Air Foil Group (AFG) that attaches to the nose and tail of a General Purpose (GP) bomb body.

The EGBU-49 is a 500LB GP bomb body fitted with the MXU-650 AFG to guide to its laser-designated target.

26. The Mk-82 GP bomb body is a 500LB, free-fall, unguided, low-drag weapon.

27. Mk-82 inert GP bomb body is a 500LB, free-fall, unguided, low-drag weapon without the explosive fill.

28. The GBU-39 Small Diameter Bomb I Practice Bomb is an inert variant of the 250LB, GPS-aided inertial navigation system, small autonomous, day or night, adverse weather, conventional, air-to-ground precision glide weapon able to strike fixed and stationary relocatable non-hardened targets from standoff ranges. It can be used for integration, test, or training purposes. This purchase will also include tactical training rounds.

29. The highest level of classification of defense articles, components, and services included in this potential sale is SECRET.

30. If a technologically advanced adversary were to obtain knowledge of the specific hardware and software elements, the information could be used to develop countermeasures that might reduce weapon system effectiveness or be used in the development of a system with similar or advanced capabilities.

31. A determination has been made that Bulgaria can provide substantially the same degree of protection for the sensitive technology being released as the U.S. Government. This sale is necessary in furtherance of the U.S. foreign policy and national security objectives outlined in the Policy Justification.

32. All defense articles and services listed in this transmittal have been authorized for release and export to the Government of Bulgaria.

[FR Doc. 2024-10473 Filed: 5/13/2024 8:45 am; Publication Date: 5/14/2024]