ISRAEL AEROSPACE INDUSTRIES

LAHAV DIVISION

LAHAV - Advanced Multi-role Fighters Manufacture





Aircraft Manufacturer





Avionics system development & integration





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LAHAV DIVISION

- Comprehensive Military Aircraft manufacture & upgrade Capabilities
- Designer & Manufacturer of Kfir Aircraft
- Supplier of advanced systems to IDF
- Data Link on all IAF fighters
- Advanced systems & weapons Development & Integration



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LAHAV EXPERTISE – AIRCRAFT

























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HELICOPTER UPGRADES

- Bell UH-1H/205, 212, 412
- Black Hawk
- Mi-24/35
- Mi-8/17
- Apache
- CH-53
- Ka-32
- ALH



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Colombia Air Force Upgrade

- Provided to customer with 8000 hours flight potential on body, systems
- Full wiring replacement Other systems as required
- Updated Avionics & Sensors designed in 2010



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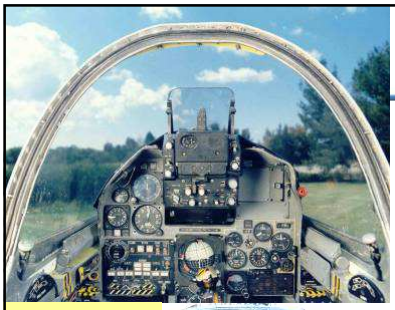
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Colombia Air Force Upgrade

- 24 Aircraft
- 80-120% of 4th Gen. A/C (such as F16 block 52, Eurofighter, Rafal, MIG-29) capabilities
- Development, Integration of new armaments, sensors, 100 flight tests
- 3 years – full delivery !
- Operational







Kfir C-2

Kfir C-7



F-16A



F-16C



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Kfir Block 60



F-16 I

Similar Capabilities

1/3 in procurement and maintenance prices!!

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KFIR block 60 Highlights

- Supersonic, MACH 2+ Fighter aircraft
- High maneuverability, Multi-Role
- Beyond Visual Range (BVR) capabilities in A/A and A/G
- Impressive carriage capability, 9 stations for operational flexibility
  - Efficient fuel/armament mix
  - Wide range of weapons compatibility & 5.5 Tons Payload
  - Targeting Pod
- Aerial refueling for extended missions
- Glass Cokpit



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KFIR block 60 Carrying Capabilities

5.5 tons

9 Station

30mm guns

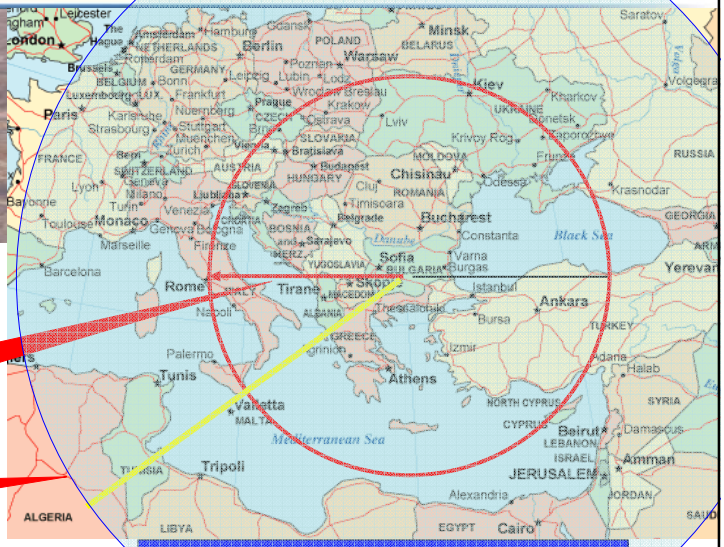


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Ground Attack operational radius





KFIR
540 NM
1000 Km

1 Air refuel
1100 NM

High profile Air to Ground mission with 3 Fuel Tanks 4 x 250Kg bombs

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KFIR block 60



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KFIR Block 60

- State of the art Avionics, Radar, weapons
- Open architecture – Customization, adaptation
- Advanced Multi role operational results:
  - All weather, Day & Night, Long-range, air refueling capability, precision
  - A/A, A/G, A/Sea missions
  - Intelligence & surveillance





KFIR AVIONICS SUBSYSTEMS

- Accurate Navigation & Weapon Delivery
- EGI- Embedded GPS/INS
- Multi Function Color Display (MFCD)
- Up Front Control Panel (UFCP)
- Head Up Display (HUD)
- Mission and Display Processor (MDP)















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IAI Radar and DL operational enhancements

- Tactical Situation Display (TSD)
- Missiles and sensor slaving





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Kfir Block 60 Advanced Multi Role Fighter

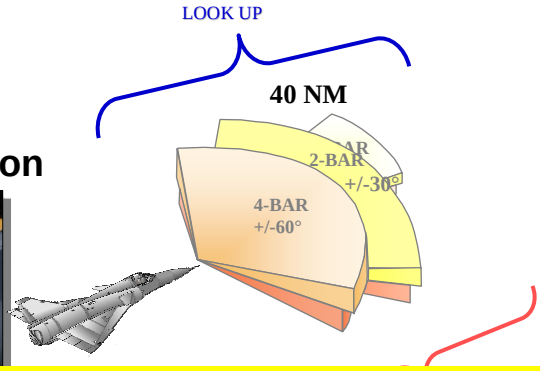
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KFIR block 60 Radar

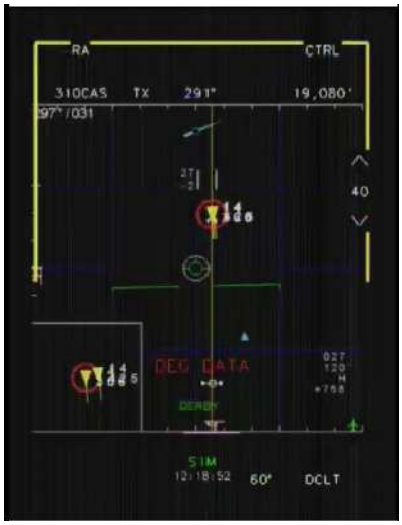
- Multi-Role Fire Control Radar (EL 2032)
- All Weather/Day Night Detection & Identification





- The combat edge comes from systems & weapons
- First to "see" in A/C systems, First to shoot, First to kill
- Platform should have: Reliability, Range, Load, Modern Systems

Air Air Radar





Up to 64 Tgts with elevation, Velocity and vector in TWS

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A/G High Resolution SAR Radar



Optical Sensor image

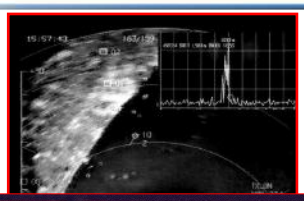




A/G High Resolution SAR Radar images

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SEA TWS, RS & ISAR







ISAR



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Operational Example Border/Sea Control





Karin A !!!





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Kfir Block 60 Air to Air Weapon capabilities

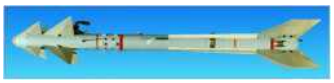
- **Latest generation Air to Air missiles are integrated on the Kfir providing edge advantage in Air Defense**



A/A- Helmet Sight & Display

Short range





- **Python 4/5**
- **Look & Kill**
- **Shoot & Forget**

Long range Derby

- **BVR**
- **Active**



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Kfir Block 60 A/G Weapon capabilities





Targeting Pod



A/G- Autonomous Bombs

JDAM

SPICE

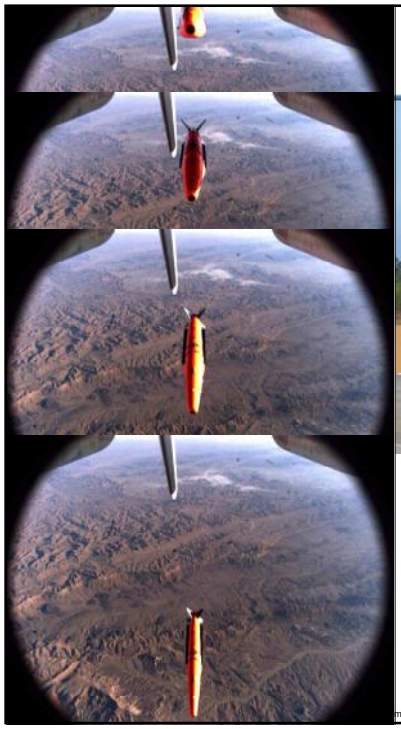
LGB

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A/G Weapons…



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Operational enhancements

- **Air to Air**
  - **Infra Red & Electro Magnetic (BVR) Missiles**
  - **Easy Acquisition of Targets**
  - **Precise A/A Gunnery**
  - **Head Out Flight**
- **Air to Ground**
  - **Accurate Day/Night Navigation**
  - **Precise Weapon Delivery**
  - **Reduced Pilot Workload**
  - **All Weapons Capability**
  - **All weather**











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IAI Data Link

- IAI is the sole supplier of Israeli Air Force data link systems for the F-15, F-16, F-35
- More then 18 years data link proven experience
- International proven datalink programs
- **Link 16 integration capability**





Hundreds flying DATA LINK Systems

KFIR Maintenance Concept

- Low maintenance costs and high aircraft availability
- Western Maintenance concept Highly reliable systems
  - Turn around time 30 min.
  - No body & wing cracks for 8000 h
  - Engine 8000 hours life span
  - **Unlimited** number of Overhauls



30 years flight Potential

Guaranteed Long Term Support

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Support by Original Manufacturer

- IAI is the original manufacturer of the Kfir with established efficient support for all operational and logistic needs
  - Spare Parts
  - Support Equipment
  - Repair Services
  - Technical Assistance
  - Training
  - Documentation
  - Maintenance knowledge transfer
  - Long term Integrated Logistics support by manufacture (IAI)

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Advanced relaiable Affordable Fighter



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Kfir Block 60 Advanced Multi Role Fighter

- Easy to operate, and superb results
  - Full glass cockpit
  - Man Machine interface
  - IAF pilots design
  - Integration =

    S Y M P H O N Y
- Advanced Sensors
- IAI/Elta Powerful Radar
- Advanced DL & ECM

80 - 120 % of 4th gen * aircraft



FIRST TO "SEE", FIRST TO SHOOT, FIRST TO KILL

* 4th Generation aircraft – F16 blocks 40- 52, Rafal, Eurofighter

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O.A2 Single engine

Oren Aviram, 09/06/2011



Kfir Block 60

- EASA Radar
- Fully NATO compatible
- Link 16
- BVR and 5th Gen IR (Piton 5) missiles
- A/G – LGB, GPS guided, Autonomus TV guided
- Full glass cockpit
- Short delivery
- RFP's – Similar results - **At a 1/3 of the price**

Enhanced Capabilities, Cost Effective Solution

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IAI F-16 CAPABILITIES

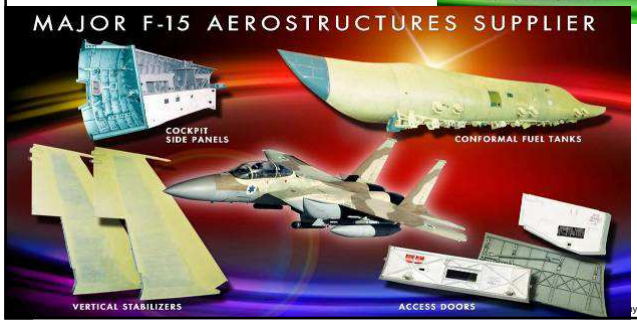


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AEROSTRUCTURES /BUILD TO SPEC / ELECTRICAL HARNESSES

- Sole source for major F-16 & F-15 Aerostructures
- Boeing preferred supplier





- USAF F15 rewiring
- *New!* T38 wings
- *New!* F-35 wings

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F-16 A/B/C/D Falcon Up Star & Slip



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FAC KFIR C-10
Advanced Multi-role Fighter
Red Flag 2012



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Colombian Air Force Kfirs in Red Flag

- ✓ Independent deployment
- 2000 Miles
- 130 people
- 8 Kfir MRF
- Refueling



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Red Flag



Red Flag



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Red Flag



Red Flag





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Kevin Jackson

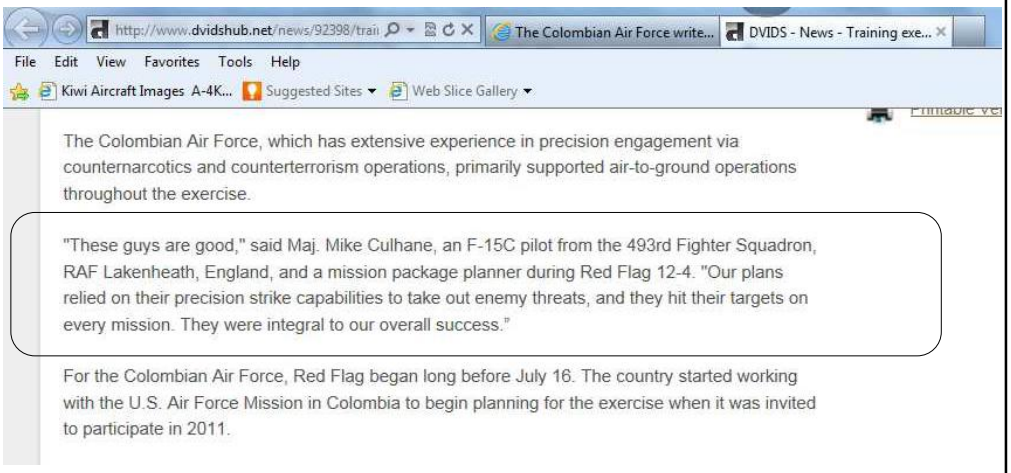
Red Flag



Red Flag



Red Flag



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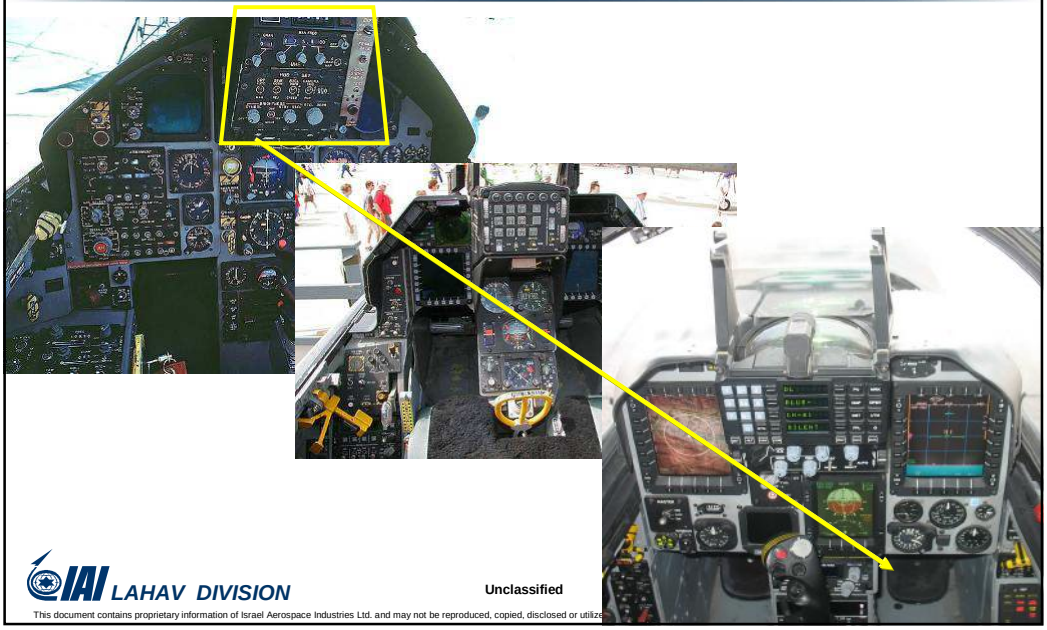




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Up Front Control generations



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Up Front Control Display (UFCD)

- THE NEED and benefits -

  Improved systems operation and flight Safety
- **Unique product** combining UFC + Display + Computer + HMI
- Optimal display location in cockpit (centric, high)
- Crucial tactical flight data in **center of pilot's attention**
- Pilot workload reduction, Improved & enhanced pilot SA



- The UFCD is FFF tested for F15 A/B/C/D cockpit by end user

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