# 6. ISRAEL

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## **Major Changes**

- Israel is acquiring new short range anti ballistic missile systems: The "Iron Dome" is entering into operational service. Two batteries will be deployed as a first stage. A second system, the "David Sling" designed to counter longer range rockets is scheduled to enter service in 2012.
- An additional third Arrow BMD battery is scheduled to enter service. While some of Israel's Patriot batteries will be upgraded to the PAC-3 standard.
- The Israeli Army is still absorbing its Merkava Mk IV MBTs, while withdrawing older MBTs from service. Meanwhile the Israeli Industry began producing and the IDF is introducing into service the new "Namer" IFV, which is based on the Merkava automotive system.
- Following the lessons of the second Lebanon war, the IDF is equipping its MBTs with the "Trophy" APS. A different APS system, the "Iron Fist", is being installed on the "Namer" IFVs.
- The IAF is replacing its aging Tzukit training aircraft with the new T-6A Texan (Efroni).
- The IAF acquired the new Heron-2 HALE UAV ("Shoval") and the Heron TP UAV ("Eitan"). The IAF is also acquiring the Hermes 900 UAV.
- IDF ground forces are being equipped with the "Skylark" short range UAVs.
- The Navy acquired two additional Dolphin submarines, which are being constructed in Germany.

### **General Data**

Official Name of the State: State of Israel Head of State: President Shimon Peres Prime Minister: Benjamin Netanyahu Minister of Defense: Ehud Barak

Chief of General Staff: Lieutenant General Gabi Ashkenazi Commander of Army HQ: Major General Sami Turgeman Commander of the Air Force: Major General Ido Nehushtan

Commander of the Navy: Rear Admiral Eli Marom

Area: 22,145 sq. km, including East Jerusalem and its vicinity, and the Golan Heights.

**Population:** 7,400,000

### **Demography**

Ethnic groups		
• Jews	5,680,000	80.2%
<ul> <li>Arabs, Druze, and others</li> </ul>	1420,000	19.8%
Religious groups		
Jews	5,680,000	80.2%
Muslims	1,136,000	16.1%
Christians	142,000	2.1%
Druze and others	114,000	1.6%

### **Economic Data**

		2005	2006	2007	2008	2009
• GDP (current price)	\$ bn	133.2	143.8	164.0	199.0	178.1
GDP per capita	\$	19,304	20,254	22,778	27,260	24,068
Real GDP growth	%	5.1	5.2	5.4	4.0	-1.3
Consumer price index	%	1.4	2.1	0.5	4.6	2.8
• External debt	\$ bn	77.5	86.5	89.1	85.3	84.0
Balance of payments						
• Exports fob	\$ bn	39.8	43.3	50.3	57.2	45.7
• Imports fob	\$ bn	-43.9	-47.1	-55.9	-64.4	-50.8
Current account balance	\$ bn	4.2	7.2	4.3	2.2	4.2
Government expenditure						
• Public expenditure/ GDP	%	33.7	34.0	32.7	32.3	35.0
Defense expenditure	\$ bn	10.1	12.0	15.0	15.3	15.1
Real change in defense	%	5.1	18.8	25.0	2.0	-1.4
expenditure						
• Defense expenditure/GDP	%	7.6	8.3	9.1	7.7	8.5
Population	m	6.9	7.1	7.2	7.3	7.4
Official exchange rate	NIS:\$1	4.6	4.23	3.85	3.8	4.05

Sources: EIU Quarterly Report, EIU Country Profile, IMF International Financial Statistical Yearbook, SIPRI Yearbook

### **Foreign Military Cooperation**

Туре	Details
Foreign forces	USA (120), pre-positioning of \$800 million worth of
	stockpiled US military equipment, TPY-2 AMD radar
Joint maneuvers	Canada (2005), India (2006), Jordan (2009), Romania
	(2005), Turkey (2009), NATO (2007), US (2009)

## **Arms Trade**

**Arms Procurement and Security Assistance Received** 

Country	Туре	Details
Canada	<ul> <li>Arms transfers</li> </ul>	Upgrading of C-130H (2008)
Germany	• Arms transfers	Dolphin submarines (2009), MAKO A-100 corvettes (2009)
	• Assistance	Partial financial support for submarines constructed in Germany (2009)
UK	<ul> <li>Military training</li> </ul>	Trainees in Britain
US	• Arms transfers	F-16I combat aircraft (2005), AH-64D Longbow helicopters (2009), Patriot PAC-3 SAMs (2008), JDAMs guided bombs (2007) Gulfstream G550 aircraft (2007), engines for PBs (2006), Tatra tracks (2005), GBU-28 bombs (2007), Defender PBs (2005), David LAVs (2009), BLU-109 bombs (2007), Paveway-2 bombs (2007), Sidewinder AAM (2007), AMRAAM AAMs (2007), Harpoon SSMs (2007), TOW-2A ATGMs (2007), Hellfire ATGMs (2007), D-9 (2007), C-130J aircraft (2008), T-6 Texan aircraft (2009), GBU-39 bombs (2008) TPQ-48 radar (2009), F-35 JSF (2009), GBU-54 LJDAM
	Cooperation in	(2009) Namer IFVs (2009), David Sling ABM
	arms production	(2009), Arrow-3 ABM (2009)
	Assistance	\$2.55 billion annual military aid in FY10
	- Issistance	(2009), \$110 million in special military aid (2010)
	<ul> <li>Military training</li> </ul>	Trainees abroad

<sup>\*</sup> According to foreign publications, as cited by Israeli publications.

## **Arms Sales and Security Assistance Extended**

Country	Туре	Details
Angola	Arms transfers	upgrading of L-39 aircraft (2005)
Afghanistan*	<ul> <li>Arms transfers</li> </ul>	Sufa RVs (2009)
Australia	Arms transfers	RCWS (2005), Litening AT pods (2005), Skylark UAV (2008), Heron UAV (2009), I- view mini-UAVs (canceled - 2008), Armor for APCs (2009)
Austrian	<ul> <li>Arms transfers</li> </ul>	RCWS (2009)
Und	dated on 20/09/20	10 4

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Country	Туре	Details
Azerbaijan	<ul> <li>Arms transfers</li> </ul>	Hermes-450 UAVs (2009)
	<ul> <li>Cooperation in</li> </ul>	Orbiter UAVs (2009)
	arms production	
Belgium	<ul> <li>Arms transfers</li> </ul>	RCWS for IFVs (2007)
Brazil *	<ul> <li>Arms transfers</li> </ul>	Airborne systems (2005), Derby AAMs
		(2006), Avionics for F-5M, AMX aircraft
		(2008), RCWS (2009), Heron UAVs (2009)
Bulgaria	<ul> <li>Arms transfers</li> </ul>	Sandcat LAVs (2009)
Cameroon	<ul> <li>Arms transfers</li> </ul>	120mm Cardom mortars (2007)
Canada	Arms transfers	Skylark UAVs (2006), Heron UAVs (2008), ECM for Frigates (2009)
Chad	• Arms transfers	Raam APCs (2006), upgrading of helicopters (2006)
Colombia	Arms transfers	Avionics for Super Tucano aircraft (2006), Kfir aircraft (2009), AH-60 Arpia helicopters (2009)
Croatia	<ul> <li>Arms transfers</li> </ul>	Armor for MBTs (2005)
Czech	<ul> <li>Cooperation in</li> </ul>	RCWS and Spike ATGMs (2006)
Republic	arms production, assembly, R&D	
Ecuador	• Arms transfers	Heron UAVs (2008), Searcher-2 UAVs (2008), EL/M-2022 MP radars (2008)
Equatorial Guinea	• Arms transfers	Armored vehicles (2008)
Ethiopia	Arms transfers	UAVs (2005)
Finland	Arms transfers	thermal imaging systems (2005), Spike
		ATGMs (2006), Litening designator pods (2008)
France	<ul> <li>Arms transfers</li> </ul>	Skylark UAV (2008)
	<ul> <li>Cooperation in</li> </ul>	Harfeng/ Heron UAV (2008), imaging
	arms production	satellite (2005)
Germany	Arms transfers	Litening targeting pods (2007), laser
-		designators (2006), Heron UAVs (2010),
		Recclite reconnaissance pods (2009)
	<ul> <li>Cooperation in</li> </ul>	Spike ATGMs (2009), Bluebird ABM sensor
	arms production	(2008), Harop ALCM (2009)
Greece	• Arms transfers	Helmet-Mounted Cueing Systems (2005), Spice AGMs (2006)
Georgia	• Arms transfers	Hermes-450 UAVs (2007), Spyder SAMs (2009)
Hungary	<ul> <li>Arms transfers</li> </ul>	Litening designation pods (2006)
India*	<ul> <li>Arms transfers</li> </ul>	Searcher-2 and Heron UAVs (2006), Phalcon
		AEW aircraft (2009), Derby AAMs (2007),

Country	Type	Details
		upgrading of Harrier aircraft (2008), ATMOS artillery (2006), Spyder SAMs (2009), AEW aerostats (2008), EL-2248 radar for MFPBs (2006), RISAT sattelites (2009), Avionics for An-32 (2009), Harop ALCM (2009)
	• Cooperation in arms production	EW for aircraft (2006), Tank shells (2005), UAVs (2005), Barak-NG, MR-SAM SAMs (2009), G150 aircraft (2009)
	Military training	Instructors training Special Forces in India (2008)
Indonesia	<ul> <li>Arms transfers</li> </ul>	Searcher UAVs (2006)
Italy	<ul> <li>Cooperation in arms production</li> </ul>	Developing of EW system (2007), Spike ATGMs (2009)
Kazakhstarn	<ul> <li>Arms transfers</li> </ul>	Orbiter UAV (2008)
	<ul> <li>Cooperation in arms production</li> </ul>	Nazia MRL (2008), 120mm Abiat mortar (2008), 120mm Semser gun (2008)
Lithuania	<ul> <li>Arms transfers</li> </ul>	Costal C <sup>4</sup> I system (2007)
Macedonia	<ul> <li>Arms transfers</li> </ul>	Upgrading of Mi-17 helicopters (2006)
Mexico	• Arms transfers	Hermes UAVs (2008), Skylite UAVs (2008) Orbiter UAVs (2009), Skystar aerostats (2009)
Netherlands	• Arms transfers	Reclite reconnaissance systems (2005), Litening targeting pods (2006), Skylark UAVs (2006), Battle management system (2007), Aerostar UAVs (2009)
Nigeria	<ul> <li>Arms transfers</li> </ul>	Aerostar UAVs (2006)
Peru	<ul> <li>Arms transfers</li> </ul>	Spike ATGMs (2009)
Poland	Arms transfers	thermal imaging systems (2005), RCWS (2005), Orbiter UAVs (2009), Aerostar UAV (2010)
	• Cooperation in arms production	Reconnaissance systems (2005), Skylark mini-UAVs (2006), upgrading Boeing 767 aircraft (2009)
Portugal	• Arms transfers	RCWS (2006), Helmet Mounted Cueing- system (2007), Cardom mortars (2006)
PRC	• Arms transfers	Upgrading of UAVs (2004), Eros-B satellite imagery (2007)
Romania	Arms transfers	LAR-160 MRLs (2005), RCWS (2007)
	Cooperation in	IAR-99 trainer aircraft (2006), Upgrading of
	arms production	IAR-330 Puma helicopters (2005)
Russia	Arms transfers	Bird-eye, I-view, Searcher UAV's (2009)
Serbia	<ul> <li>Arms transfers</li> </ul>	Orbiter UAVs (2008)

Country	Туре	Details
Singapore*	Arms transfers	Protector USVs (2005), Hermes 450 UAVs (2007), G550 CAEW aircraft (2009), IMINT pods (2008), MP radars (2008), Skylark UAVs (2007)
	<ul> <li>Cooperation in arms production</li> </ul>	NRUAV (2009)
Slovenia	Arms transfers	Armor for MBTs (2005), ATMOS artillery (2006), RCWS (cancelled - 2008), Spike ATGMs (cancelled - 2008)
South Korea*	Arms transfers	Helmet Mounted Cueing-system and Avionics for helicopters (2009), reconnaissance systems (2005), Skylark-2 UAVs (2007), EL-2032 radars for FA-50 aircraft (2009), ECM for aircraft (2009), EL- 2080 'Green Pine' radars (2009)
Spain	• Arms transfers	Spike ATGMs (2009), Searcher-2 UAVs (2007), Mini-Samson RCWS (2008)
Sri Lanka	<ul> <li>Arms transfers</li> </ul>	Super Dvora PBs (2009)
Sweden	• Arms transfers	Skylark UAVs (2007), Litening II targeting pods
Switzerland	• Arms transfers	C <sup>4</sup> I system (2006), upgrading of Super Puma helicopters (2006)
Turkey	Arms transfers	upgrading of M-60 tanks (2006), Delilah anti-radar missile (2006), Litening targeting pods (2005)
	<ul> <li>Cooperation in arms production</li> </ul>	Heron UAVs (2010), IMINT pods (2009)
Uganda	Arms transfers	ATMOS artillery (2006), ASIS reconnaissance pods (2006), Falcon Eye UAVs (2009)
Ukraine	<ul> <li>Arms transfers</li> </ul>	Light armored vehicles (2007)
UK	<ul> <li>Arms transfers</li> </ul>	Hermes UAV's (2007)
	<ul> <li>Cooperation in arms production, assembly</li> </ul>	ESM systems (2005), weapon station (2005), Litening III targeting pods (2006)
US	Arms transfers and cooperation in arms production	Air Force equipment: Helmet Mounted Cueing-system (2009), Litening designation pods (2008), upgrading UH-1 helicopters (2006), I-TALD (2008), Hunter UAV's (2007), avionics for aircrafts (2005), AH-60 Battlehawk (2009)  Ground Forces equipment: tactical computers (2005), Typhoon and Mini-

Country	Туре	Details
		Samson RCWS (2007), armor for APCs
		(2009), Golan APCs (2007), Cardom mortars (2010), Mortar FCS (2009)
Venezuela	Arms transfers	Defender SAMs (2006 - suspended)
Vietnam	<ul> <li>Arms transfers</li> </ul>	EW systems (2005)

<sup>\*</sup> According to foreign publications, as cited by Israeli publications.

# **Defense Production**

	М	Р	Α
Ground Forces equipment			
THEL system	✓		
Merkava MBTs	$\checkmark$		
Self propelled and towed artillery guns	$\checkmark$		
Self propelled mortars	✓		
LORA, EXTRA Heavy artillery rockets, MRLs	✓		
Several types of ACVs (some based on old tank hulls)	$\checkmark$		
David, Sandcat, Sufa Light armored vehicles	$\checkmark$	$\checkmark$	
Rakal, Granite, Legatus reconnaissance vehicles	$\checkmark$		
Unmanned ground vehicles (UGV)	$\checkmark$		
Tank guns	$\checkmark$		
Spike (SR, MR, ER, NLOS) and Lahat ATGMs	$\checkmark$		
B-300, Matador ATRLs	$\checkmark$		
Overhead weapon systems for IFVs (RCWS)	$\checkmark$		
Carpet mine-clearing system	$\checkmark$		
Tread-width mine plows for tanks (TWMP)	✓		
Tank-towed bridges (TAB)	$\checkmark$		
Upgrading of M60 tanks	$\checkmark$		
Mines	$\checkmark$		
Small arms	$\checkmark$		
Simulators	✓		
Fire ball, Dagger, Rakefet guided mortar Shells	$\checkmark$		
Artillery, mortar and small arms ammunition	$\checkmark$		
Trophy, Iron Fist APS	$\checkmark$		
Add on armor kits	✓		
Air force equipment			
Arrow ATBM	$\checkmark$		
G150, G250 business jets		$\checkmark$	
Upgrading of combat aircraft	✓		
Upgrading of helicopters	✓		
Phalcon, G550 AEW aircraft conversion	✓		
ADAMS, Barak-8, Defender, SPYDER AD system	$\checkmark$		

	М	Р	Α
Iron Dome and David Sling ABM systems	✓		
Delilah, MSOV ALCMs	✓		
AAMs	✓		
AGMs	✓		
CBUs	$\checkmark$		
TV and laser guided bombs	✓		
ELINT, target designation and surveillance pods	✓		
UAVs and mini-UAVs	✓		
Harpy anti-radiation drone	✓		
Air-launched decoys	$\checkmark$		
Operational flight trainer systems	✓		
Refueling system for aircraft	✓		
Helicopter parts		$\checkmark$	
Flight simulators	$\checkmark$		
Combat aircraft parts		$\checkmark$	
Navy equipment			
LCTs	✓		
MFPBs	$\checkmark$	$\checkmark$	
PBs	✓		
Predetor, Sea Star and Silver Marine USVs	✓		
Ship-based Barak AD missiles	$\checkmark$		
Torpedo components		$\checkmark$	
Electronics			
Radars – early warning, missile detection, Ship born AD,	✓		
ground surveillance, Naval surveillance, SAR			
Search and rescue system	✓		
ELINT equipment	✓		
Airborne ESM systems	✓		
EW jammers	$\checkmark$		
Audio/video microwave transceivers	✓		
Radio voice scramblers and encryption units	✓		
Command and control system			
APC simulator	✓		
Optronics			
Night vision devices	$\checkmark$		
Laser rangefinders and target designators	$\checkmark$		
Space			
Shavit/Ofeq satellite launcher			
Ofeq series imaging satellite	$\checkmark$		
Amos/MILCOM communications satellite	$\checkmark$		
EROS imaging satellite	$\checkmark$		
TECHSAR radar imaging satellite			

Note: M - manufacture (indigenously developed)

P - production under license A - assembly

# **Strategic Assets**

#### **NBC Capabilities**

### Nuclear capabilities

Two nuclear research reactors; alleged stockpile of nuclear weapons\*. Nuclear-safety cooperation agreement with the USA. Not a party to the NPT.

#### Chemical weapons and protective equipment

Personal protective equipment; Unit decontamination equipment. Fuchs (Fox) NBC detection vehicles (8 vehicles); SPW-40 P2Ch NBC detection vehicles (50 vehicles); AP-2C CW detectors. Signed but not yet ratified the CWC.

#### BW capabilities

Not a party to the BWC.

#### **Ballistic Missiles**

Model	Launchers	Missiles	Since	Notes
• MGM-52C (Lance)	12		1976	
• Jericho Mk 1/2/3 SSM *	+			Upgraded
Black/ Blue Sparrow	+			Target decoy
Total	+			
Future procurement				
<ul> <li>LORA</li> </ul>	+			Under
				negotiations

<sup>\*</sup> According to foreign publications, as cited by Israeli publications.

### **Space Assets**

Model	Туре	Notes
Satellites		
<ul> <li>Amos</li> </ul>	Communication	Civilian, currently deployed Amos 3.
• Ofeq	Reconnaissance	Currently deployed Ofeq-5, Ofeq-7 and Ofeq-9
• Eros	Reconnaissance	Civilian derivate of Ofeq, currently Eros-1B
• TECHSAR	Reconnaissance	SAR imagery satellite, known as "Ofaq-8", 260kg, 550 km in orbit
<ul> <li>TechSat</li> </ul>	Research	Civilian
Satellite launcher		
<ul> <li>Shavit</li> </ul>	SLV	
Future procurement		
• Amos-3/4	Communication	Civilian-owned satellites

Updated on 20/09/2010

<sup>\*</sup> According to foreign publications, as cited by Israeli publications.

	Model Type		Notes
•	MILCOM	Communication	
•	David	Remote sensing	

# **Armed Forces**

### Order-of-Battle

Year	2006	2007	2008	2009	2010
General data					
Personnel	176,500	176,500	176,500	176,500	176,500
(regular)					
SSM launchers	+	+	+	+	+
Ground Forces					
Divisions	16	16	16	16	16
Total number of brigades	76	78	78	79	79
Tanks	3,510	3,400	3,360	3,290	3,340
	(3,890)	(3,800)	(3,740)	(3,730)	(3,770)
APCs/AFVs	6,750	6,930	7,070	7,000	7,823
				(7,500)	(8,325)
Artillery (including	+	+	+	+	4
MRLs)					
Air Force					
Combat aircraft	494 (845)	520 (875)	541 (875)	541 (875)	516 (875)
Transport aircraft	60 (75)	71 (84)	66 (77)	66 (77)	66 (77)
Helicopters	183 (291)	184 (286)	172 (285)	169 (285)	171 (287)
Air Defense					
Forces					
Heavy SAM batteries	25	25	25	25	25
Medium SAM					1
batteries					
Light SAM	70	70	70	70	70
launchers					
Navy					
Submarines	3	3	3	3	3
Combat vessels	15	15	15	15	15
Patrol craft	42	50	52	55	57

<sup>\*</sup> Due to change in estimate.

### **Personnel**

	Regular	Reserves	Total
Ground Forces	133,000	380,000	513,000
<ul> <li>Air Force</li> </ul>	34,000	55,000	89,000
<ul> <li>Navy</li> </ul>	9,500	10,000	19,500
Total	176,500	445,000	621,500
Paramilitary			
<ul> <li>Border Police</li> </ul>	7,650		7,650

# **Ground Forces**

### **Formations**

	Corps/HQ	Divisions	Independent brigades/groups	Brigades in divisions
All arms	3*			
Armored		12		2-3 armd., 1 mech., 1 aty. Each
Mechanized/		4	13	
Infantry/				
Territorial				
Airborne			4	
Total		16	17	

Anti-guerrilla HQ: 3 divisional HQ for control of units engaged in anti-guerrilla activities in Judea, Samaria and on the Gaza and Lebanese borders. In emergency, the  $HQ\ will$  be reinforced by armor, infantry, helicopters, engineering and anti-tank forces.  $\ensuremath{^*}$  According to foreign publications, as cited by Israeli publications.

#### **Tanks**

Model	Quantity	In service	Since	Notes
MBTs				
High quality				
Merkava Mk 4	320	320	2003	Some with Trophy ADS installed
<ul> <li>Merkava Mk 3</li> </ul>	780	780	1989	
Subtotal	1,100	1,100		
Medium and low quality				
• Merkava Mk 1/2	580	580	1979/1983	In operational storage
<ul> <li>M60 A3/upgraded M60/Magach 7</li> </ul>	1,040	1,040	1980	-
Updated on 2	20/09/201	0		12

Model	Quantity	In service	Since	Notes
• M60/M60 A1	360	260	1970	In operational storage
• M48 A5	200	0		In operational storage
<ul> <li>Centurion/upgraded Centurion</li> </ul>	490	360	1965	In operational storage
Subtotal	2,670	2,240		
Total	3,770	3,340		
Future procurement				
<ul> <li>Merkava Mk 4</li> </ul>	300			Being delivered

Note: Old MBT chassis are being converted into AFVs.

### APCs/AFVs

Model	Quantity	In service	Since	Notes
Achzarit	215	215	1994	
<ul> <li>Namer</li> </ul>	60	60	2008	Being Delivered
• M113 (various	5,500	5,500		Some being
marks)				upgraded
<ul> <li>Nagmashot*</li> </ul>	}		1989	
<ul> <li>Nagmachon</li> </ul>	}	400		
<ul> <li>Nakpadon</li> </ul>	}			
<ul> <li>M2/M3 halftrack</li> </ul>	600	100		Some phased out
Subtotal	6,775	6,275		
Light armored				
vehicles				
<ul> <li>Akrep</li> </ul>	30	30	1998	
<ul> <li>M1114 up-armored</li> </ul>	120	120	2004	
HMMWV				
• Ze'ev	300	300	2004	
• Sufa-2	700	700	2006	Armored version
• David	400	400	2008	Armored Defender- 110
Guardium UGV	+	+	2009	UGVs under evaluation
Subtotal	1,550	1,550		
Total	8,325	7,825		
Future procurement				
• Namer	130			Current order.
				Total requirement up to 500
Caracal/ Sandcat	79			•
<ul> <li>Wildcat</li> </ul>	+			

Artillery				
Model	Quantity	In service	Since	Notes
Self-propelled guns and howitzers				
• 203mm M110	36	36	1975	
• 175mm M107	140	70	1974	
• 155mm M109 variants	600	600		
• 155mm M-50/ 155mm L-33	120	120		
Subtotal	896	756		
Towed guns and howitzers				
• 155mm M-71	+	+		
• 130mm M-46	+	+		
122mm D-30	+	+		
Subtotal	+	+		
Mortars, over 160mm				
• 160mm SP	+	+		Phased out
Mortars, under 160mm				
120mm Keshet/ Cardom SP	64	64	2006	
• 120mm	250	250		
Subtotal	314	314		
MRLs				
• 240mm	+	+	1974	
• 140mm	+	+		
122mm BM-21	+	+		
227mm MLRS	48	48		
• 290mm MAR 290	+	+		
Specialized missiles				
<ul> <li>Keres anti-radar missile</li> </ul>	+	+		
<ul> <li>Kachlilit anti-radar missile</li> </ul>	+	+		

<sup>\*</sup> According to foreign publications, as cited by Israeli publications.

### **Ground Radars**

Model	Quantity	In service	Since	Notes
Artillery/ mortar-locating	radars			
• AN/TPQ-37 (Nurit)	+	+		
<ul> <li>AN/PPS-15</li> </ul>	+	+		
<ul> <li>Raaz</li> </ul>	+	+		
<ul> <li>AN/TPQ-48 LCMR</li> </ul>	+	+		
<ul> <li>Shilem</li> </ul>	+	+		
• Spyder	+	+	2010	Based on Caracal/ Granite chassis
<ul> <li>Stalker II</li> </ul>	+	+		
Aerostats with radars				
• Hila	+	+	2008	
<ul> <li>Skystar 300 aerostat</li> </ul>	+	+	2007	

### **Logistic and Engineering Equipment**

Gilois motorized bridges, M-123 Viper minefield crossing system, M60 AVLB, mineclearing rollers, mine layers, Pomins II portable mine neutralization system\*, Puma ECVs, TAB (towed assault bridge, towed by tanks), TLB (trailer-launched bridge), TWMP (tread-width mine ploughs), M-1000 heavy equipment transporters, Namer ARV, D9R bulldozers (100), M88 ARV, Lioness ECV, CX-1, Guardium UGV

### **Anti-Tank Missiles**

Spike missiles (NT-S, NT-G, NT-D), BGM-71A/C TOW, Israeli improved BGM-71C TOW, Mapats SP, Nimrod, M-47 Dragon, Matador

<sup>\*</sup> According to foreign publications as cited by Israeli publications.

<sup>\*</sup> According to foreign publications, as cited by Israeli publications.

# **Air Force**

### Order-of-Battle

	Category	Quantity	In service	Notes
•	Combat	875	516	Including aircraft in operational storage
•	Transport	77	66	
•	Helicopters	287	171	

### **Combat Aircraft**

Model	Quantity	In service	Since	Notes
Advanced multi-role				
• F-16 I (Soufa)	101	101	2004	
• F-16 C/D (Barak)	136	136	1990	To be upgraded
• F-16 A/B (Netz)	107	107	1980/1986	
• F-15 I (Ra'am)	25	25	1998	
Subtotal	369	369		
Advanced interceptors				
• F-15 A/B/C/D	72	72	1976	Upgraded
(Baz)				
Obsolete				
• F-4E Phantom 2000 (Kurnass)	120	50	1969	In operational storage
• A-4 Skyhawk	174	20	1967	Used for advanced training. The rest are in operational storage.
• Kfir C-2/ TC-2/ C-7/ TC-7	140	5	1976	Small contingency force. some in operational storage, for sale
Subtotal	434	75		<i>U</i> ,
Total	875	516		
Future procurement				
• F-35 JSF	25			Under negotiations; Total requirement up to 100

**Transport Aircraft** 

Model	Quantity	In service	Since	Notes
• Arava	9	9	1984	To be phased out
<ul> <li>Dornier Do-28</li> </ul>	8	0		In storage
• Boeing 707 (Reem)	13	13	1973	Some in tanker role
• C-130E/H Hercules	18	15	1970	Some in Tanker
(Karnaf)				role, 3 in storage
<ul> <li>Beech King Air B-</li> </ul>	29	29	1990	Some in
200/200T (Ztufit)				surveillance role
Total	77	66		
Future procurement				
• C-130J	3			With option for additional aircraft

**Training and Liaison Aircraft** 

Model	Quantity	In service	Since	Notes
Jet trainers				
<ul> <li>CM-170 Fouga</li> </ul>	79	0	1960	In operational
Magister (Tzukit)				storage
Piston/Turbo-prop				
<ul> <li>Bonanza A-36</li> </ul>	22	22	2005	
(Hofit)				
T-6A (Efrony)	20	20	2009	
<ul> <li>Socata Trinidad TB-</li> </ul>	22	22	1995	To be phased out
21 (Pashosh)				-
Cessna U-206	21	0		In storage, for sale
(Stationair-6)				
• G 120A (Snunit)	27	27	2003	Trainers are
. ,				privately owned.
Subtotal	112	91		-
Total	191	130		

Helicopters

Model	Quantity	In service	Since	Notes
Attack				
• AH-64A Apache (Peten)	30	27	1990	3 being upgraded
<ul> <li>AH-64D Apache (Saraf)</li> </ul>	17	17	2005	
<ul> <li>AH-1G/S Cobra (Effeh)</li> </ul>	63	33	1981	To be upgraded

Model	Quantity	In service	Since	Notes
• 500MD Defender	30	2	1979	In operational storage, for sale.
Subtotal	140	79		
Heavy transport				
• CH-53-2000	38	38	1970	Being upgraded to
(Yasoor)				CH-53-2025
Medium transport				
<ul> <li>Bell 212 (Anafa)</li> </ul>	55	0		In storage, for sale
<ul> <li>S-70A Blackhawk</li> </ul>	49	49	1994/2002	
(Yanshouf)				
Subtotal	104	49		
Naval combat				
<ul> <li>AS 565SA Panther</li> </ul>	5	5	1995	
(Atalef)				
Total	287	171		
Future procurement				
<ul> <li>AH-60 Battlehawk</li> </ul>	18			
<ul> <li>AH-64D Apache</li> </ul>	10			4 to be upgraded
Longbow				from existing platforms

# Miscellaneous Aircraft

Model	Quantity	In service	Since	Notes
Reconnaissance				
• RF-4E	0	0		Also listed under Combat Aircraft
AEW/AWACS				
• Gulfstream G550	2	2	2006	Systems are
CAEW (Eitam)				installed in Israel
ELINT and EW				
<ul> <li>Gulfstream G500</li> </ul>	3	3	2005	
SEMA (Shavit)				
<ul> <li>King Air A200CT/</li> </ul>	16	16	1990/	
B-200T (Ztufit)			2001	
Maritime surveillance				
aircraft				
• Heron-2 (Shoval)	8	8	2006	MP radar payload
• Seascan (1124N)	3	3		

Model	Quantity	In service	Since	Notes
UAVs				
Aerostar, Delilah/ Light I	Defender, Ha	rpy anti-radiati	on drone*, F	Hermes 450B
(Khamsan), Hermes 450S	, Hermes 150	00 High Altitud	le*, Heron-2	(Soval), Heron TP
(Eitan), Hunter, Searcher	I/II, Ranger,	Pioneer		
mini-UAVs				
I-view, Mini-V, Skylark L	E			
Target drones				
Beech AQM-37A; Beech	BQM-107B,	MQM-74C Ch	uckar II, Tele	dyne Ryan 1241
Tankers				
<ul> <li>Boeing 707 tanker</li> </ul>	3	3	2002	Being upgraded
<ul> <li>KC-130 tanker</li> </ul>	3	3	1976	Included in
				transport aircraft
Future procurement				-

Eitan UAV +
Gulfstream G550 2

### **Advanced Armament**

#### Air-to-air missiles

AIM-9L/M Sidewinder, AIM-7 Sparrow, Python 3, Python 4, Derby, AMRAAM AIM-120B

#### Air-to-ground missiles

AGM-78D Standard ARM, AGM-65 Maverick, AGM-62A Walleye, AGM-45A/B Shrike, AGM-114 Hellfire, AGM-142 Popeye\*, Nimrod ATGM, Spike (LR, ER. NLOSf) ATGM\*

#### **Bombs**

CBU (including Tal-1, ATA-1000, ATA-500), Delilah ALCM, GBU-39 guided bombs (1,000), runway-penetration bombs, Griffin, Guillotine, JDAMs (Barad Kaved) (228), Opher, PB-500, Pyramid, Spice (Barad Plada)

### Target designation pods

LANTIRN (Inbar), Litening, Reccelite (Ogen Krav), Reec-U (Ogen Khad)

#### EW and CEW

Chaff and flare dispensers for combat aircraft, Delilah ALCM , Samson AN/ADM-141 TALD, EL/L-8202 ECM pod, EL/L-8230 ECM system, EL/L-8231 ECM system, EL/L-8240 ECM system, EL/M-2160 warning system, LWS-20 system, SRS-25 airborne receiver, SPS-20 self protection system, SPS-65 self protection system, SPS-200 airborne self protection system, SPS-1000 EW system, SPS-2000 self protection system, Sky-Jam 200 jammer , AN/ALQ 131 electronic countermeasure systems (20); EL/M-2022 MP radar

#### **Future procurement**

AIM-9M AAMs (500), Star-1 AGM/cruise missile (under development), AMRAAM

Gulfstream G550
 Hermes 900
 Skylark LE UAV

<sup>\*</sup> According to foreign publications, as cited by Israeli publications.

AIM-120C AAMs (200), JDAMs guided bombs (10,000), BLU-109 guided bombs (2,000), GBU-28 guided bombs (50), Paveway 2 guided bombs (4,000), AGM-114L3 Hellfire II AGMs (480), Lizard-3 , Spice, GBU-54 LJDAM (100), Lahat ATGM

### Air Force Infrastructure

#### Aircraft shelters

In all operational airfields, for combat aircraft

#### Military airfields

11

Haifa, Hatzerim, Hatzor, Lod, Nevatim, Palmachim, Ramat David, Ramon, Tel Aviv, Tel Nof, Uvda

#### Aircraft maintenance and repair capability

Maintenance on all models in service, partly in airfields, partly at Israel Aircraft Industries facilities

### **Air Defense Forces**

### **Surface-to-Air Missiles**

Model	Batteries	Launchers	Since	Notes
Heavy missiles				
<ul> <li>MIM-23B Improved HAWK</li> </ul>	17		1965	
<ul> <li>MIM-104 Patriot</li> </ul>	2		1991	
• MIM-104 Patriot PAC-2	4		2000	3 of which are scheduled to be upgraded
Arrow ATBM	2	16	1998	Including Green Pine radar and Citrus Tree command post
Total Medium missiles	25			•
<ul> <li>Iron Dome</li> <li>Light missiles</li> </ul>	1		2010	
• MIM-72A Chaparral		~50		
• Stinger		~ 20	1997	Part of Mahbet AD system
Total		~70		•

<sup>\*</sup> According to foreign publications, as cited by Israeli publications.

Model	Batteries	Launchers	Since	Notes
Shoulder-launched missiles				
• FIM-92C Stinger		500 missiles		
• MIM-43A Redeye Future procurement		+	1975	
<ul> <li>Iron Dome</li> </ul>	7			
<ul> <li>David Sling</li> </ul>	+			
• MIM-104 Patriot PAC-3	3			Upgrade for systems in service
<ul> <li>Arrow-3 ATBM</li> </ul>	1			-

Other Air Defense Systems

Model	Quantity	In service	Since	Notes
Air Defense systems				
Mahbet SP	20	20	2002	M-163 Vulcan with Stinger SAMs
Short-range guns				· ·
• 40mm Bofors L70	+	+		
• 23mm ZU 23x2	+	+		
• 20mm TCM-20	+	+		
Hispano Suiza SP				
Total	~900	~900		
Radars				
<ul> <li>Ramit</li> </ul>	+	+		
• FPS-100	+	+		
<ul> <li>AN/TPS-43</li> </ul>	+	+		
<ul> <li>Green Pine/ Great</li> </ul>	+	+		
Pine				
<ul> <li>Alufa-3</li> </ul>	+	+		
<ul> <li>Nautilus</li> </ul>	+	+		
Aerostats with				
airborne radars				
<ul> <li>Status</li> </ul>				
Future procurement				
• EL/M-2084	5			

# Navy

### **Submarines**

Туре	Quantity	Length (m.)/ displacement (t.)	Notes/armament
Submarines			
• Dolphin (Type 212/800)	3	57.3/1,900	Sub-Harpoon SSMs 6x533mm torpedoes total of 16 torpedoes/missiles
Future procurement			•
<ul> <li>Dolphin</li> </ul>	2		

# Combat vessels

Туре	Quantity	Length (m.)/ displacement (t.)	Notes/armament
Missile corvettes			
Eilat class (Sa'ar 5)	3	86.4/1,075	1xSA-536 helicopter 8xHarpoon SSMs 8xGabriel II SSMs 64xBarak-1 SAMs 1x76mm gun 2x25mm Sea Vulcans 6x324mm torpedoes
MFPBs			•
Aliya class (Sa'ar 4.5)	2	61.7/498	1xSA 536 helicopter 8xHarpoon SSMs 4xGabriel II SSMs 2x20mm guns 1x20mm Vulcan Phalanx 2x12.7mm MGs
Hetz class (Sa'ar 4.5)	8	61.7/488	8xHarpoon SSMs 6xGabriel II SSMs 32xBarak I SAMs 1x76mm gun 1x20mm Vulcan Phalanx 2x12.7mm MGs
Subtotal  ASW vessels	10		
Reshef class (Sa'ar 4)	2	58/415	4xHarpoon SSMs 4-6xGabriel II SSMs 1-2x76mm guns

Туре	Quantity	Length (m.)/ displacement (t.)	Notes/armament
			2x20mm guns
			1x20mm Vulcan Phalanx
			2x12.7mm MGs
			In ASW role:
			2-3x324mm torpedoes
			sonar
Total Future procurement	15		
• LCS/ MAKO Future corvette	2		Under negotiations

### **Patrol Craft**

Туре	Quantity	Length (m.)/ displacement (t.)	Notes/armament
• Shaldag-2	5	23.6/56	1x25mm Typhoon gun
<ul> <li>Super Dvora</li> </ul>	15	21.6/54	2x20mm or 2x25mm guns
Mk-I/II			2x12.7mm MGs
			1x84mm MRL
			depth charges
			2x324mm torpedoes
<ul> <li>Super Dvora</li> </ul>	10	27.4/72	1x25mm Typhoon gun
Mk-III			1X20mm gun
			2x324mm torpedoes
			depth charges
<ul> <li>Dabur</li> </ul>	15	19.8/39	2x20mm guns
			2x12.7mm MGs
			2x324mm torpedoes
			1x84mm MRL
			depth charges
• Stingray (Nahshol)	2	12/10.5	
<ul> <li>Defender class</li> </ul>	8	9.5/2.7	7.62mm gun
(Tzir'ah)			Radar
			Personal optical sensors
<ul> <li>Protector USV</li> </ul>	2	9/	1x30mm gun
Total	57		-
Future procurement			
<ul> <li>Protector</li> </ul>	+		

**Landing Craft** 

Туре	Quantity	Length (m.)/ displacement (t.)	Notes/armament
LCM class	2		
<ul> <li>Ashdod class LCT</li> </ul>	1	62.7/400	In reserve
Total Future procurement	3		
<ul> <li>Newport LST</li> </ul>	1		Under negotiations

**Auxiliary Vessels** 

	Туре	Quantity	Length (m.)/ displacement (t.)	Notes/armament
•	Bat Sheva	1	95.1/1,150	Support ship
•	Stollergrund (Type 745 – Bat Yam)	2	38.6/450	Support ships
•	Ro-Ro	1		

**Special Maritime Forces** 

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	Туре	Quantity	Length (m.)/ displacement (t.)	Notes/armament
•	Mulit (RHIB)	+		
•	Snunit	+		
•	Zaharon fast boats	12	12.5	
	(Firefish)			
•	Morena (RHIB)	2	13	Search radar

# Naval Infrastructure

Naval bases	3
Ashdod, Eilat, Haifa	
Ship maintenance and repair facilities	

Repair and maintenance of all naval vessels at Haifa, partly in conjunction with Israel Dockyards