# 6. ISRAEL

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# **Major Changes**

- Five batteries of the Iron Dome anti rocket system entered operational service and already displayed excellent performance during "Pillar of Defense" in November 2012.
- The Israeli Air force began recieving its new C-130J (Shimshon) transport air craft as well as its new M-346 (Lavi)
- Entering a period of financial difficulties the IDF is undergoing some major organizational changes that included the closing of several units including armored brigades and air force squadrons.

## **General Data**

Official Name of the State: State of Israel

Updated on 26/11/2014

Head of State: President Reuven Rivlin Prime Minister: Benjamin Netanyahu Minister of Defense: Moshe Yaalon

Chief of General Staff: Lieutenant General Benny Gantz Commander of Army HQ: Major General Guy Tzur Commander of the Air Force: Major General Amir Eshel Commander of the Navy: Rear Admiral Ram Rothberg

**Foreign Military Cooperation** 

Туре	Details
Foreign forces	USA (45), pre-positioning of \$800 million worth of
	stockpiled US military equipment, TPY-2 AMD radar
Joint maneuvers	Bulgaria (2013), Greece (2013), Italy (2013), Poland
	(2012), Romania (2011), Turkey (2009), US (2013), US
	(2014)
Security cooperation	Canada (2011), Greece (2011), Poland (2011), Russia
accords	(2010), US

# **Arms Trade**

**Arms Procurement and Security Assistance Received** 

Country	Туре	Details
China	<ul> <li>Arms transfers</li> </ul>	Gunpowder (2012)
Germany	Arms transfers	Dolphin submarines (2014), MAKO A-100 corvettes (2009 – postponed), TEP 90 decontamination vehicles (2012)
	• Assistance	Partial funding for submarines constructed in Germany (2012)
Italy	• Arms transfers	SAR radars for UAVs (2011), M-346 trainer aircraft (2012)
US	Arms transfers	AH-64D Longbow helicopters (2012), upgrade to Patriot PAC-3 SAMs (2011), GBU-28 bombs (2009), David LAVs (2009), D-9 (2010), C-130J aircraft (2013), T-6 Texan aircraft (2009), GBU-39 bombs (2010) TPQ-48 radar (2009), F-35 JSF (2010), GBU-54 LJDAM (2010), AT-802 firefighter aircraft (2011), V-22 Osprey (2013), KC-135 tanker (2013), JDAM bombs (2012), GBU-39 SDBs (2012)
	• Assistance	\$3.1 billion annual military aid in FY2013 (2012); additional special military aid to BMD projects (\$236m in FY2012, \$480 in
المطو	stad on 26/11/2011	2

Country	Туре	Details
	Cooperation in arms production	FY2013) Namer IFVs (2013), David Sling ABM (2011), Arrow-3 ABM (2011)
	• Facilities	Upgrade of Naval and AF bases by USACE (2012), \$1.2 billion in War reserve stockpiles (2012)
	<ul> <li>Military training</li> </ul>	Trainees in the USA

<sup>\*</sup> According to foreign publications.

# Arms Sales and Security Assistance Extended

Country	Туре	Details
Afghanistan*	Arms transfers	Sufa RVs (2009)
Angola*	Arms transfers	155mm ATMOS guns (2011), Heron UAVs
8		(2011)
Australia	<ul> <li>Arms transfers</li> </ul>	Heron UAV (2009), Armor for APCs (2009)
		C4ISR system (2010), Battle Management
		Systems for amphibious vessels (2012)
Austrian	<ul> <li>Arms transfers</li> </ul>	RCWS (2009)
Azerbaijan**	<ul> <li>Arms transfers</li> </ul>	Hermes-450 UAVs (2009), Upgrading of T-
		72 BMTs (2011), 120mm Cardom mortars
		(2011), Heron (2012), EL-2080 'Green Pine
		radars (2012), Barak SAMs (2012)
	<ul> <li>Cooperation in</li> </ul>	Aerostar, Orbiter UAVs (2011)
	arms production	
Belgium	<ul> <li>Arms transfers</li> </ul>	Spike ATGMs (2013)
Brazil *	<ul> <li>Arms transfers</li> </ul>	Avionics for F-5M, AMX aircraft (2012),
		REMAX/ UT30 RCWS (2012), Heron UAV
		(2010), Hermes 450 UAVs (2013), upgrade
		of HB-350 helicopters (2011), upgrading of
		M113 APCs (2011), DIRCM and SPS for
		KC-390 (2011), B767 MRTT aircraft (2013)
D 1 .		Border surveillance sensors (2013)
Bulgaria	Arms transfers	Sandcat LAVs (2009)
Canada	Arms transfers	ECM for Frigates (2009), UAVs (2013)
China	<ul> <li>Military training</li> </ul>	Training of Armed Police forces (2012)
Chile	<ul> <li>Arms transfers</li> </ul>	Aerostar UAVs (2010), Hermes 900 UAVs
C 1 1: 444		(2012), Spylite UAVs (2013)
Colombia***	<ul> <li>Arms transfers</li> </ul>	Upgrading Kfir aircraft (2010), AH-60 Arpi
		helicopters (2009), B-767 MRTT aircraft
		(2010), EL-2032, EL-2022 radars (2011),
		Derby AAMs (2011), Hermes 900 (2012),
		Hermes 450 (2012), Flight training center
		(2012)

Country	Туре	Details
Denmark	<ul> <li>Arms transfers</li> </ul>	120mm Cardom mortars (2010)
Dominican	<ul> <li>Arms transfers</li> </ul>	3D AD radars (2010)
Republic		
Ecuador	<ul> <li>Arms transfers</li> </ul>	Heron UAVs (2008), Searcher-2 UAVs
Dalei e e i e	. A	(2008), EL/M-2022 MP radars (2008)
Ethiopia Equatorial	Arms transfers	Skylite UAVs (2011) OPV (2011)
Guinea	<ul> <li>Arms transfers</li> </ul>	OPV (2011)
France	• Arms transfers	Skylark UAVs (2010), add-on armor for APCs (2012)
	<ul> <li>Cooperation in</li> </ul>	Harfeng/ Heron/ Heron TP UAVs (2011),
	arms production	VENuS satellite (2012)
Finland	Arms transfers	Orbiter-2 UAVs (2012)
Germany	<ul> <li>Arms transfers</li> </ul>	Heron UAVs (2010), Recclite reconnaissance
·		pods (2009), Heron-TP UAVs (2013), EL/M-2222S Naval Self Protection System (2014)
	<ul> <li>Cooperation in</li> </ul>	Spike ATGMs (2009), Harop ALCM (2011),
	arms production	Pilum AGM (2011)
Georgia	<ul> <li>Arms transfers</li> </ul>	Spyder SAMs (2009)
Greece	<ul> <li>Arms transfers</li> </ul>	Spice guided-bombs (2011)
India*	Arms transfers	Litening targeting pods (2010), Phalcon AEW aircraft (2012), Derby AAMs (2011), Spyder SAMs (2010), AEW aerostats (2010), RISAT sattelites (2009), Avionics for An-32 (2009), Harop ALCM (2010), Crystal Maze AGMs (2010), EL-2083 APR radar (2010), EL-2248 MF-STAR radars (2010), EL-2032 radars for Teja LCAs (2012), Spike ATGMs (2013), NGPGM (2012).Barak SAMs (2014).
	Cooperation in arms production	Barak-NG, MRSAM SAMs (2012), G150 aircraft (2009), Chetak/ Dhruv NRUAV (2011), Aerostar UAV (2010), POP EO systems (2010), APS system for submarines (2012), upgrading Heron/ Searcher UAVs (2012), Compass payloads (2013)
Italy	Arms transfers	Spike ATGMs (2009), Recclite reconnaissance pods (2010), Music DIRCM for transport aircraft (2011), G550 AEW (2012), OPTSAT satellite (2012)
	<ul> <li>Cooperation in arms production</li> </ul>	multi-spectral satellites (2010)
Kazakhstarn	<ul> <li>Cooperation in arms production</li> </ul>	Nazia MRL (2010)

Country	Туре	Details
Mexico	<ul> <li>Arms transfers</li> </ul>	Hermes 450 UAVs (2010), Skylark UAVs
		(2010), Orbiter UAVs (2009), Skystar
		aerostats (2009), Hermes 900 (2012)
Macedonia	<ul> <li>Military training</li> </ul>	Training school for helicopter pilots (2011)
Netherlands	<ul> <li>Arms transfers</li> </ul>	Aerostar UAVs (2010), Recclite
		reconnaissance pods (2010)
Nigeria	<ul> <li>Arms transfers</li> </ul>	Shaldag PBs (2012)
Paraguay	<ul> <li>Arms transfers</li> </ul>	EL-2106NG AD radars (2011)
Peru	Arms transfers	Spike ATGMs (2010), G-550 AEW aircraft (2011), Mini Falcon UAVs (2011), Spyder SAMs (2012)
Poland	<ul> <li>Arms transfers</li> </ul>	Orbiter UAVs (2009), Aerostar UAV
		(cancelled - 2012), Surveillance payload for Rosomak APCs (2010)
	<ul> <li>Cooperation in arms production</li> </ul>	Upgrading Boeing 767 aircraft (2009)
Romania	<ul> <li>Arms transfers</li> </ul>	Upgrading of C-130 aircraft (2011)
Russia	<ul> <li>Cooperation in arms production</li> </ul>	I-view, Searcher-2 UAV's (2010)
Singapore*	Arms transfers	G550 CAEW aircraft (2009), Spyder SAM (2010), Barak SAMs (2011), Heron UAVs (2012)
South Africa	<ul> <li>Arms transfers</li> </ul>	Litening targeting pods (2010)
South Korea*	Arms transfers	Helmet Mounted Cueing-system and Avionics for helicopters (2009), EL-2032 radars for FA-50 aircraft (2012), ECM/ EW for aircraft (2011), EL-2080 'Green Pine' radars (2009), Spike ATGMs (2013), upgrading C-130 aircraft (2012)
Spain	Arms transfers	Spike ATGMs (2009), Litening targeting
~ F	- Time transfers	pods (2010), Cardom SP mortars (2012)
	<ul> <li>Cooperation in</li> </ul>	Orbiter UAVs (2011)
	arms production	,
Sri Lanka	Arms transfers	Super Dvora PBs (2009)
Sweden	<ul> <li>Arms transfers</li> </ul>	PAWS-2 (passive airborne warning system)
		for the Gripen fighter (2014)
Switzerland	<ul> <li>Arms transfers</li> </ul>	UAVs (2012)
Turkey	<ul> <li>Cooperation in</li> </ul>	Heron UAVs (2010), IMINT pods (Cancelled
	arms production	- 2011)
Uganda	Arms transfers	Falcon Eye UAVs (2009), 155mm ATMOS gun (2011)
US	<ul> <li>Arms transfers</li> </ul>	Air Force equipment: Helmet Mounted
	and cooperation in arms	Cueing-system (2010), AH-60 Battle-hawk (2009), HUD displays (2010), upgrading AH-

Country	Type	Details
	production	1Ws targeting systems (2010)
		Ground Forces equipment: Typhoon and
		120mm Cardom mortars (2010), Mortar FCS
		(2010), FMAB (2010), reactive armor for
		Bradley IFVs (2010), Skystar-180 aerostat
		(2011), GATR guided rockets (2013)
		Naval equipment: installing Spike missiles on
		USVs (2012)

# **Defense Production**

	М	Р	Α
Ground Forces equipment			
THEL system	✓		
Merkava MBTs	✓		
Self propelled and towed artillery guns	$\checkmark$		
120mm Cardom, Hanit SP mortars	$\checkmark$		
LORA, EXTRA, Magic Spear Heavy artillery rockets	✓		
Several types of ACVs (some based on old tank hulls)	✓		
David, Sandcat, Sufa Light armored vehicles	✓	$\checkmark$	
Granite, Legatus, Raccoon, Spider reconnaissance vehicles	$\checkmark$		
NBC reconnaissance and decontamination vehicles	✓		
Avantguard, Guardium, Nahshon UGVs	✓		
Tank guns	✓		
Spike (SR, MR, ER, NLOS) and Lahat ATGMs	✓		
B-300, LAW-4/6/9, Matador ATRLs	✓		
Overhead weapon systems for IFVs (RCWS)	✓		
Carpet mine-clearing system	✓		
Tread-width mine plows for tanks (TWMP)	$\checkmark$		
Tank-towed bridges (TAB)	✓		
Upgrading of M60 tanks	$\checkmark$		
Mines	$\checkmark$		
Small arms	$\checkmark$		
Simulators	$\checkmark$		
Fire ball, Dagger, Rakefet guided mortar Shells	✓		
Morty guided mortar shell			
GPS-guided MRLs	$\checkmark$		
Artillery, mortar and small arms ammunition	$\checkmark$		
Trophy, Iron Fist APS	$\checkmark$		
Add on armor kits	✓		
Air force equipment			
Arrow , David Sling , and Iron Dome ABM systems	✓		
G150, G250 business jets		✓	
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<sup>\*</sup> According to foreign publications. \*\* According to Azeri publications. \*\*\* According to Colombian publications.

	М	Р	Α
Upgrading of combat aircraft	✓		
Upgrading of helicopters	$\checkmark$		
C-295, Il-76, G550 AEW aircraft conversion	$\checkmark$		
ADAMS, Barak-8, Defender, SPYDER, Red Sky AD system	$\checkmark$		
Delilah, Harop, MSOV ALCMs	$\checkmark$		
AAMs	$\checkmark$		
AGMs	$\checkmark$		
CBUs	$\checkmark$		
Lizard, Opher, Pyramid, Spice TV and laser guided bombs	$\checkmark$		
Star, Whipshot, Zuni Laser-guided rockets	$\checkmark$		
ELINT, target designation and surveillance pods	$\checkmark$		
Airmule, Flying Elephant resupply UAVs	$\checkmark$		
UAVs and mini-UAVs, Butterfly	$\checkmark$		
Harpy, Harop anti-radiation drones	$\checkmark$		
Air-launched decoys	$\checkmark$		
Operational flight trainer systems	$\checkmark$		
Refueling system for aircraft	$\checkmark$		
Helicopter parts		$\checkmark$	
Flight simulators	$\checkmark$		
Combat aircraft parts		$\checkmark$	
Navy equipment			
LCTs	$\checkmark$		
MFPBs	$\checkmark$	✓	
PBs	$\checkmark$		
Predetor, Sea Star, Silver Marine USVs	$\checkmark$		
Ship-based Barak AD missiles	$\checkmark$		
Torbuster APS for submarines	$\checkmark$		
Torpedo components		✓	
Electronics			
Radars – early warning, missile detection, Ship born AD, ground surveillance, Naval surveillance, airborne SAR	✓		
Search and rescue system	✓		
ELINT equipment	<b>✓</b>		
Airborne ESM systems	<b>✓</b>		
EW jammers	<b>✓</b>		
Audio/video microwave transceivers	<b>✓</b>		
Radio voice scramblers and encryption units	·		
Command and control system	•		
APC simulator	1		
	•		
Optronics	./		
Long range observation systems	<b>√</b>		
Night vision devices	·		
Laser rangefinders and target designators  Space	٧		
Shavit/Ofeq satellite launcher			

	M	Р	Α
Ofeq series imaging satellite	✓		
Amos/MILCOM communications satellite	✓		
EROS imaging satellite	✓		
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); SPW-40 P2Ch NBC detection vehicles (50); Girit decontamination vehicles; TEP 90 decontamination vehicles (8); 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
<ul> <li>Black/ Blue Sparrow</li> </ul>	+			Target decoy
Total	+			
Future procurement				
• LORA	+			Under negotiations

<sup>\*</sup> According to foreign publications.

#### **Space Assets**

Model	Туре	Notes
Satellites		
• Amos	Communication	Civilian, currently deployed Amos 2/3/5.
• Ofeq	Reconnaissance	Currently deployed Ofeq-5, Ofeq-7 and Ofeq-9
• Eros	Reconnaissance	Civilian derivate of Ofeq, currently

Updated on 26/11/2014

<sup>\*</sup> According to foreign publications.

Model	Туре	Notes
		Eros-1B
<ul> <li>TECHSAR</li> </ul>	Reconnaissance	SAR imagery satellite, known as
		"Ofeq-8", 260kg, 550 km in orbit
<ul> <li>TechSat</li> </ul>	Research	Civilian, "Ofeq-10"
Satellite launcher		
<ul> <li>Shavit</li> </ul>	SLV	
Future procurement		
• Shalom	Remote sensing	Multi-spectral satellites, in
		cooperation with Italy.
<ul> <li>VENuS</li> </ul>	Remote sensing	Civilian multi-spectral micro-satellite
		developed in cooperation with
		France. To be launched in 2014.
<ul> <li>Nano-satellites</li> </ul>	Reconnaissance	Optical satellites with 1.5m resolution
• Amos-4,6	Communication	Civilian-owned satellites. To be
		launched in 2013 and 2015.
		respectively
<ul> <li>MILCOM</li> </ul>	Communication	

## **Command and Control Assets**

Name	Description
Air defense	
NCCS	National early warning system, linking radars, aerostats and regional command centers.
Naval surveillance	
CSS	National system, linking regional command centers with a network of coastal radars and optical sensors.
Border security	
Sentry Tech/ See-	Linking regional command centers with ground surveillance
Shoot	radars, reconnaissance vehicles, and remotely-operated weapon stations.

# **Armed Forces**

### Order-of-Battle

J. 40. J. Date	. •				
Year	2010	2011	2012	2013	2014
General data					
<ul> <li>Personnel</li> </ul>	176,500	176,500	176,500	176,500	176,500
(regular)					
<ul> <li>SSM launchers</li> </ul>	+	+	+	+	+
Ground forces					
<ul> <li>Divisions</li> </ul>	16	16	16	16	16
Undated o	n 26/11/20	14	9		
Opaaica c	20,, 20	• •	O		

Year	2010	2011	2012	2013	2014
<ul> <li>Total number</li> </ul>	79	79	79	79	79
of brigades					
<ul> <li>Tanks</li> </ul>	3,120	2,940	2,840	2,840	2,840
	(3,630)	(3,070)*	(3,070)	(3,070)	(3,070)
<ul> <li>APCs/AFVs</li> </ul>	7,900	7,875*	7,850	7,850	7,850
	(8,400)				
<ul> <li>Artillery</li> </ul>	+	+	+	+	+
(including					
MRLs)					
Air force					
<ul> <li>Combat</li> </ul>	515 (874)	440	446 (520)	446 (520)	446 (520)
aircraft		(614)*			
<ul> <li>Transport aircraft</li> </ul>	66 (77)	57 (60)*	57 (60)	57 (60)	58 (61)
<ul> <li>Helicopters</li> </ul>	171 (201)	171 (201)	155	154 (181)	154 (181)
•			(182)*		
Air defense forces					
<ul> <li>Heavy SAM</li> </ul>	19*	19	19	19	19
batteries					
<ul> <li>Medium SAM batteries</li> </ul>	1	4	5	5	5
• Light SAM	70	70	70	70	70
launchers	70	, ,	, 0	70	, 0
Navy					
<ul> <li>Submarines</li> </ul>	3	3	4	4	4
<ul> <li>Combat vessels</li> </ul>	13	13	13	13	13
<ul> <li>Patrol craft</li> </ul>	56	56	56	56	56

<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			
Border Police	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/ Infantry		4	5	
Territorial		4	12	
Airborne			4	
Total		16	21	

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. \* According to foreign publications.

### Tanks

Taliks				
Model	In stock	In service	Since	Notes
MBTs				
High quality				
<ul> <li>Merkava Mk 4</li> </ul>	360	360	2003	Some with Trophy
				ADS installed
<ul> <li>Merkava Mk 3</li> </ul>	780	780	1989	
Subtotal	1,140	1,140		
Medium and low quality				
<ul> <li>Merkava Mk 1/2</li> </ul>	580	580	1979/1983	In operational
				storage
<ul> <li>M60 A3/upgraded</li> </ul>	1,040	1,040	1980	
M60/Magach 7				
<ul> <li>Centurion/upgraded</li> </ul>	350	120	1965	In operational
Centurion				storage
Subtotal	1,970	1,740		
Total	3,070	2,840		
Future procurement				
<ul> <li>Merkava Mk 4</li> </ul>	300			Being delivered

Note: Old MBT chassis are being converted into AFVs.

# APCs/AFVs

Model	In stock	In service	Since	Notes
Achzarit	215	215	1994	
<ul> <li>Namer</li> </ul>	130	130	2008	Being delivered
<ul> <li>M113 (various marks)</li> </ul>	5,500	5,500		Some being upgraded
<ul> <li>Nagmashot*</li> </ul>	}		1989	
<ul> <li>Nagmachon</li> </ul>	}	400		
<ul> <li>Nakpadon</li> </ul>	}			
Subtotal	6,245	6,245		
Light armored vehicles				
<ul> <li>Akrep</li> </ul>	30	30	1998	
<ul> <li>Caracal/ Sandcat</li> </ul>	70	70	2010	With Border Police
<ul> <li>M1114 up-armored HMMWV</li> </ul>	+	+	2004	
• Ze'ev	300	300	2004	
• Sufa-2	700	700	2006	Armored version
• David	400	400	2008	Armored Defender- 110
Subtotal	1,600	1,600		
UGVs				
<ul> <li>AvantGuard</li> </ul>	+	+	2010	Under evaluation
Guardium	+	+	2009	In Force Protection role
Total	7,850	7,850		
Future procurement				
• Namer				Total requirement up to 600

<sup>\*</sup> According to foreign publications.

# Artillery

Model	In stock	In service	Since	Notes
Self-propelled guns and howitzers				
• 203mm M110	36	36	1975	
• 175mm M107	140	70	1974	
• 155mm M109 variants	600	600		To be upgraded
• 155mm M-50/ 155mm L-33	120	120		
Subtotal	896	756		

Model	In stock	In service	Since	Notes
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/	64	64	2006	
Cardom SP				
• 120mm	250	250		
Subtotal	314	314		
MRLs				
• 122mm BM-21	+	+		
<ul> <li>160mm Accular/</li> </ul>	12	12	2012	
Magic Spear				
<ul> <li>227mm MLRS</li> </ul>	48	48	1995	
<ul> <li>290mm MAR 290</li> </ul>	+	+		
Future procurement				
• 120mm Keshet/				Follow-on order
Cardom SP				

## **Ground Radars**

Model	In stock	In service	Since	Notes
Artillery/ mortar-locating	radars			
• AN/TPQ-37 (Nurit)	+	+		
<ul> <li>AN/PPS-15</li> </ul>	+	+		
• EL/M-2112	+	+	2007	Part of Sentry Tech
<ul> <li>EL/M-2084 MMR</li> </ul>	+	+	2009	Part of Iron Dome
(Raaz)				AD system
<ul> <li>AN/TPQ-48 LCMR</li> </ul>	+	+		
<ul> <li>Shilem</li> </ul>	+	+		
Specialized reconnaissan	ice vehicles			
• TOM SP	+	+	2011	Mounted on patrol vehicles
Granite	+	+	2011	Based on Caracal/ Sandcat chassis; with Spider payload
<ul> <li>Raccoon/Stalker II</li> </ul>	+	+	2000	

Model	In stock	In service	Since	Notes
Aerostats with radars				
• Hila	+	+	2008	
• Skystar 300	+	+	2007	Part of Sentry
aerostat				Tech; with Spider
				payload

#### **Advanced Munitions**

Morty guided mortar shell , APAM-MP-T, M329 Cartridge (Kalanit) , APAM-MP-T M117/1 Cartridge (Rakefet) ,

# 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, Viper UGVs (Pazit), Ami bulldozers (3), Bobcat UGVs

#### **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, Tamuz/Spike NLOS SP

### Air Force

#### Order-of-Battle

Category	In stock	In service	Notes
• Combat	520	446	Including aircraft in operational storage
<ul> <li>Transport</li> </ul>	54	52	
<ul> <li>Helicopters</li> </ul>	181	154	

#### **Combat Aircraft**

2004	
2010	
	2010

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

<sup>\*</sup> According to foreign publications.

Model	In stock	In service	Since	Notes
• F-16 C/D (Barak)	135	135	1990	Being upgraded to 2020 standard.
• F-16 A/B (Netz)	107	107	1980/1986	To be phased out
• F-15 I (Ra'am)	25	25	1998	
Subtotal	368	368		
Advanced interceptors				
• F-15 A/B (Baz)	30	16	1976	Being upgraded to "Baz 2000" standard
• F-15 C/D (Baz)	42	42	1982/ 1998	Upgraded to "Baz 2000" standard
Subtotal	72	58		
Obsolete				
• A-4 Skyhawk	80	20	1967	Used for advanced training. The rest are in operational storage.
Total	520	446		· ·
Future procurement				
• F-16 C/D 2020	+			Upgrading of existing aircraft
• F-35 JSF	20			Total requirement up to 100

**Transport Aircraft** 

Model	In stock	In service	Since	Notes
Boeing 707 (Reem)	7	7	1973	In tanker role
<ul> <li>C-130E Hercules</li> </ul>	8	6	1970	To be phased out
• C-130H Hercules (Karnaf)	10	10	1980	Being upgraded; Four in tanker role
• Beech King Air B- 200/200T (Ztufit)	29	29	1990	Some in surveillance role
Total	54	52		
Future procurement				
• V-22 Osprey	6-8			Delivery in 2015- 2016
• C-130J-30	2	2		Delivery in 2014- 2015, with four more will arrive in the future.

Israel

**Training and Liaison Aircraft** 

Model	In stock	In service	Since	Notes
Jet trainers				
<ul> <li>M-346 Master (Lavi)</li> </ul>	2	0	1960	Being deliverd
<ul> <li>CM-170 Fouga</li> </ul>	35	0	1960	In operational
Magister (Tzukit)				storage
Piston/Turbo-prop				
<ul> <li>Bonanza A-36 (Hofit)</li> </ul>	22	22	2005	
• T-6A (Efrony)	19	19	2009	Privately owned basic trainers
• AT-802 Fire Boss	8	8	2011	Privately owned, in firefighting role
• G 120A (Snunit)	27	27	2003	Privately owned primary trainers
Subtotal	76	76		
Total	111	76		
Future procurement				
• M-346 Master	30		2015	Privately owned advanced trainers

Helicopters

Model	In stock	In service	Since	Notes
Attack				
<ul> <li>AH-64A Apache (Peten)</li> </ul>	27	27	1990	
<ul> <li>AH-64D Apache (Saraf)</li> </ul>	18	18	2005	
<ul> <li>AH-1G/S Cobra (Tsefa)</li> </ul>	45	32	1981	To be upgraded
Subtotal	90	77		
Heavy transport				
• CH-53-2000 (Yasoor)	37	23	1970	Being upgraded to CH-53-2025
Medium transport				
<ul> <li>S-70A Blackhawk (Yanshouf)</li> </ul>	49	49	1994/2002	
Naval combat				
<ul> <li>AS 565SA Panther (Atalef)</li> </ul>	5	5	1995	
Total	181	154		

### Miscellaneous Aircraft

Model	In stock	In service	Since	Notes
AEW/AWACS	III SLUCK	III SEI VICE	JIIICE	140162
Gulfstream G550	2	2	2006	Systems are
CAEW (Eitam)	2	2	2000	installed in Israel
ELINT and EW				mstaned in Israel
Gulfstream G500	3	3	2005	
SEMA (Shavit)	3	3	2003	
King Air A200CT/	16	16	1990/	
B-200T (Ztufit)	10	10	2001	
Maritime surveillance			2001	
aircraft				
Heron (Shoval)	8	8	2006	MP radar payload
Seascan (1124N)	3	3		F
UAVs				
• Aerostar	+	+		
Hermes 450	+	+		
(Khamsan)				
Hermes 900 UAV	+	+	2011	
Heron (Soval)	+	+	2009	
Heron TP (Eitan)	+	+	2010	
Delilah/ Light	+	+	2010	In combat role*
Defender				in comout role
Harpy	+	+		Anti-radiation
Timpy				drone*
mini-UAVs				
Skylark LE (	20	20	2010	Used by ground
Rokhev Shamaim)				forces
Skylark 2 (Doher	+	+	2011	Operational
Shamaim/ project				evaluation
Shani)				
Other UAVs				I-view, Mini-V,
				dominator, Orbite
				skylite
Target drones				
eech AQM-37A; Beech B	QM-107B, I	MQM-74C Chu	ıckar II, Tele	edyne Ryan 1241
Tankers				
KC-707 tanker	5	5	2002	Upgraded tankers
<ul> <li>KC-130 tanker</li> </ul>	3	3	1976	Included in
				transport aircraft
Future procurement				
<ul><li>Future procurement</li><li>KC-135 stratotanker</li></ul>	+			Under negotiation

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Model	In stock	In service	Since	Notes
• Eitan UAV	+			
<ul> <li>Orbiter UAV</li> </ul>	4			For naval FMPBs
<ul> <li>Ghost Mini-UAV</li> </ul>	+			For special forces
<ul> <li>Hermes 900 UAV</li> </ul>	+			
<ul> <li>Skylark 2/ LE UAV</li> </ul>	+			
(project Shani)				

<sup>\*</sup> According to foreign publications.

#### **Advanced Armament**

#### Air-to-air missiles

AIM-9L/M Sidewinder , AIM-7 Sparrow, Python 3, Python 4, Derby, AIM-120B/ C AMRAAM (200)

#### 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. NLOS) ATGM\*

#### **Bombs**

CBU (including Tal-1, ATA-1000, ATA-500), Delilah ALCM, GBU-28 guided bombs (150), GBU-39 SDB guided bombs (1,000) (Barad Khad), GBU-54 LJDAM (100),runway-penetration bombs, Griffin, Guillotine, JDAMs (Barad Kaved), Opher, PB-500, Pyramid, Spice- 1000/2000 (Barad Plada)

#### Target designation pods

LANTIRN (Inbar), Litening, EL-20600 RTP (Gondola)

#### Reconnaissance pods

EL/M-2022 MP radar, EL-2060P SAR (Yanshuphon), 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)

#### Future procurement

Star-1 AGM/cruise missile (under development), JDAMs guided bombs (2,700), BLU-109 guided bombs (2,000), Paveway 2 guided bombs (4,000), AGM-114L3 Hellfire II AGMs (480), Lizard-3, Spice, Lahat ATGM

#### Air Force Infrastructure

#### Aircraft shelters

In all operational airfields, for combat aircraft

<sup>\*</sup> According to foreign publications.

#### 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
Anti-ballistic missiles				
<ul> <li>Iron Dome <sup>1</sup></li> </ul>	9		2010	
• Arrow- 1/2 ATBM	3	16	1998	Including Green Pine radar
Heavy Batteries				
• MIM-23B	10		1965	
Improved HAWK <sup>3</sup>				
<ul> <li>MIM-104 Patriot</li> </ul>	2		1991	
<ul> <li>MIM-104 Patriot</li> </ul>	4		2000	Upgraded with
PAC-2 <sup>4</sup>				<b>GEM-T</b> missiles
Total	16			
Light missiles				
• MIM-72A		~50		
Chaparral				
• Stinger		~ 20	1997	Part of Mahbet AD system
Total		~70		s y sterii
Shoulder-launched				
missiles				
• FIM-92C Stinger <sup>5</sup>		+		In operational storage

 $<sup>^{1}</sup>$  101891; (1658) (1658); 101801 (1635); 101861 (1658); 101461 (1658) (1658) (1658) (1659) – מרמז על חמש סוללות; 101954 (1719); 102007 (1769) – הכנסתי סוללה ראשונה לשרות; 102333 (1815); 102564 (1952); – 102583 (1959) – עדכנתי את כל הארבע הראשונות; 102984 (2086);  $^{\circ}$ ; 103156 (6157)

 $<sup>^2</sup>$  102,701 (1773) (1773) (1506) (101407) (1324-2004) (100,921) (1869) (1869) (1773) (1773) (1773) (1506) (1506) (1773) (1773) (1774

יי. שורה לגבי רד-איי. - (2026) 102916  $^{5}$  Updated on 26/11/2014 19

Model	Batteries	Launchers	Since	Notes
Future procurement				
<ul> <li>Iron Dome <sup>6</sup></li> </ul>	9			
<ul> <li>David Sling <sup>7</sup></li> </ul>	+		2015	
<ul> <li>Arrow- 3 ATBM <sup>8</sup></li> </ul>	+			

Other Air Defense Systems

Model	In stock	In service	Since	Notes
Air Defense systems				
Mahbet SP	20	20	2002	M-163 Vulcan with Stinger SAMs
Short-range guns				C
• 40mm Bofors L70	+	+		
• 23mm ZU 23x2	+	+		
• 20mm TCM-20	+	+		
Hispano Suiza SP				
Total	~900	~900		
Radars				
• EL-2084 MMR	5	5	2009	Part of with Iron Dome batteries
<ul> <li>Ramit</li> </ul>	+	+		
• FPS-100	+	+		
<ul> <li>AN/TPS-43</li> </ul>	+	+		
<ul> <li>EL-2083 Green</li> </ul>	3	3	1998	Part of Arrow
Pine/ Great Pine				batteries
<ul> <li>Alufa-3</li> </ul>	+	+		
<ul> <li>Nautilus</li> </ul>	+	+		
Aerostats with				
airborne radars				
Airstar	+	+	2009	71M aerostat, mounted with EL- 2083 APR radar, and EL-3330 GMTI radar.

<sup>101898 ; (1658) 101890 ; (1635) 101867 ; (1588) 101503 ; (1551) 101461</sup>  $^6$  102583 ; (1769) 102007 ; (1719) 101954 ; (1769) 102984 ; (1970) (6157) 103156 ; (2086) 102984 ; (1970)

<sup>(6157) 103156;(;(2086) 102984;(1970) 102967;(1971) 102584;(1745) 101981;(1589) 101505;(1497) 101397 7 (2074)</sup> 

<sup>(6130) 103129 &</sup>lt;sup>8</sup>

Model	In stock	In service	Since	Notes
Future procurement				
• EL/M-2084 MMR	3			

# Navy

# **Submarines**

Туре	In stock	Length (m.)/ displacement (t.)	Notes/armament
Submarines			
• Dolphin (Type 212/ 800)	4	57.3/1,900	Sub-Harpoon SSMs 6x533mm torpedoes total of 16 torpedoes/missiles
Future procurement			
<ul> <li>Dolphin AIP</li> </ul>	3	68/ 2,300	Delivery in 2013-2017

#### Combat vessels

Combat vessels			
Туре	In stock	Length (m.)/ displacement (t.)	Notes/armament
Missile corvettes			
• Eilat class (Sa'ar 5)  MFPBs	3	86.4/1,075	1xSA-536 helicopter 8xHarpoon SSMs 64xBarak-1 SAMs 1x76mm gun 2x25mm Sea Vulcans 6x324mm torpedoes Barak-8 SAMs
• 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
ASW vessels			
• Reshef class (Sa'ar 4)	2	58/415	4xHarpoon SSMs 4-6xGabriel II SSMs 1-2x76mm guns 2x20mm guns 1x20mm Vulcan Phalanx 2x12.7mm MGs In ASW role:
	20/44/004	4 04	

Туре	In stock	Length (m.)/ displacement (t.)	Notes/armament
			2-3x324mm torpedoes
			sonar
Total	13		
Future procurement			
<ul> <li>LCS/ MAKO</li> </ul>	2		Under negotiations
Future corvette			

### **Patrol Craft**

Туре	In stock	Length (m.)/ displacement (t.)	Notes/armament
Shaldag-2	5	23.6/56	1x25mm Typhoon gun 1x20mm Gun Spike ER ATGMs APS
Super Dvora Mk-I/II	13	21.6/54	2x20mm/ 25mm guns 2x12.7mm MGs 1x84mm MRL depth charges 2x324mm torpedoes
Super Dvora Mk-III	10	27.4/72	1x25mm Typhoon gun 1X20mm gun Spike ER ATGMs APS 2x324mm torpedoes depth charges
Dabur	15	19.8/39	2x20mm guns 2x12.7mm MGs 2x324mm torpedoes 1x84mm MRL depth charges
Stingray (Nahshol)	3	12/10.5	
Defender class (Tzir'ah)	8	9.5/2.7	7.62mm gun Radar Personal optical sensors
Protector USV	2	9/	1x30mm gun
Fotal Future procurement	56		-
Protector	+		

**Landing Craft** 

Landing Craft			
Туре	In stock	Length (m.)/ displacement (t.)	Notes/armament
Ashdod class LCT Future procurement	1	62.7/400	In reserve
<ul> <li>Newport LST</li> </ul>	1		Under negotiations

**Auxiliary Vessels** 

Туре	In stock	Length (m.)/ displacement (t.)	Notes/armament
• Stollergrund (Type 745 – Bat Yam)	2	38.6/450	Support ships
• Ro-Ro	1		

**Special Maritime Forces** 

opcolar maritim	C 1 010C3		
Туре	In stock	Length (m.)/ displacement (t.)	Notes/armament
<ul> <li>Mulit (RHIB)</li> </ul>	+		
<ul> <li>Snunit</li> </ul>	+		
<ul> <li>Zaharon fast boats</li> </ul>	12	12.5	
(Firefish)			
<ul> <li>Morena (RHIB)</li> </ul>	2	13	Search radar

### **Coastal Defense**

Туре	In stock	Notes
Costal surveillance radars		
• EL/M-2226	+	Part of CTS surveillance system

## **Naval Infrastructure**

Naval bases	3
Ashdod, Eilat, Haifa	
Ship maintananas and ra	noir facilities

Ship maintenance and repair facilities

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