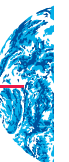
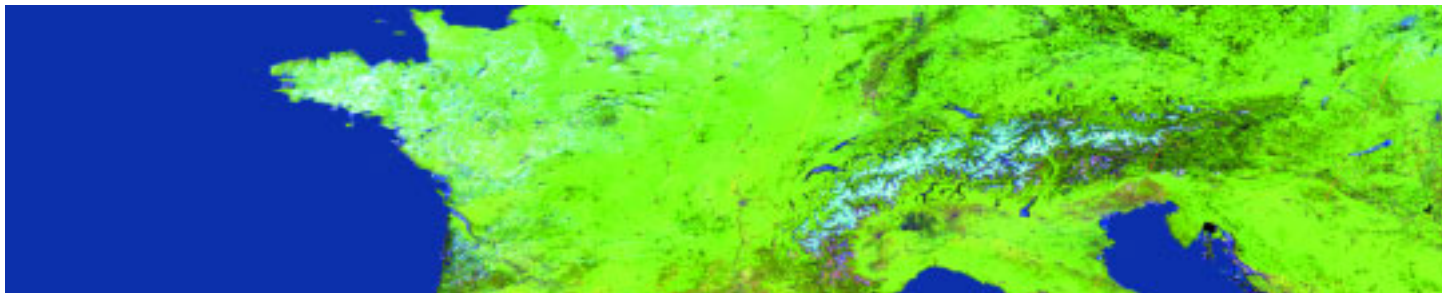


# Spot satellite technical data



# Spot satellite technical data

	General features		
	Spot 5	Spot 4	Spot 1, 2, 3
Launch date	4 May 2002	24 March 1998	1 22 February 1986 – 2 22 January 1990 3 26 September 1993
Launch vehicle	Ariane 4	Ariane 4	Ariane 2/3
Nominal lifetime	5 years	5 years	3 years
Orbit	Sun-synchronous	Sun-synchronous	Sun-synchronous
Local Equator crossing time (descending)	10:30 a.m.	10:30 a.m.	10:30 a.m.
Altitude at Equator	822 km	822 km	822 km
Inclination	98.7°	98.7°	98.7°
Velocity	7.4 kps	7.4 kps	7.4 kps
Attitude control	Earth-pointing and yaw-axis controlled (to compensate for effects due to Earth's rotation)	Earth-pointing	Earth-pointing
Orbital period	101.4 minutes	101.4 minutes	101.4 minutes
Orbital cycle	26 days	26 days	26 days
Total mass	3,000 kg	2,760 kg	1,800 kg
Dimensions	3,1 x 3,1 x 5,7 m	2 x 2 x 5,6 m	2 x 2 x 4,5 m
Solar array (end of life)	2,400 W	2,100 W	1,100 W
Recording capacity	90-Gbit solid-state memory (~ 210 images with an average decompressed file size of 144 Mb)	Two 120-Gbit recorders plus 9-Gbit solid-state memory (~ 560 images on each recorder + 40 images, with an average decompressed file size of 36 Mb)	Two 60-Gbit recorders (~ 280 images on each with an average decompressed file size of 36 Mb)
Onboard image processing	Up to 5 images acquired simultaneously, 2 downlinked in real time AND 3 stored onboard using a 2.6 compression ratio (DCT)	Two images acquired simultaneously, then downlinked OR recorded using a 1.3 compression ratio (DPCM)	Two images acquired simultaneously, then downlinked OR recorded using a 1.3 compression ratio (DPCM, panchromatic imagery only)
Image telemetry link (8 GHz)	2 x 50 Mbps	50 Mbps	50 Mbps



VEGETATION synthesis - Europe



# Spot satellite technical data

	High-Resolution Instruments		
	Spot 5	Spot 4	Spot 1, 2, 3
Instruments	2 HRGs	2 HRVIRs	2 HRVs
Spectral bands and resolution	2 panchromatic (5 m), combined to generate a 2.5-metre product 3 multispectral (10 m) 1 short-wave infrared (20 m)	1 panchromatic (10 m) 3 multispectral (20 m) 1 short-wave infrared (20 m)	1 panchromatic (10 m) 3 multispectral (20 m)
Spectral range	P: 0.48 - 0.71 $\mu\text{m}$ B1 (green): 0.50 - 0.59 $\mu\text{m}$ B2 (red): 0.61 - 0.68 $\mu\text{m}$ B3 (NIR): 0.78 - 0.89 $\mu\text{m}$ B4 (SWIR): 1.58 - 1.75 $\mu\text{m}$	M: 0.61 - 0.68 $\mu\text{m}$ B1 (green): 0.50 - 0.59 $\mu\text{m}$ B2 (red): 0.61 - 0.68 $\mu\text{m}$ B3 (NIR): 0.78 - 0.89 $\mu\text{m}$ B4 (SWIR): 1.58 - 1.75 $\mu\text{m}$	P: 0.50 - 0.73 $\mu\text{m}$ B1 (green): 0.50 - 0.59 $\mu\text{m}$ B2 (red): 0.61 - 0.68 $\mu\text{m}$ B3 (NIR): 0.78 - 0.89 $\mu\text{m}$
Imaging swath	60 km x 60 km to 80 km	60 km x 60 km to 80 km	60 km x 60 km to 80 km
Image dynamics	8 bits	8 bits	8 bits
Absolute location accuracy (no ground control points, flat terrain)	30 m ( $1 \sigma^*$ )	350 m ( $1 \sigma^*$ )	350 m ( $1 \sigma^*$ )
Relative internal distance accuracy (level 1B)	$0.5 \times 10^{-3}$ ( $1 \sigma$ )	$0.5 \times 10^{-3}$ ( $1 \sigma$ )	$0.5 \times 10^{-3}$ ( $1 \sigma$ )
Programmable	Yes	Yes	Yes
Angle of incidence	$\pm 31.06^\circ$	$\pm 31.06^\circ$	$\pm 31.06^\circ$
Average revisit interval over a 26-day orbital cycle, depending on latitude	2 to 3 days	2 to 3 days	2 to 3 days

\* Location accuracy is evaluated on the basis of a statistic calculated from a large number of scenes acquired from September 2003, across the globe.

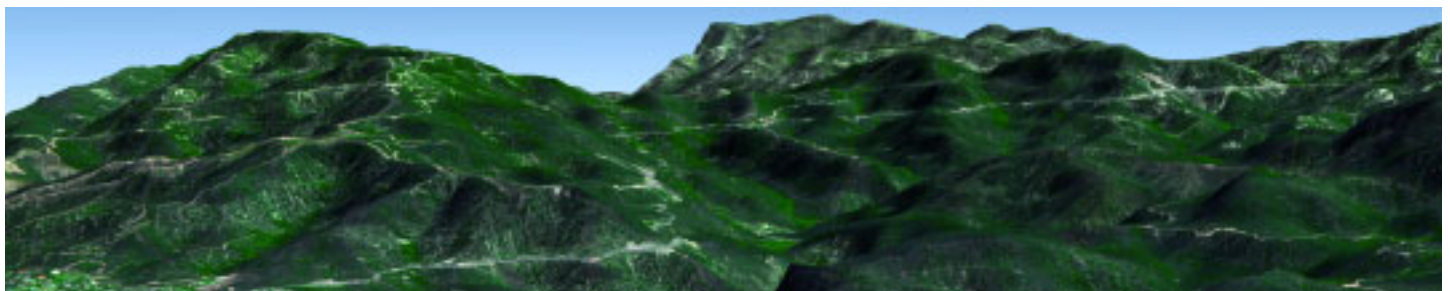
	VEGETATION Instrument		
	Spot 5	Spot 4	Spot 1, 2, 3
Passenger instrument	VEGETATION 2	VEGETATION 1	-
Spectral bands	4	4	-
Electromagnetic spectrum	B0: 0.45 - 0.52 $\mu\text{m}$ B2: 0.61 - 0.68 $\mu\text{m}$ B3: 0.78 - 0.89 $\mu\text{m}$ B4: 1.58 - 1.75 $\mu\text{m}$	B0: 0.45 - 0.52 $\mu\text{m}$ B2: 0.61 - 0.68 $\mu\text{m}$ B3: 0.78 - 0.89 $\mu\text{m}$ B4: 1.58 - 1.75 $\mu\text{m}$	-
Resolution	1,000 m	1,000 m	-
Imaging swath	2,250 km	2,250 km	-
Image dynamics	10 bits	10 bits	-
Revisit interval	1 day	1 day	-



# Spot satellite technical data

	Stereoscopic Instruments			
	Spot 5		Spot 4	Spot 1, 2, 3
<b>Instrument</b>	HRS Along-track stereoviewing	HRG stereoviewing capability Across track	HRVIR stereoviewing capability Across track	HRV stereoviewing capability Across track
<b>Spectral bands and resolution</b>	1 panchromatic (10 m) (resampled every 5 m along track) => 10 m across track, 5 m along track	2 panchromatic (5 m), combined to generate a 2.5-metre product 3 multispectral (10 m) 1 short-wave infrared (20 m)	1 panchromatic (10 m) 3 multispectral (20 m) 1 short-wave infrared (20 m)	1 panchromatic (10 m) 3 multispectral (20 m)
<b>Spectral range</b>	P: 0.49 - 0.69 $\mu\text{m}$	P: 0.48 - 0.71 $\mu\text{m}$ B1: 0.50 - 0.59 $\mu\text{m}$ B2: 0.61 - 0.68 $\mu\text{m}$ B3: 0.78 - 0.89 $\mu\text{m}$ B4: 1.58 - 1.75 $\mu\text{m}$	M: 0.61 - 0.68 $\mu\text{m}$ B1: 0.50 - 0.59 $\mu\text{m}$ B2: 0.61 - 0.68 $\mu\text{m}$ B3: 0.78 - 0.89 $\mu\text{m}$ B4: 1.58 - 1.75 $\mu\text{m}$	P: 0.50 - 0.73 $\mu\text{m}$ B1: 0.50 - 0.59 $\mu\text{m}$ B2: 0.61 - 0.68 $\mu\text{m}$ B3: 0.78 - 0.89 $\mu\text{m}$
<b>Imaging swath</b>	600 km x 120 km	60 km x 60 km to 80 km	60 km x 60 km to 80 km	60 km x 60 km to 80 km
<b>Image dynamics</b>	8 bits	8 bits	8 bits	8 bits
<b>Base/height ratio (B/H)</b>	~ 0.84 ( $\pm 20^\circ$ )	0.5 to 1.1	0.5 to 1.1	0.5 to 1.1
<b>Absolute location accuracy (no ground control points, flat terrain)</b>	10 m ( $1 \sigma^*$ )	30 m ( $1 \sigma^*$ )	350 m ( $1 \sigma^*$ )	350 m ( $1 \sigma^*$ )
<b>Time between two images</b>	90 seconds (simultaneous)	variable	variable	variable

\* Location accuracy is evaluated on the basis of a statistic calculated from a large number of scenes acquired from September 2003, across the globe.



3D view - Los Angeles, USA - 06/2002

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