

**Guide:** Maxar Satellite Constellation

**URL:** <https://www.pgc.umn.edu/guides/commercial-imagery/maxar-satellite-constellation/>

**Last Modified:** October 3, 2023

**Export Date:** February 24, 2024

*PGC provides high-resolution imagery from Maxar Technologies (formerly DigitalGlobe). Here you will find information about the satellites' spatial and temporal resolution, spectral capabilities, and more!*

## About Maxar

Maxar Technologies Inc. is a commercial satellite imagery company currently headquartered in Westminster, Colorado. DigitalGlobe and MDA Holdings Company merged to become Maxar Technologies in 2017.

Maxar operates a constellation of five electro-optical earth imaging satellites.

For more information, visit [Maxar's Constellation](#).

## WorldView-1

WorldView-1 was Maxar's second satellite, increasing capacity for the growing demand for commercial satellite imagery.

Launched in September 18, 2007, WorldView-1 has a single panchromatic band with a resolution of 0.5 m.

### Satellite Specifications

**Launched:** 2007

**Operational Altitude:** 496 km

**Spectral Characteristics:** Panchromatic

**Sensor Resolution:** 50 cm GSD at nadir

**Dynamic Range:** 11-bits per pixel

**Swath Width:** 17.7 km at nadir

**Capacity:** 1.3 million km<sup>2</sup> per day

**Stereo Collection:** Yes

[Datasheet](#)

## WorldView-2

Maxar's third satellite was launched on October 8, 2009.

WorldView-2 provides commercially available panchromatic imagery of .46 m resolution, and 8-band multispectral imagery with 1.84 m (6 ft 0 in) resolution.

### Satellite Specifications

**Launched:** 2009

**Operational Altitude:** 770 km

**Spectral Characteristics:** Panchromatic + 8 Multispectral

**Sensor Resolution:** 46 cm GSD at nadir

**Dynamic Range:** 11-bits per pixel

**Swath Width:** 16.4 km at nadir

**Capacity:** 1.0 million km<sup>2</sup> per day

**Stereo Collection:** Yes

[Datasheet](#)

## WorldView-3

Launched on August 13, 2014, WorldView-3 provides commercially available panchromatic imagery of 0.31 m (12 in) resolution, which was the highest resolution commercially available at the time.

In addition, eight-band multispectral imagery with 1.24 m (4 ft 1 in) resolution and shortwave infrared (SWIR) imagery at 3.7 m (12 ft 2 in) resolution are also available.

### Satellite Specifications

**Launched:** 2014

**Operational Altitude:** 617 km

**Spectral Characteristics:** Panchromatic + 8 Multispectral + 8 SWIR + 12 CAVIS

**Sensor Resolution:** 31 cm GSD at nadir

**Dynamic Range:** 11-bits per pixel, 14-bits per pixel SWIR

**Swath Width:** 13.1 km at nadir

**Capacity:** 680,000 km<sup>2</sup> per day

**Stereo Collection:** Yes

[Datasheet](#)

## WorldView-4

Launched on November 11, 2016, WorldView-4 is Maxar's newest high-resolution satellite.

### Satellite Specifications

**Launched:** 2016

**Operational Altitude:** 617 km

**Spectral Characteristics:** Panchromatic + 4 Multispectral Bands

**Sensor Resolution:** Pan: 31 cm GSD at nadir; MS: 1.24 m at nadir

**Dynamic Range:** 11-bits per pixel

**Swath Width:** 13.2 km at nadir

**Capacity:** 680,000 km<sup>2</sup> per day

**Stereo Collection:** Yes

[Datasheet](#)

As of 2018, WorldView-4 is not available in the NRO Electro-Optical Commercial Layer (EOCL) license.

## QuickBird

Maxar's first Earth observation satellite, QuickBird launched in October of 2011 and became the first satellite provide commercially-available sub-meter optical imagery.

QuickBird was retired in December 2014 after its mission was extended in 2011 by raising the orbital altitude from 450km to 482km.

### Satellite Specifications

**Launched:** 2011

**Operational Altitude:** 400-450 km

**Spectral Characteristics:** Panchromatic + 4 Multispectral

**Sensor Resolution:** 55-61 cm GSD at nadir

**Dynamic Range:** 11-bits per pixel

**Swath Width:** 14.9-16.8 km at nadir

**Capacity:** 200,000 km<sup>2</sup> per day

**Stereo Collection:** Yes

[Datasheet](#)

## IKONOS

A pioneer in earth-observation satellites, IKONOS was the first to collect publicly available high-resolution imagery at 1-(panchromatic) and 4-(multispectral) meter resolution.

Launched on September 24, 1999, the satellite performed for more than twice its life expectancy when it was retired in March 2015.

### Satellite Specifications

**Launched:** 1999

**Operational Altitude:** 681 km

**Spectral Characteristics:** Panchromatic + 4 Multispectral

**Sensor Resolution:** 82 cm GSD at nadir

**Dynamic Range:** 11-bits per pixel

**Swath Width:** 11.3 km at nadir

**Capacity:** 240,000 km<sup>2</sup> per day

**Stereo Collection:** Yes

[Datasheet](#)

## GeoEye-1

Originally owned and operated by GeoEye Inc., GeoEye-1 was launched on September 6, 2008.

GeoEye-1 offers four multispectral bands (red, green, blue and near-infrared) in addition to its panchromatic band, which has a maximum resolution of 41 cm.

## Satellite Specifications

**Launched:** 2008

**Operational Altitude:** 681 km

**Spectral Characteristics:** Panchromatic + 4 Multispectral Bands

**Sensor Resolution:** Pan: 41 cm GSD at nadir; MS: 1.65 m GSD at nadir

**Dynamic Range:** 11-bits per pixel

**Swath Width:** 15.3 km at nadir

**Capacity:** 350,000 km<sup>2</sup> per day

**Stereo Collection:** Yes

[Datasheet](#)

## Summary

In this Guide, we've covered:

- History of Maxar Technologies, Inc.
- Detailed specifications of sensors