



Downtown of St. Petersburg, Russia | August 14, 2017 | ZY-3

ZY-3 SATELLITES

3 Satellites, Tri-stereoscopic Mapping, HR, Optical

ZY-3 (short for ZiYuan-3) constellation is composed of three tri-camera satellites. ZY-3 was launched on January 9, 2012, its panchromatic resolution of nadir-, front- and rear-camera are 2.1 m, 3.6 m and 3.6 m, and the multispectral resolution is 5.8 m. The imaging nadir swath width is wider than 50 km, and stereo imaging nadir swath width is wider than 45 km. It has been in operation over 8 years. ZY-3 02 was launched on May 30, 2016. ZY-3 03 was launched on July 25, 2020, it is equipped with a laser altimeter. When the three work as a constellation, they shorten the repeat circle from 59 days to 15 days and revisit rate from 3 days to daily, and enable 3 times imaging swath width. The main mission of the constellation is to collecting tri-stereoscopic and multispectral imagery applied in 1:50,000 scale mapping, 1:25,000 scale or higher updating and correcting maps. The products includes imagery data, DSM, DEM, DLG, DRG, and customized products according to user's requirements.

Technical Specifications

Number of satellites	3 identical satellites: ZY-3, ZY-3 02 and ZY-3 03		
	ZY-3	ZY-3 02	ZY-3 03
Mission life	5 years	5 years	5 years
Weight	2630 kg	2700 kg	2500 kg
Launch time	January 9, 2012	May 30, 2016	July 25, 2020
Orbit	Sun-synchronous, 10:30 am descending node, 505 km altitude, 97.421° inclination angle		
Sensor bands	Panchromatic, blue, green, red and near-infrared		
Resolution (at nadir)	Panchromatic: 2.1 m (nadir) 3.6 m (Front/Rear) Multispectral: 5.8 m	Panchromatic: 2.1 m (nadir) 2.5 m (Front/Rear) Multispectral: 5.8 m	Panchromatic: 2.1 m (nadir) 2.5 m (Front/Rear) Multispectral: 5.8 m
Dynamic range at imaging	10 bits		
Swath width (at nadir)	Mono: 50 km; stereo: 45 km		
Revisit capacity	5 days per satellite, 3 days bi-satellite, daily tri-satellite		

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