



# ZIYUAN-1 02 SATELLITES

## Hyperspectral, IRS, 8 MS bands, HR

ZY-1 02 (short for ZiYuan-1 02) is composed of two satellites that are almost identical. ZY-1 02D (also named ZY1E) was launched on September 12, 2019. It is equipped with two cameras, one is VNIR camera and the other is hyperspectral camera. The VNIR camera has eight multispectral bands, and it has a large view field, with 115 km swath width. The hyperspectral camera has 166 bands. Its follow-on satellite ZY-1 02E (ZY1F) was launched on December 26, 2021, apart from VNIR and hyperspectral cameras, it is also equipped IRS camera that collect 15 m resolution infrared-spectral data. The two satellites provide great supports in investigating land resources, emergent monitoring and supervising services.

### Technical Specifications

<b>Number of satellites</b>	2 satellites: ZY-1 02D and ZY-1 02E		
<b>Mission life</b>	5 years		
<b>Weight</b>	1840 kg		
<b>Launch time</b>	ZY-1 02D: September 12, 2019; ZY-1 02E: December 26, 2021		
<b>Orbit</b>	Sun-synchronous, 10:30 am descending node, 778 km altitude, 98.5° inclination angle		
	<b>Visible Near Infrared Camera</b>	<b>Hyperspectral Camera</b>	<b>IRS Camera (ZY-1 02E only)</b>
<b>Sensor bands</b>	Panchromatic, Red, Blue, Green, Red, NIR1 Coastal Blue, Yellow Red Edge, NIR2	Spectral Range: 0.4 $\mu\text{m}$ ~ 2.5 $\mu\text{m}$ VNIR: 76 bands SWIR: 90 bands	Spectral Range: 7.7 $\mu\text{m}$ ~ 10.5 $\mu\text{m}$
<b>Resolution (at nadir)</b>	Panchromatic: 2.5 m Multispectral: 10 m	30 m	15 m
<b>Locational accuracy</b>	50 m CE90 (w/o GCPs)		
<b>Dynamic range at imaging</b>	12 bits		
<b>Swath width (at nadir)</b>	115 km	60 km	115 km
<b>Onboard storage</b>	2 Tb		
<b>Revisit capacity</b>	5 days		

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