

KOMPSAT-3A Satellite Sensor Specifications

Spectral bands	PAN: 450–900 μm
	MS1 (Blue): 450–520 μm
	MS2 (Green): 520–600 μm
	MS3 (Red): 630–690 μm
	MS4 (NIR): 760–900 μm
Optics	MWIR: 3.3 – 5.2 μm
	– Korsch-type telescope design on a CFRP optical bench
	– 80 cm diameter of primary mirror aperture (the mirrors are lightweighted)
	– All mirrors (5) are of Zerodur design
	– Focal length = 8.6 m
GSD (Ground Sample Distance)	– F number = f/11.5
	PAN: 0.55m at nadir
	MS: 2.2m at nadir
Swath width	IR: 5.5 m at nadir
	12 km (at nadir)
Pan CCD detector module	– Line array of 24,000 pixels consisting of 2 stacks of 12 k pixels each
	– TDI (Time Delay Integration), up to 64 TDI in 4 stages
	– Pixel pitch = 8.75 μm
	– Source data rate = 16 x 15 Mpixel/s (or 3.84 Gbit/s)
MS CCD detector module	– Line array of 6,000 pixels, provision of 8 stacks, TDI capability
	– Pixel pitch = 2 x 17.5 μm
	– Binning of MS pixels (MS pixels are 4 times longer than Pan pixels)
	– Source data rate = 4 x 240 Mbit/s
Antiblooming	Yes
PRNU (Photo Response Non-Uniformity)	Yes
DSNU (Dark Signal Non-Uniformity)	Yes
SNR (Signal-to-Noise Ratio)	> 100 for Pan and MS

Data quantization	14 bit
Data compression	CCSDS 120.1-G-1E
Payload data memory	512 Gbit
Data rate	1 GB/s