

عنوان مقاله:

Type of Payloads in satellites : A Review

محل انتشار:

بیست و دومین کنفرانس بین المللی انجمن هوافضای ایران (سال: 1402)

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خلاصه مقاله:

Today, the need to use satellites and their applications is not hidden from anyone, so this has led to the development of various types of satellites with different applications. Satellites generally consist of two parts, the bus and the payload, and in this article, we will specifically focus on the payload, e.g., see Fig. 1. A satellite payload encompassing various parameters that delineate its diverse facets. These parameters include payload type, orbit type, vehicle type, weight, frequency band, application, and regional analysis. In terms of payload type, it includes communication, imaging, and navigation segments. The orbit type classification comprises LEO (Low Earth Orbit), MEO (Medium Earth Orbit), and GEO (Geostationary Earth Orbit), offering a dynamic perspective on satellite deployment. Vehicle types are diversified into small, medium, and heavy, reflecting the spectrum of satellite sizes and capacities. The payload weight segment adds granularity to the analysis by dividing it into low, medium, and high categories, reflecting the diverse payload capabilities of satellites. Frequency bands play a pivotal role, with classifications such as C band, Ka band, S and L band, X band, VHF, and UHF band. Applications diversify the market even further, encompassing telecommunication, remote sensing, scientific research, surveillance, and navigation, e.g., see Fig. 2. Lastly, the regional analysis brings a global perspective, focusing on North America, Europe, Asia-Pacific, and LAMEA (Latin America, Middle East, and Africa).

کلمات کلیدی:

.Payload-Transponder-Antenna-Camera-Sensors

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