TIMETAG.SPACE

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TIMETAG.SPACE OFFERS SPACE-GRADE DEVELOPMENT LEVEL INSTRUMENT MEASURING THE TIME OF EVENTS WITH PICOSECOND PRECISION.

TimeTag.Space is the first company in the world that offers a space-grade development level instrument measuring the time of events with picosecond precision, which is essential in the following space applications: navigation, machine vision, clock distribution among satellites, deep-space laser communication, quantum communication, and others.

Currently there is no space standard timing solution available on the market. Current solutions, such as GPS for synchronisation, atomic clocks for absolute time, custom time of flight and time tagging systems, are either highly expensive and/or low radiation tolerant.

We offer a multipurpose resilient event timing technology, which provides clock distribution and synchronisation among satellites that is significantly better, cheaper and more secure than the currently employed solutions. Moreover, the same device also can be employed simultaneously in other subsystems:

- one-shot distance measurement:
  (a) laser altimetry (e.g. docking, landing, navigation)
  (b) laser imaging (e.g. machine vision)
- laser communication by pulse position modulation
- quantum communication (e.g. QKD, QDS)

USP
We are the first to offer a picosecond Time Tagging Technology for space applications. Our know-how allows us to achieve a radiation-tolerant timer with the resolution of 5 picoseconds RMS, that can serve multiple tasks simultaneously in a wide temperature range. Moreover, already being a leader in the terrestrial timer market-niche, we also hold more than 50% of the satellite laser ranging market.

Target Market
Satellite constellation primes and satellite system providers

Space Connection
Our technology is designed to be used aboard a satellite or other spacecrafts for simultaneous support of multiple space applications where picosecond-precise timing is required (such as navigation, clock distribution and synchronization in free space, laser communication, quantum communication, machine vision).

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