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A High Precision GPS Receiver toward the Introduction of LPS in Structural Mechanics

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In structural health monitoring, the demand is for high precision positioning sensor. Among emerging positioning technologies, the carrier phase measurement was proved to be preferable in consideration of its positioning precision. Global Positioning System (GPS) is the most successful demonstration of high precision positioning based on carrier phase measurement. It cannot deliver equal precision in all position components, all the time since the quality of GPS positioning solution is heavily dependent on the number and geometric distribution of available satellites. This evokes for the future adoption of LPS (Local Positioning System). In this paper, in particular, the construction of a GPS receiver is reviewed in the light of IC technology. The key aspects of the antenna will be discussed and a solution based on the ZARLINK chipset is presented.

Ключевые слова:

Содержание.

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