

Frequency Counter

S No.	Name of the paper	Author and Year	Summary
1	High precision time and frequency counter for mobile applications	R. Szplet et al. Year: 2010	This paper presents the architecture and specialised operation modes of a miniature, portable, and precise time interval and frequency counter. The precision and flexibility of the counter make it feasible to utilise advanced test and measurement systems in telecom, industry, and research applications.
2	Optical frequency counter based on two mode-locked fibre laser combs	J. L. Peng et al. Year: 2008	This work has demonstrated a semi-automatic optical frequency counter based on two fibre laser combs operated at three different repetition rates. Simple measurement processes were presented to determine the difference in mode number between the two laser combs and the absolute mode number involved in the optical frequency measurement, independent of the frequency fluctuation of the laser under measurement.
3	Picosecond-precision multichannel autonomous time and frequency counter	P. Kwiatkowski et al. Year: 2017	A new highly precise instrument for comprehensive-time and frequency measurements is presented. The fundamental measurement method combines the timestamp method and two-stage time interpolation with an equivalent coding line in the second stage of interpolation. Based on this principle, the instrument's functionality was expanded on frequency measurement, clock stability estimation, and evaluation of signal synchronisation quality.
4	Intensification of biodiesel production using dual-frequency counter-current pulsed ultrasound	Xiulian Yin et al. Year: 2016	Biodiesel production from soybean oil deodorizer distillate was intensified by dual-frequency counter-current pulsed ultrasound, and the kinetics were studied. The effect of different modes, including single-frequency, dual-frequency of sequential mode (SQM), and simultaneous mode (SMM), on biodiesel, were studied with the reactants in a counter-current state. Results

			indicated that the biodiesel conversions enhanced by single-frequency were lower than those enhanced by dual-frequency. For dual-frequency, the biodiesel conversions of SMM were higher than those of SQM.
5	Implementation of PIC based Digital Frequency Counter	Wai Phyto Aung et al. Year: 2008	In this paperwork is proposed to build a frequency counter using advanced PIC technology. For this PIC16F84A is used which has a high resolution frequency upto 30 MHz. First all the theory and architecture is studied in a PIC microcontroller then afterwards all these techniques are applied to build a frequency counter, also various operations of frequency measuring instruments both of analog and digital types are studied to build a frequency counter of 10Hz - 30MHz range.
6	Traffic Flow Estimation using LTE Radio Frequency Counters and Machine Learning	Peter Boros et al. Year: 2021	Different strategies are implemented to improve the transport infrastructure. The work is proposed on a traffic estimation method using ultra frequency counters like path loss and timing advanced counters.
7	A frequency counter based analog-to-digital converter for a RFID telemetry system	McCoy et al. Year:2007	The Analog to Digital conversion process is most effective for low frequency, Radio Frequency IDentification (RFID) sensing systems where the sensing element tags are powered by an inductively coupled carrier signal of fixed frequency. The method uses a specially gated frequency counter to create a digital value that is related to the system's carrier frequency and the frequency of the variable oscillator used with the sensing element.
8	A low-frequency counter using time-discriminant connectionist systems.	El-Asir et al. Year: 2004	The author proposed an architecture for frequency counter which is simple and could be used to measure a wide range of low frequencies by just increasing the number of decade clock dividers. Also, the accuracy can be increased by increasing the number and the size of the memories (EPROMs) used and by increasing the clock frequency without altering the circuit design.

9	Design of Dual Edge 0.5 Hz Precision Frequency Counter for QCM Sensor.	Wijayanto et al. Year:2015	The author designed a circuit system which is implemented in a single chip device to get a counting of the frequency down to 0.5 Hz without suffering the sampling time. The frequency counter has an error of 1 Hz compared to the reference frequency. The frequency counter has a precision of 0.5 Hz
10	High-Resolution Multiple Channel Frequency Counter Using Spartan-3E FPGA	Muhammad A et al. Year: 2016	A reciprocal frequency counter has been successfully implemented in a Spartan-3E (XC3S250E). Better resolution can be achieved for lower input signal frequency. The system shows high stability and accuracy; however, the stability of the TCXO as reference frequency contributes an unexpected spike-like noise in the measured frequency data.