

# Digital Delay Generator

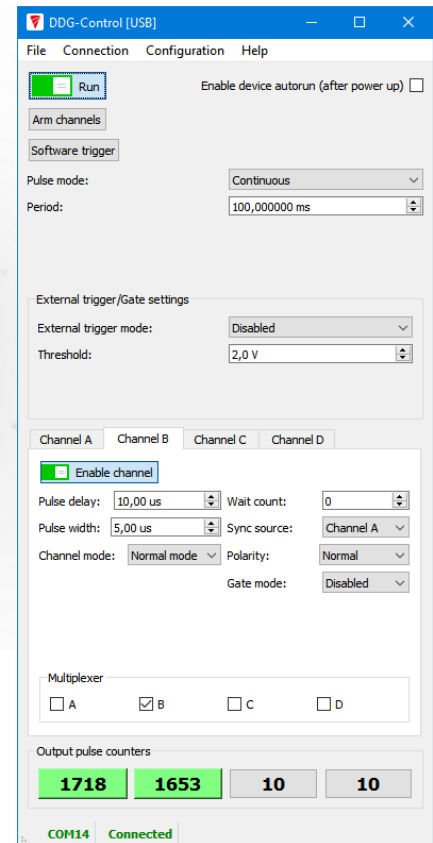
## AC-DDG-4

The AC-DDG is a universal 4 channel digital delay generator with a full set of user-configurable functions.



Its main purpose is precise timing and triggering of events with a resolution of 10 ns and with a wide range of delay and pulse width times from 10 ns to 1000 s.

It allows **periodic, single pulse, burst or duty cycle** modes of operation for each output independently. Pulse delay times can be referenced to the start of the base period or to any other pulse output. This way pulses of different delays can be chained according to various needs. Multiplexers on each output allow combining pulse outputs together to create groups of several pulses on any single output. The AC-DDG can be externally triggered or selected outputs can be gated by the trigger/gate input.



All parameters of output pulses can be set in real-time by a GUI application running on a remote PC and/or stored internally in the generator for standalone operation. The communication with the AC-DDG is possible through USB or serial RS-485 line by simple SCPI protocol.

## Specification

Period t1 – t4	Pulse length 100 ns to 1000 s, Time delay 0 to 1000 s Resolution 10 ns Precision typ. 5 ns ± 100 ppm
Input TRIG/GATE	Trigger level 0.2 to 24.0 V (+- 0.2 V + 3%) Impedance 5.4 kOhm Termination 50 Ohm Jitter typ. < 10 ns (RMS)
Outputs (Ch A – Ch D)	Switchable output level 3.3 / 5 V for each channel Impedance 50 Ω
Communication	USB - Open communication over the serial line using SCPI protocol (R4-485)
Output mode	Continuous, Single shot, Burst mode, Duty cycle, Gated, Inverted
Mechanical mounting	Aluminium box, W×H×D 130×75×190 mm; Weight 1 kg
Input voltage	12–26 V DC, connector 5,5x2,5 mm
Power consumption	< 5 W
Operating temperature	5 – 35 °C, non-condensing
Package content	DDG Power supply, input: ~80-260 V, 50/60 Hz, European plug Control software, Quick Start Guide and manual available online USB A to USB B cable 1,5m
Features on request	Communication over RS485 (binary commands protocol with addressing multiple DDGs) Arm channels of multiple DDG`s synchronously on the common control bus. Eurocard version, 100×160 mm, fits into the subrack format, height 3U, width 8HP Control DDG from your application written with C/C++, C#