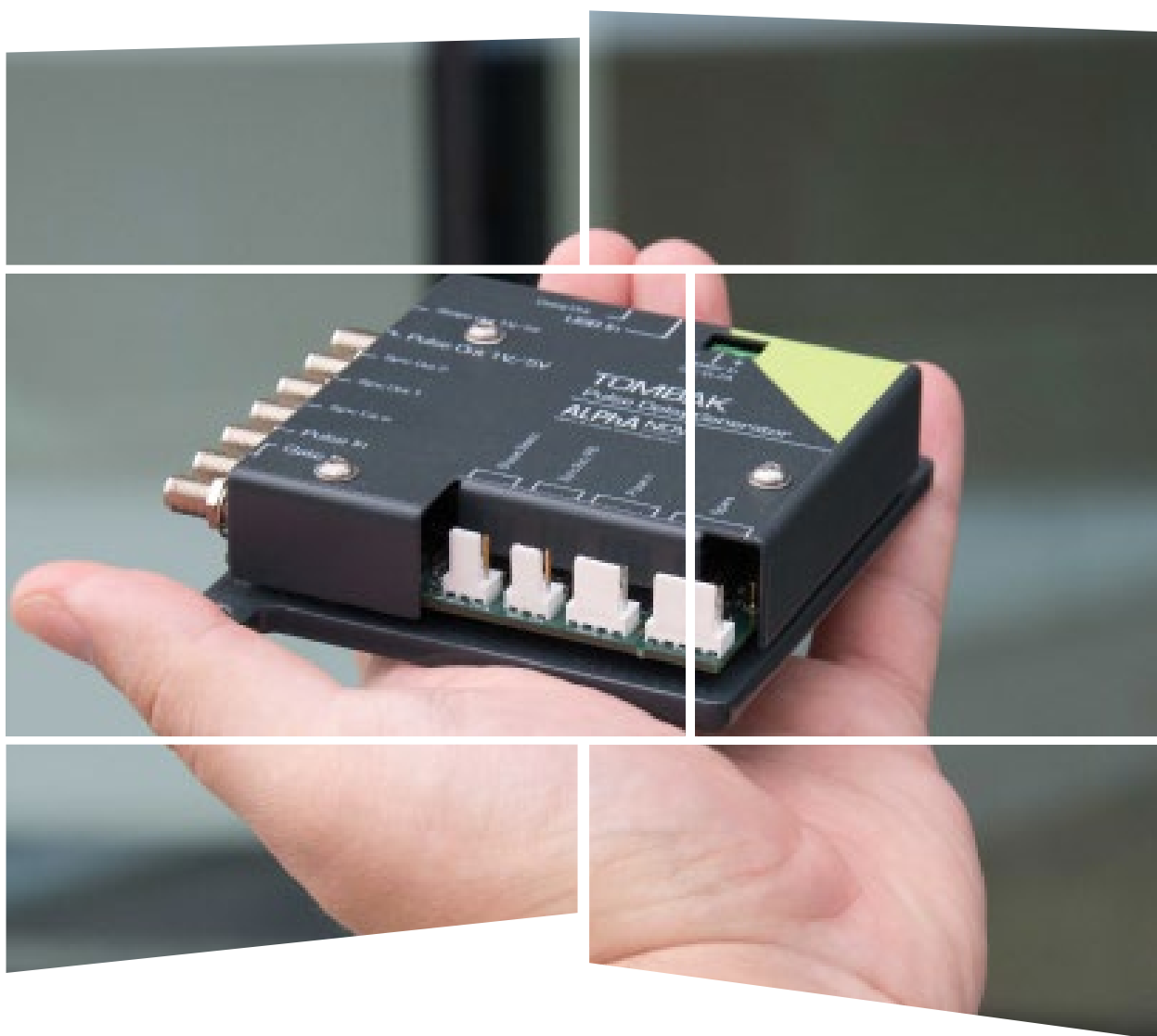


Tombak

Pulse & Digital Delay Generator

Pulse-Picker | Voltage Converter



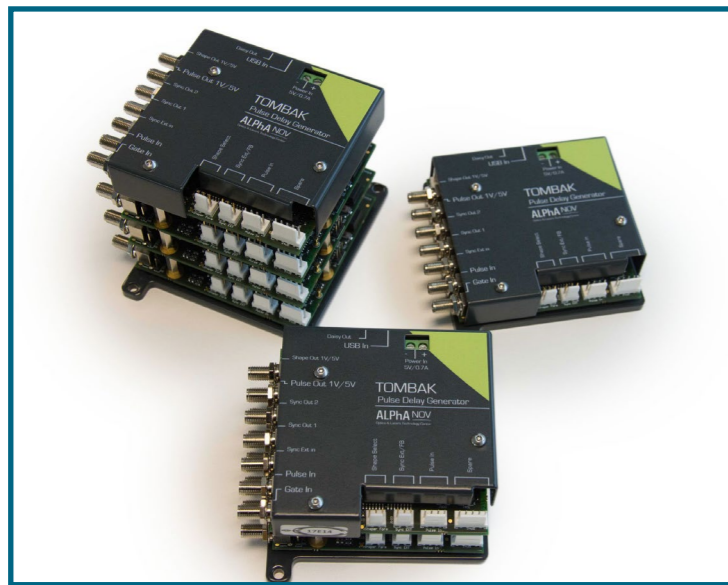
ALPhA **NOV**

Optics & Lasers Technology Center

Tombak

Pulse Delay Generator

The Pulse Delay Generator is a high performance instrument that enables the user to consolidate multiple functions into one compact device.



Possibility to stack multiple synchronized modules

Key features

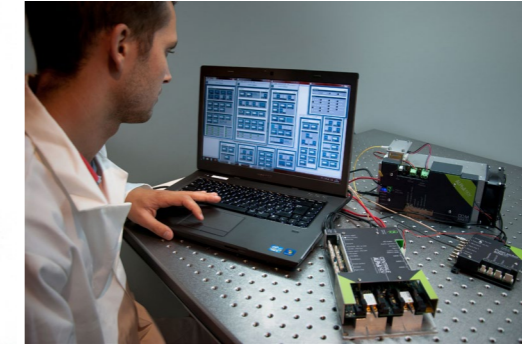
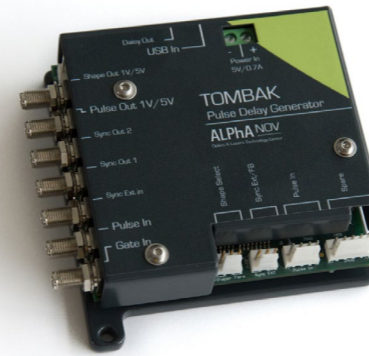
- 10 ps delay resolution
- 80 ps RMS jitter (few ps in direct mode)
- Min input voltage: 30 mV
- 150 MHz voltage level converter / Digital Delay
- 20 MHz standalone generator
- 2 ns pulse resolution
- Burst/Gate generator
- Down to 12 ns insertion delay
- USB interface

This unit is a great asset to generate high frequency pulses, delays and bursts. It's an ideal testing and timing control instrument for electronics, lasers or camera setup.

Key applications

- Ideal for OEM integration
- Components test
- Laser timing control
- Laser pulse-picking
- Precision pulse application
- Instrument triggering
- ATE applications
- Camera synchronization

Operating Modes



The Pulse Delay Generator offers several operating modes including pulse generator, Digital delay generator, frequency divider, burst generator, pulse picker and Voltage converter.

Pulse/Digital Delay Generator

- Adjustable pulse delay: 10 ps to >1000 s
- Adjustable pulse width: 5 ns to >1000 s
- Delay resolution: 10 ps
- Width resolution:
 - 2 ns for pulse width: 5 to 510 ns
 - 5 ns for pulse width: 511 ns to 1000 s
- Jitter:
 - < few ps up to 10 ns delay
 - < 80 ps RMS up to 100 ns delay
 - < 200 ps RMS up to 500 ns delay
 - 1.5 ns RMS otherwise

Voltage level converter

- Rate: up to 150 MHz
- Input Voltage: <30 mV to 3.3 V
- Adjustable output level: 1 V/3.3 V/5 V_TTL
- 12 ns insertion delay
- < 30 ps Jitter

Frequency divider/prescaler

- 200 MHz maximum input freq
- Division by 1 to 10⁹

Standalone generator

- Rate up to 20 MHz
- Programmable duty cycle

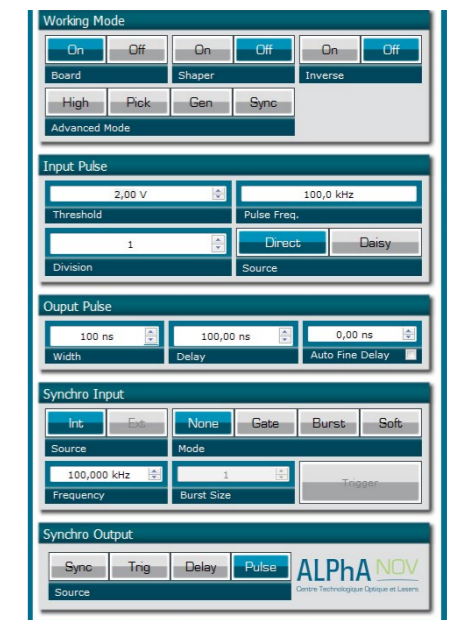
Pulse-Picker / Clock synchronizer

- Pulse picking up to 200 MHz input / 20 MHz output

Burst/gate generator

- 1 to 10⁹ pulses (burst)
- Adjustable trig to burst delay
- Intra burst resolution (internal source): 5 ns
- External or internal source generator
- External or software trigger/gate

GUI control software



Technical Specifications

Electrical

Pulse_Out Outputs (SMA connector)

Output Impedance	50 Ω recommended coupling
Adjustable output level	1 V/3.3 V/5 V_TTL
Rise time	< 1 ns typical
Max output rate	20 MHz (up to 150 MHz as Digital Delay Generator)

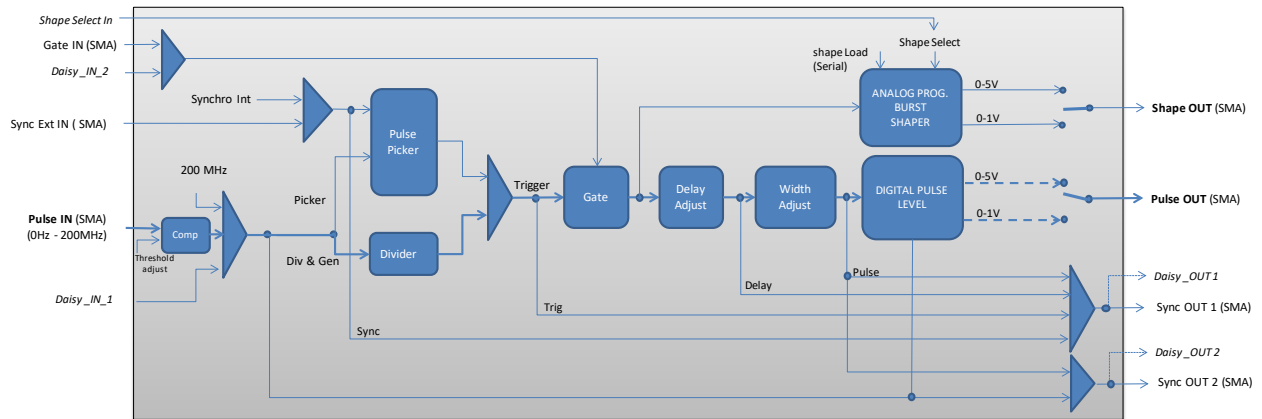
Pulse_In (SMA connector)

Input voltage	30mV to 3.3 V
Threshold	0-3.3 VDC software adjustable (Pulse In)
Max Input rate	200 MHz
Insertion delay	12 ns / 15 ns / 70 ns (see user manual)

Sync Ext/Gate Inputs (SMA connector)

Input voltage	0 to 3.3 V
Threshold	1.2 V
Max input rate	20 MHz

Synoptic



General

Power voltage/current	+5 VDC/500 mA [charger included]
USB	USB 2.0 (cable included)
Stackable units	Multiple channel setup using several units (single USB/ single power supply/single synchronization input signal)
Dimensions (mm)	104*95*28.2