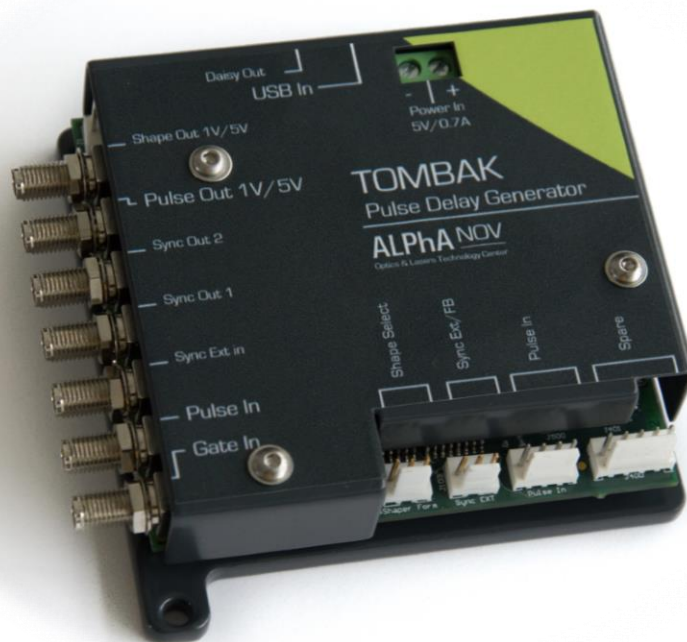




Voltage Level Converter

TOMBAK



Tombak can be used as a **voltage level converter** in every mode that used the PulseIn signal as a reference signal. However, SYNC mode is a specific mode that gives extended performance to the voltage converter feature (higher frequency, lower jitter, lower delay ...).

Main features

Input PulseIn voltage (software adjustable threshold)	30 mV – 3,3V
Output Voltage	1 / 3,3 / 5 Volts (hardware setup)
Input/output maximum frequency	150 MHz

Timing diagram

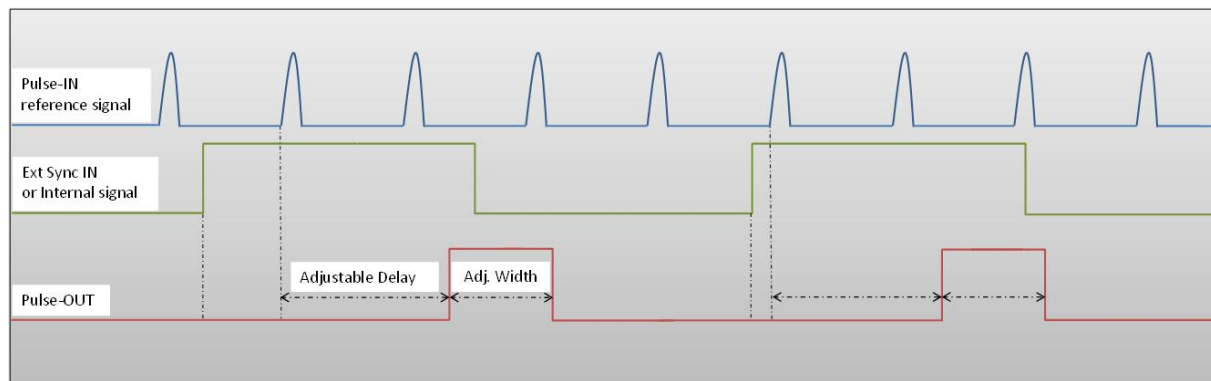


Figure 1 : External or internal signal synchronized with Pulse-In signal.

Synoptic

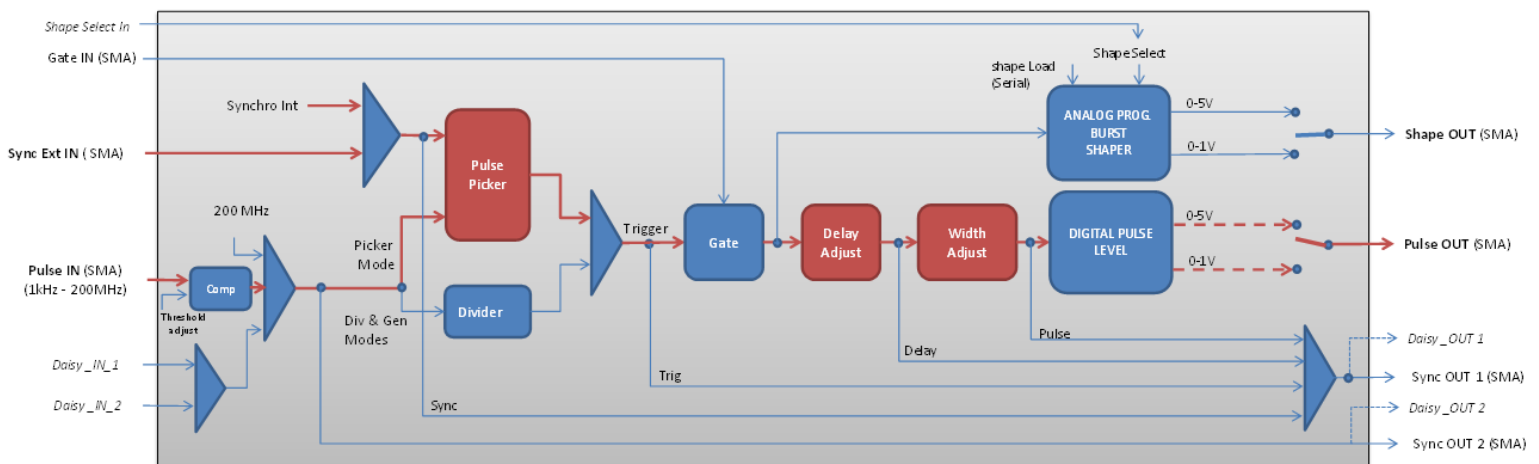
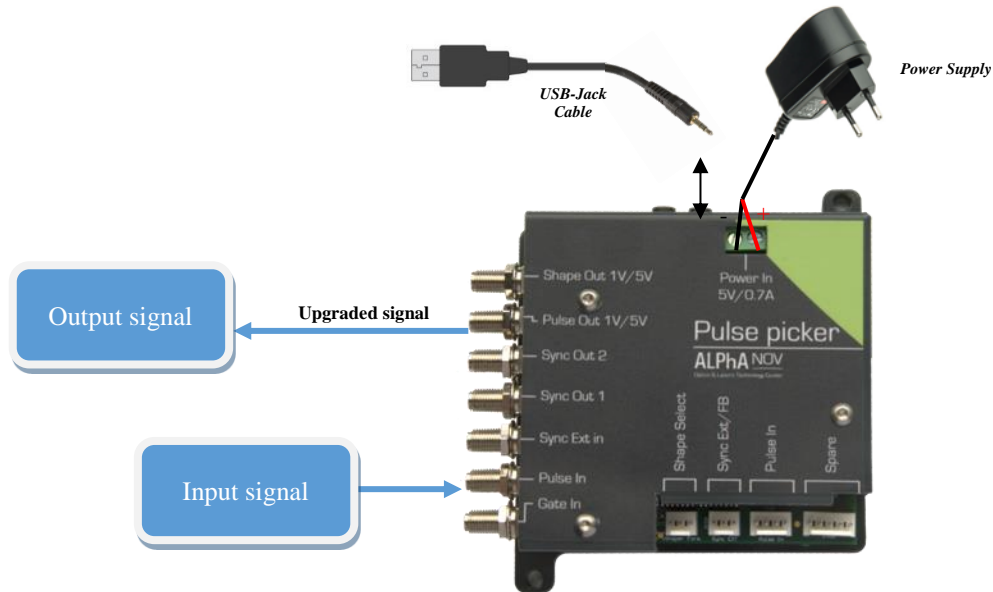


Figure 2 : Main firmware features used in synchronization mode

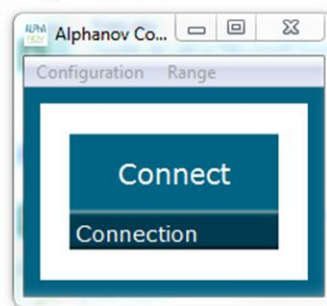
Cabling

1. Plug the USB-Jack cable in the “*USB In*” connector
2. Plug the signal you want to convert in the “*Pulse In*” SMA connector
3. The upgraded signal will output on the “*Pulse Out*” SMA connector
4. Finally, plug the power supply to the “*Power In*” connector to power on the board



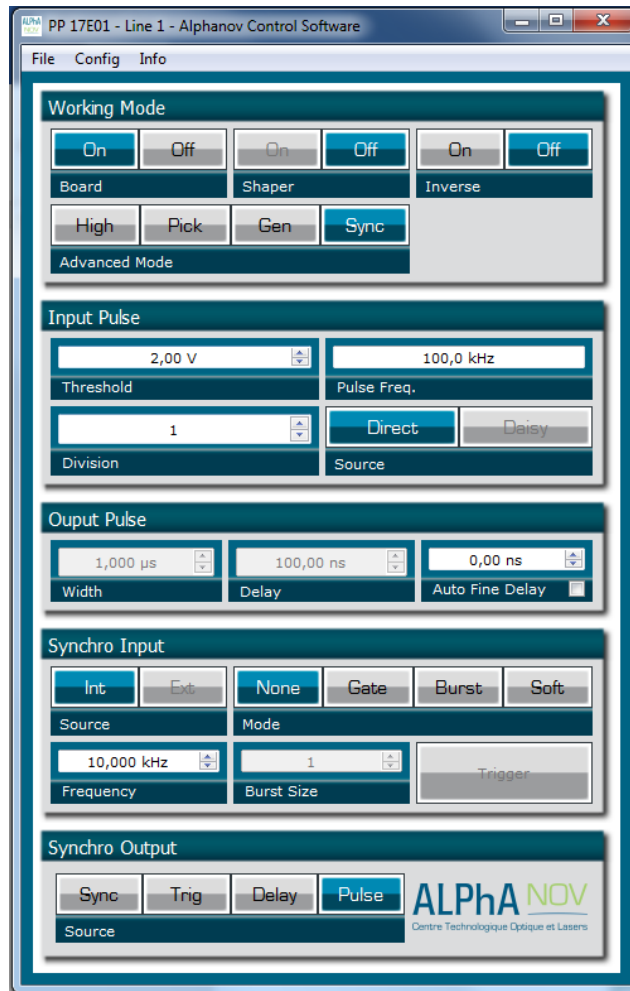
Software configuration

Launch the ALPhANOV Control Software and click on *Connect* to start the Pulsepicker hardware detection. The software automatically detects the Pulse-Picker board.

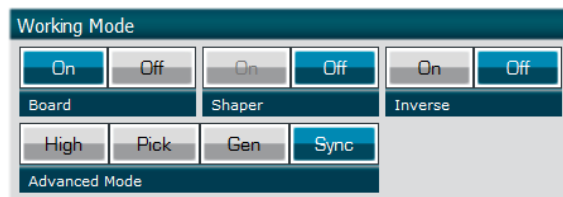


A window will appear for each Pulsepicker connected to the computer.

The main configuration windows must be configured as follow :



- Working Mode window :
 - Set the **Board** On
 - Set the **Shaper** button to **Off**
 - Set the **Inverse** button to **Off** unless you need to invert the output signal
 - Set **Advanced Mode** to **Sync**



- Input pulse window :
 - Configure the **Threshold** voltage so that the input **pulse frequency** is detected and equal to your pulse generator system
 - Set the **Division** factor to **1**
 - Set the input pulse **Source** to **Direct**

Input Pulse	
2,00 V	100,0 kHz
Threshold	Pulse Freq.
1	Direct Daisy
Division	Source

- Output Pulse window :
 - Choose the output **delay value**
 - Choose the output **pulse width**
 - **Auto Fine Delay** may be let in auto mode

Output Pulse		
1,000 µs	100,00 ns	0,00 ns
Width	Delay	Auto Fine Delay

- Synchro input windows (default settings) :
 - Source : not used in this mode
 - Gate Mode : None
 - Frequency : not used in this mode
 - Burst size : not used in this mode

Synchro Input		
Int	Ext	None Gate Burst Soft
Source	Mode	
10,000 kHz	1	Trigger
Frequency	Burst Size	

- Synchro output window (default settings) :
 - Source : Pulse

Synchro Output			
Sync	Trig	Delay	Pulse
Source	ALPhA NOV		
	Centre Technologique Optique et Lasers		