

Features

- Eight Simultaneous Outputs
 - 3V / 50 Ω amplitude
 - < 5 ns rise time
 - < 20 ps RMS jitter
 - LEMO connectors
- Trigger Source
 - External
 - Manual from Push button
- Trigger Output
- cPCI, 6U, 1 Slot Form Factor
- Options: Module in Rack 19", 1U
 - LEMO to BNC cable

Applications

- Components Test
- ATE Application
- Laser Timing System
- Precision Pulse Application

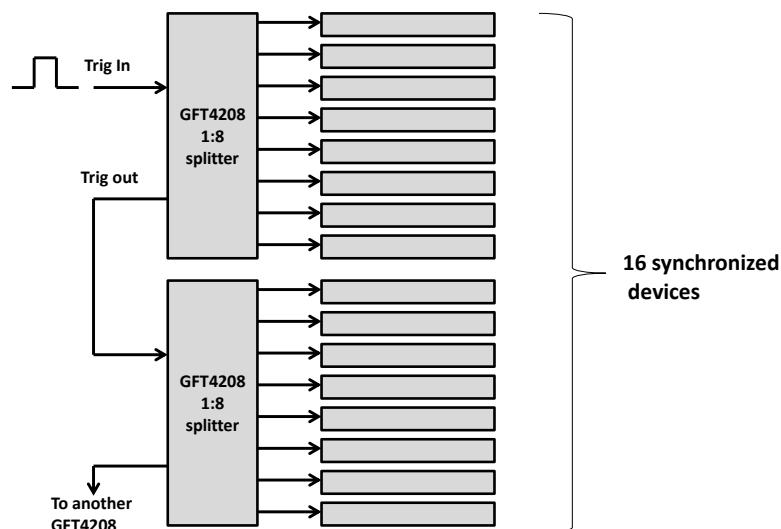
Description

The GFT4208 digital splitter module provides eight simultaneous pulses. Channel to channel jitter is less than 20ps rms. LEMO outputs deliver 3V level, <5ns rise time, under 50 Ω .

One Input (Trigger In) or push button is used to trigger off all output channels.

One output (Trig Out) allows to synchronize another GFT4208 modules by daisy chaining several digital splitters.

A typical GFT4208 application would be a local timing system. In this way up to 4 GFT4208 can synchronize 32 delay generators with low jitter.



Typical application to synchronize 16 devices



GFT4208

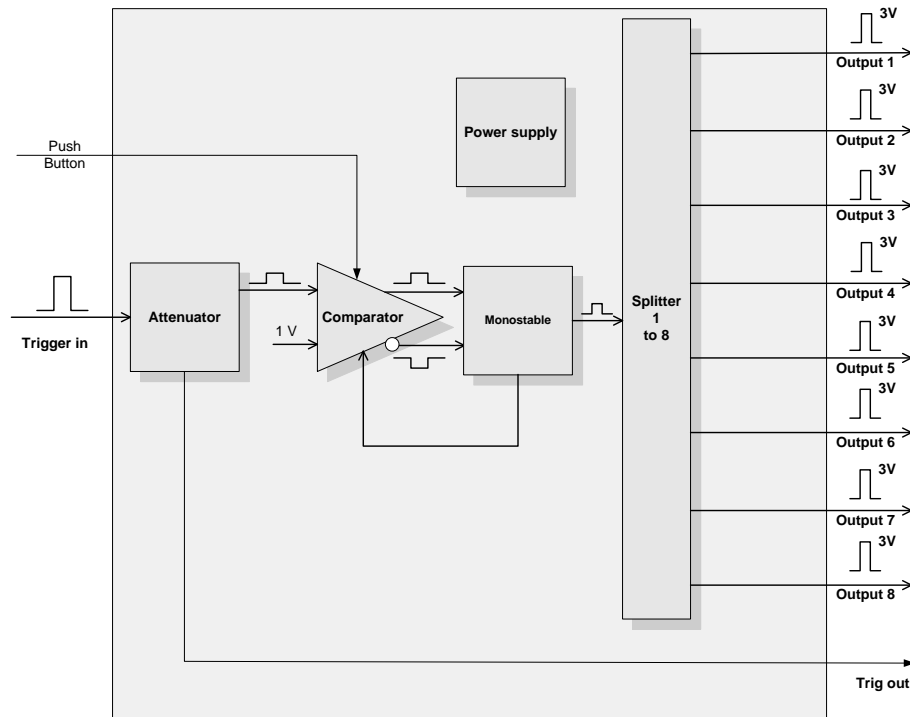
1:8 Output Digital Splitter

Specifications

Trigger input	
Threshold	+ 1 V
Slope	Positive
Rise time	< 5 ns
Impedance	100 k Ω (or 50 Ω if "Trigger output" is loaded)
Repetition rate	< 1 kHz
Trigger Delay	< 15 ns (input to any output)
Output T1 to T8	
Channel number	8 outputs
RMS jitter	< 20 ps (output to output)
Amplitude	3 V
Load	50 Ω
Width	150 ns +/- 10 ns
Rise time / Fall time	< 5 ns
skew	< 500 ps (output to output)
Drift	< 20 ps / $^{\circ}$ C
Trigger output	
Amplitude	Same as the Trigger input signal
Internal Load	100 k Ω (external 50 Ω load is furnished)
Rise time	Same as the Trigger input signal
General	
Connectors	All are LEMO
Size	cPCI, 6U, 1 slot
Power supply	+3.3 V / 200 mA, + 5 V / 100 mA, + 12 V / 300 mA, - 12 V / 100 mA
Option 1	
The unit is available in 19", 1U Rack with following specifications	
<ul style="list-style-type: none"> - Power supply < 100 W, 90 to 240 V - 1U, 443 mm, 290 mm (H x W x D) - Cooling side to side 	
Option 2	
6" (150 mm) length Lemo to BNC cable, Quantity=10	

Functional Overview

Block diagram



Operating

A rising edge on external trigger input (or if you press the front panel push button) starts the generator.

After an insertion delay a pulse appears on each output.

Comparator and monostable

The comparator allows to detect the rising edge of the input pulse and the monostable allows to calibrate the width of the output pulses.

Splitter 1 to 8

A high speed digital splitter distributes, with low jitter, the calibrate pulse to 8 drivers

Outputs

The outputs are designed to drive an external 50 Ω load. Each output provide a + 3 V, 150 ns width, positive pulse.

Trigger output

This output is a hardware copy of the input. If you don't use this output, it's necessary to connect a 50 Ω load.

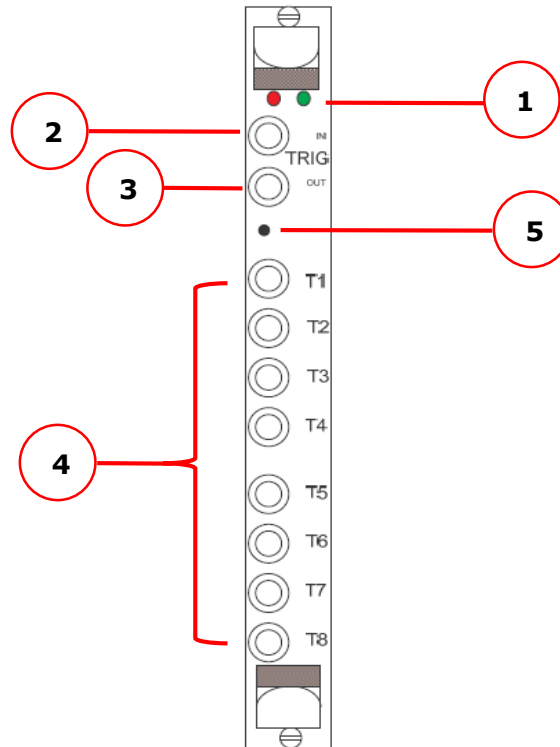
A 50 Ω load is furnished with each module.



GFT4208

1:8 Output Digital Splitter

Input / Output Interface



Front panel

Connector, Indicators

Front Panel	
<u>Indicators</u>	
1	Green : Flick at same rate as trigger input signal Red: Light when power is ON
<u>Connectors</u>	
2	Trigger Input : Lemo connector
3	Trigger Output : Lemo connector
4	Output T1 to T8 : Lemo connector
<u>Switch</u>	
5	Manual trigger: Push button

Ordering information

GFT4208 1:8 Output Digital Splitter part numbering

GFT4208-X (Where "X" is option number)

Ordering number example

GFT4208-01 (GFT4208 Splitter in 19", 1U rack)