



Instrumentation
Technologies

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RF & Clock Generator

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Libera **WORKSHOP**
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RF & Clock Generator

Basic information



RF & Clock Generator

Basic information

This is Instrumentation Technologies new product.

RF & Clock Generator consists of RF signal source and function generators. It is specialized for basic Libera Brilliance or Libera Electron SW development and on-site testing. It can replace 3 conventional generators (1 x RF, 2 x function).

The generator provides the following signals:

- gated RF with variable filling pattern
- machine clock (Synchronous to the RF)
- gate for external RF gate
- trigger

RF & Clock Generator

Key advantages

- **The unit is portable.**
- **All the signals are synchronous as they are generated from the same source. Synchronization to an external 10 MHz source is possible.**

The generator can be locally (knobs & LCD) or remotely controlled (USB, Ethernet)

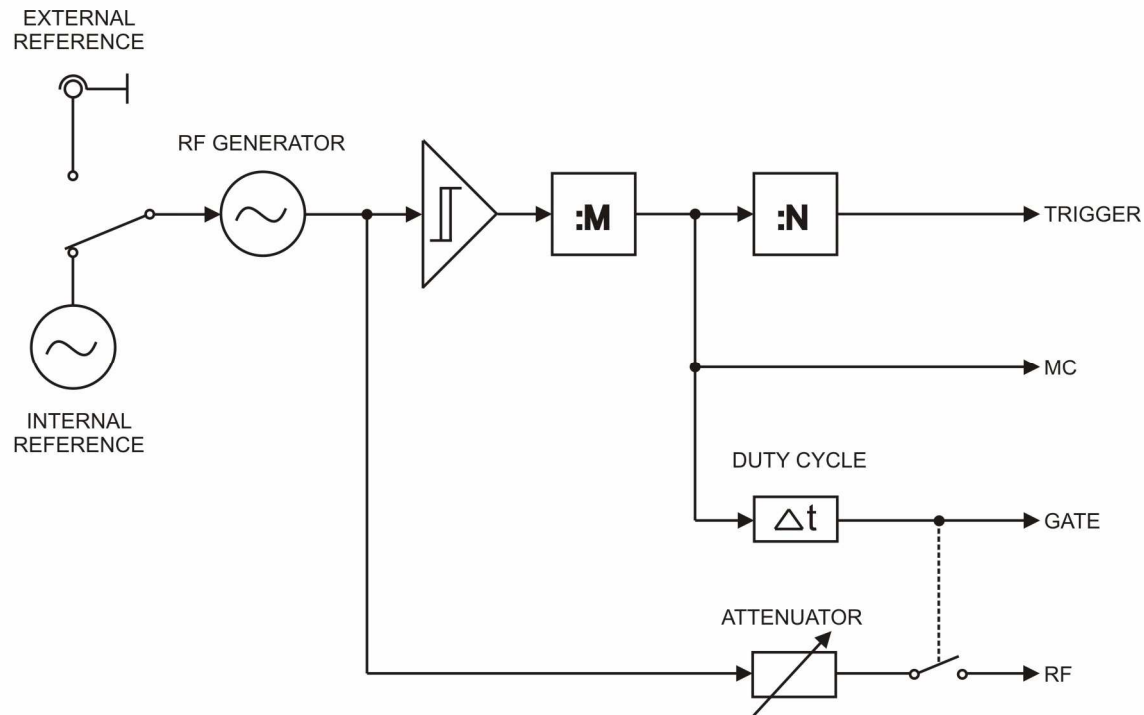
- **The control software is open source for end user tweaking (ARM7TDMI & GCC)**

RF & Clock Generator Specification

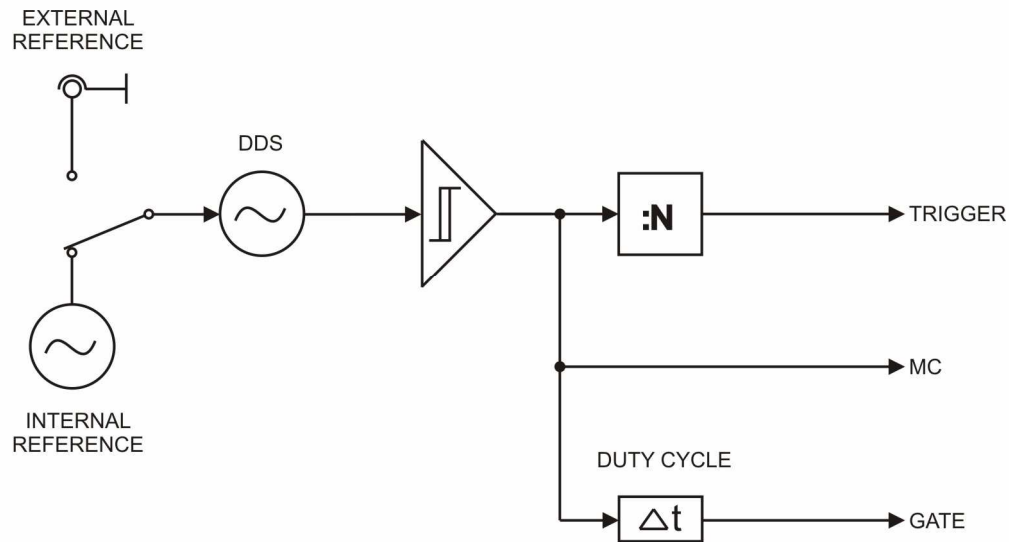
RF frequency	300 MHz - 500 MHz
RF Signal level	- 57 dBm - +6 dBm
Machine Clock frequency	1 kHz - 30.6 MHz (Automatically Calculated from Harmonic number)
Harmonic number	16 – 300000 (in steps of 4)
Gating (duty cycle)	RF mode: <1% - 100% (step depending on the harmonic number) DDS mode: 20% - 100%, 20% step
Trigger	0.1 Hz - 10 kHz
Power supply	24V DC, 0,35A

RF & Clock Generator

RF mode – block diagram



RF & Clock Generator DDS mode – Block Diagram



RF & Clock Generator

RF mode - Operation

Setting RF frequency



Setting harmonic number



Setting gate filling (duty cycle)



Setting trigger rate



RF & Clock Generator Connections

