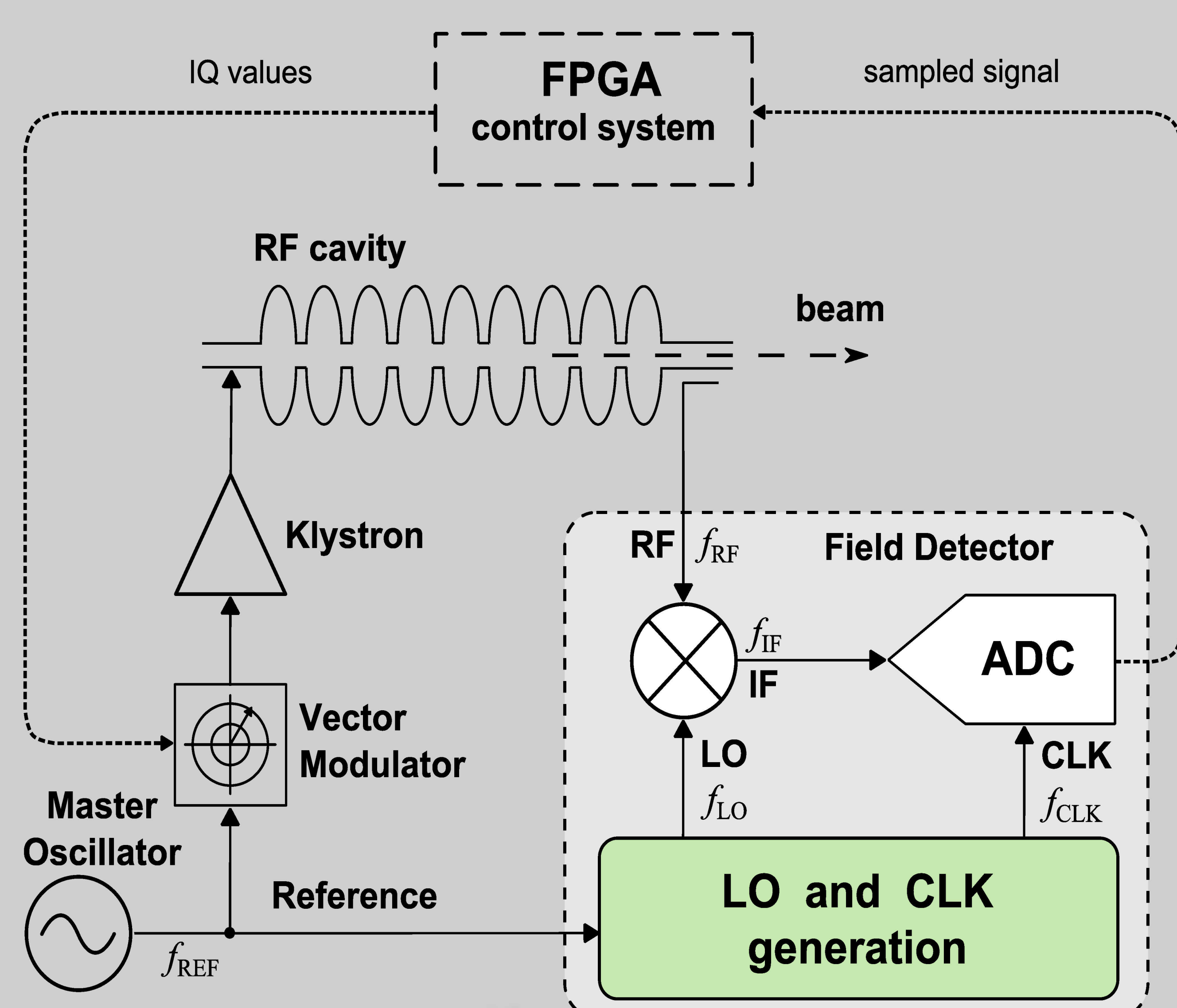


Universal High-Performance LO and CLK Generation Module for LLRF System Receivers

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- generates LO and CLK for LLRF front-end receiver

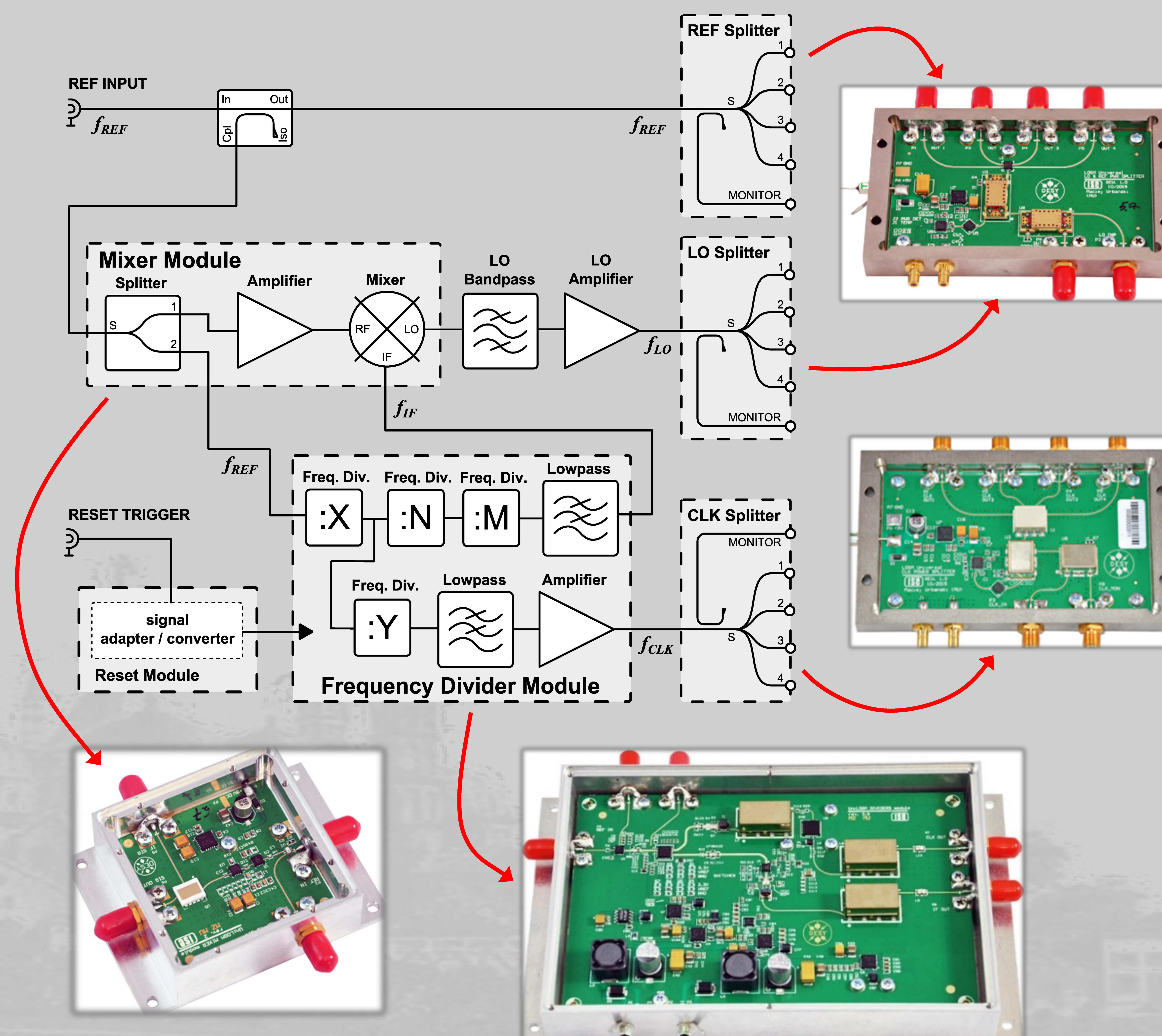


- universal / flexible

General Electrical Requirements

Input f_{REF} range	300 ÷ 6000 MHz
Output f_{LO} range	$f_{RF} \pm \max 200 \text{ MHz}^*$
Output f_{CLK} range	$\max 300 \text{ MHz}^*$
REF input power	+15 dBm nominal **
REF output power	4 x +13 dBm **
LO output power	4 x +13 dBm **
CLK output power	4 x +13 dBm **
monitor outputs	+ 5 dBm nominal **
LO additive phase jitter	< 3 mdeg RMS ***
CLK additive phase jitter	< 6 mdeg RMS ***
Mains or DC power supply	
supply voltage and current monitoring	
signal power monitoring	

- modular design / reconfigurability



Examples of frequency variants

f_{REF} [MHz]	X	M	N	Y	f_{LO} [MHz]	f_{CLK} [MHz]	f_{IF} [MHz]
704	2	3	5	3	727.47	117.33	23.47
1300	2	8	3	4	1354.17	81.25	54.17
2856	2	12	10	3	2903.60	119.00	47.60
3000	4	6	10	3	3025.00	125.00	25.00
3900	4	12	6	3	3954.16	81.25	54.16
5712	4	12	10	3	5759.60	119.00	47.60

* depends on the filters selection

** power levels can be adjusted for individual case

*** integrated over the band 10 Hz ÷ 1 MHz

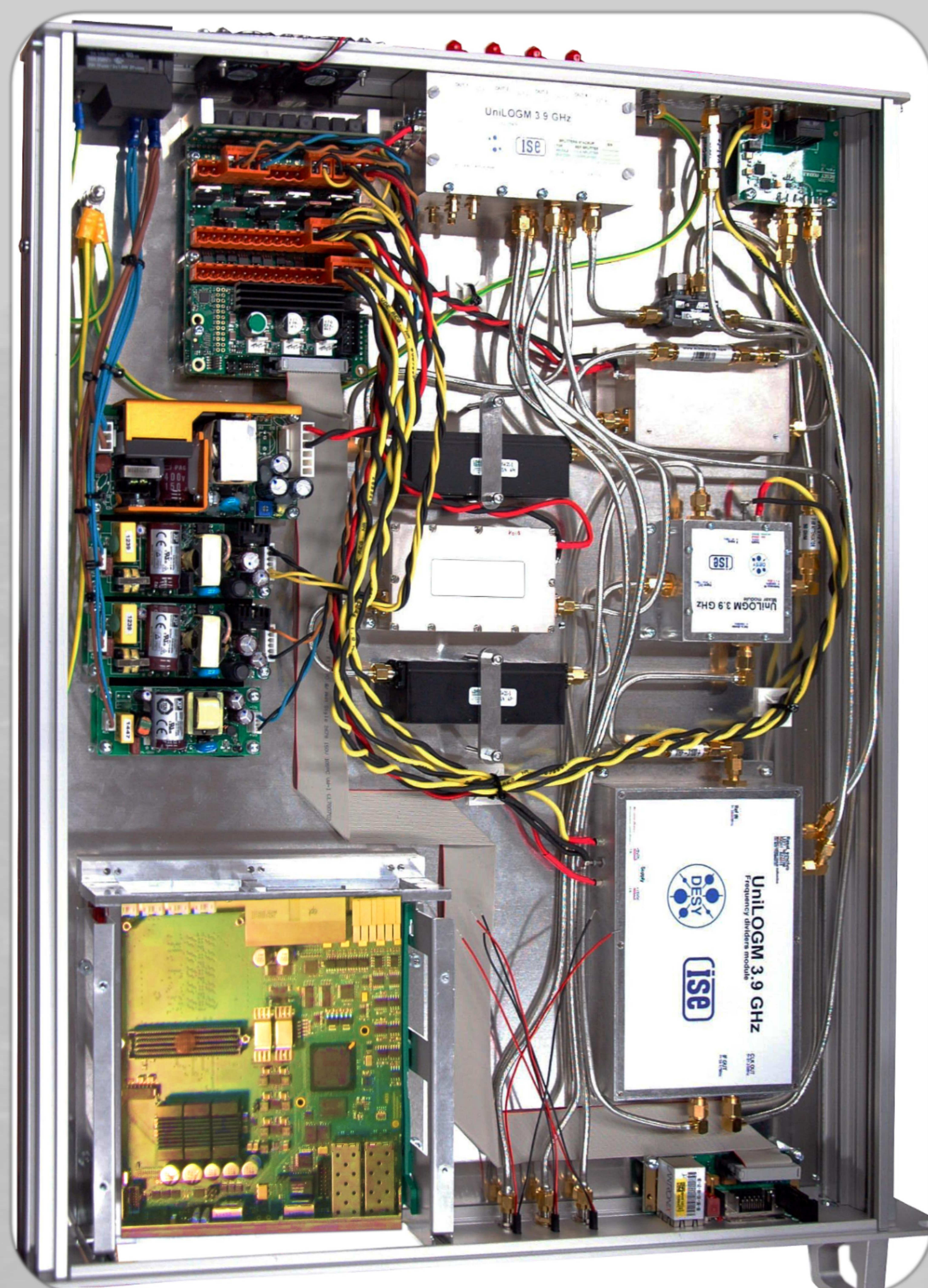
Universal High-Performance LO and CLK Generation Module for LLRF System Receivers

Packaging and functionality

- standard 19" crate, 1U height
- rack and benchtop use
- SMA connectors for RF
- Reset trigger signal (RJ-45)
- remote diagnostics
- Ethernet communications
- power supply protection & management



- modular design
- reconfigurable with hardware settings and assembly options



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