



SAPHYRION

communication technologies

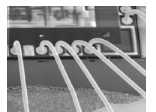


ABOUT SAPHYRION

Founded in 2009, Saphyrion is a Swiss privately owned research and development company mainly focused on the development of RF integrated circuits, PCB-level systems and software. Its focus is on high quality high value designs, especially in the GNSS and communication domains.

ACTIVITIES AND SERVICES

RF analog/mixed-signal design and digital signal processing. Design and development of own and bespoke ASICs, FPGA or PCB solutions. Own products span from space-qualified ASICs, to logging and signal processing systems.



PRODUCTS

SY1007: Flexible GNSS RF front-end IC.

SY1017C: AD/DA-converter and interface IC.

- RF front-end chip-set for GNSS receiver applications.
- Configurable to all GNSS signals (1.1-1.6GHz).
- Radiation tolerant (>100krad(Si) , 84MeV/mg/cm2).
- Space qualified to ESA ESCC9000 (SY1007/17C).



SY2001: fractional-N PLL frequency synthesizer in the L-band

- Space qualified ESA ESCC9000
- Sigma- Delta modulated fractional-N PLL.
- Programmable frequency dividers for clock generation
- Flexible 5MHz to 20MHz reference frequency.
- 1..3-1.5GHZ LO, Low phase noise: -75dBc/Hz typical at 10Hz.
- CMOS and LVDS output (6- 375MHz)

SM1027u: GNSS receiver module for ground applications

- Ready to use single channel L-band GNSS RF frontend.
- Designed around the SY1007 and SY1017C ASIC.
- Chip on board for low cost solution

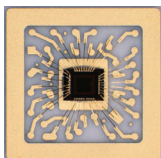
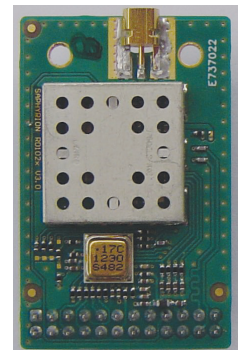
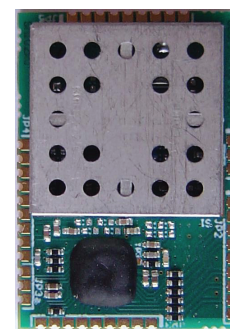
RD1027: Evaluation module for SY1007/SY1017C chipsets.

GDAS-2: GNSS RF band digitizing laboratory instrument

- System for GNSS signal study and analysis
- Acquisition and logging of up to four independent GNSS bands in parallel (4-50 MHz BW, 1..8 bit resolution)
- Proprietary SW GUI to operate the unit (USB 3.0 interface)

Company capabilities:

- Requirement definition and analysis.
- System architecture, engineering.
- Radiation tolerant, low power RF and mixed-signal ASIC design.
- FPGA circuit design, DSP.
- PCB design, engineering and prototyping.
- GNSS and communications signal processing.
- Firmware and application software development.



	ASIC / FPGA	PCB	Software
Design:	RF ASICs, mixed-mode ICs, DSP	RF transceiver, DSP, IMU, embedded systems	Firmware Application SW Signal processing Integration
Manufacturing:	ASIC production at foundry	PCB manufacturing and assembly ²	
Testing :	Verification, prod. testing and qualification ^{1,2}	Verification ¹ Production ²	Testing and debugging
Integration:	Reference designs	Hardware-software integration	

¹ Saphyrion

² Via partners

