

# GNSS L1/E1 USB Front-End

AGCNS-L1\_E1-FE-V2



Ed.1  
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ACORDE's ACGNS\_L1-E1\_FE-V2 consists of a GNSS front-end (FE) with USB interface optimized for real-time Software Defined Radio (SDR) applications and signal recording. The FE is designed to work at GPS L1 and Galileo E1 band. The module is optimized for its use with an external active antenna but can be easily configured to work with passive antennas as well, by switching the input LNA.

The device is fully software reconfigurable and can be customized (filtering, TCXO, Glonass/Compass support, software libraries...) according to user needs.

## RECEIVER OEM SPECIFICATIONS

Input frequency .....	1575.42MHz
Chipset .....	MAXIM 2769 RF Front End
FE 3dB Analog Bandwidth .....	{2.5, 4.2, 8 MHz} band-pass, 9 MHz Low pass
FE NF .....	1.4dB (passive antenna mode) / 2.7 (active antenna)
TCXO Frequency .....	10 to 40MHz (16.384MHz by default)
TCXO Stability .....	0.5ppm
Sampling Frequency .....	TCXO/2, TCXO/4
Input Impedance .....	50 $\Omega$
Optional reference input .....	10MHz
Data Output .....	Interleaved IQ (signed byte I, signed byte Q)
AGC .....	Custom external AGC (provides gain currently applied)
USB Controller .....	Cypress FX2LP (High Speed)
Software .....	Library and examples provided

## POWER SUPPLY SPECIFICATIONS

DC input voltage .....	4.75-5.25V DC (USB bus powered)
Active Antenna supply voltage .....	3.3V DC (provided by FE via input SMA connector)
Antenna Supply Current .....	20mA max.

## ENVIRONMENTAL SPECIFICATIONS

Storage temperature .....	-40 to +85°C
Operating temperature .....	-20 to +55°C
Relative humidity .....	Up to 95%

## MECHANICAL SPECIFICATIONS

Interfaces:	
RF Input .....	SMA female
Optional reference input .....	SMA female
Supply input and data input/output .....	Mini B Type USB
Dimensions .....	86 mm x 74 mm
Weight .....	34.6 g

## APPLICATIONS

- Research and Education
- Location Based Service
- GNSS applications developments
- Snapshot positioning
- Raw signal recording