GNSS L1/E1 USB Front-End

ACGNS-L1_E1-FE-V1

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ACORDE

ACORDE's ACGNS_L1-E1_FE_USB 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, but can be configured for Glonass/Compass signal reception upon request. The device is fully software reconfigurable and can be customized (filtering, TCXO, output data format) according to customer needs.

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.

RECEIVER OEM SPECIFICATIONS

Input frequency	1575.42MHz
Chipset	MAXIM 2769 RF Front End
FE 3dB Analog Bandwidth	{2.6, 4.2, 8 MHz} band-pass, 15MHz Low pass
FE NF	1.4dB (passive antenna mode) / 2.7 (active antenna)
TCXO Frequency	10 to 40MHz (16.3676MHz by default)
TCXO Stability	0.5ppm
Sampling Frequency	TCXO, TCXO/2, TCXO/4, TCXOx2 (40MHz max)
Input Impedance	50 Ω
Data Output	1 bit (I or I+Q) or 2 bits per sample (I)
USB Controller	Cypress FX2LP (High Speed)
VCC	5V (USB supply)
ICC	<100mA

POWER SUPPLY

DC input voltage	4-5.25 V 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 +85ºC
Operating temperature	-20 to +55ºC
Relative humidity	Up to 95%

MECHANICAL SPECIFICATIONS

Interfaces:

RF Input	SMA female
Supply input and data input/output	Mini B Type
Dimensions	70 mm x 28 mm

APPLICATIONS

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

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