



ACORDE's **ACGNS_L1-E1_FE** consists of a GNSS Radio Front-End (FE) with SPI controls specifically designed to interface the **Stratix II EP2S180 DSP FPGA development board** and other pin-compatible boards. It uses 2.54mm-connectors but custom interfaces for other boards can be provided.

The FE is designed to work at the **GPS L1 and Galileo E1 bands** but can be adapted for Glonass/Compass signals reception upon request. The device is fully reconfigurable (filtering, IF, output data format...) according to customer needs. An MMCX connector can be used as a buffered output of the internal TCXO reference, or as an input for an external source. This module can be used with either a passive or an active antenna.

RECEIVER OEM SPECIFICATIONS

Input frequency.....	1575.42 MHz
FE Analog 2dB Bandwidth.....	{2.6, 4.2, 8 MHz} band-pass, 15 MHz Low pass
FE NF	1.4 dB (passive antenna), 2.7 dB (active antenna)
TCXO Frequency	10 to 40 MHz
TCXO Stability	0.5 ppm
Sampling Frequency.....	fTCXO, fTCXO/2, fTCXO/4, 2xfTCXO (40MHz max)
Input Impedance.....	50 Ω
Data Output	1-2 bits (I&Q), 3 bits (I only), Analog
VCC	3.3 V (internally regulated)
ICC	<30 mA (internal reference, passive antenna)

POWER SUPPLY

DC input voltage	3.3-5 V DC
Active Antenna supply voltage	3.3 V DC (provided by FE via input SMA connector)
Antenna Supply Current	20 mA max.

ENVIRONMENTAL SPECIFICATION

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

MECHANICAL SPECIFICATIONS

Interfaces:	
RF Input	SMA female
Supply, control in, data out.....	Double 20x2 Female 2.54 mm
Dimensions	61 mm x 43 mm

APPLICATIONS

- Baseband Hardware Research and Development
- Education
- GNSS applications development