Features

- Frequency range: 17 to 21.5 GHz
- Noise figure: 2.7 dB
- 360° phase adjustment range
  - Step size: 5.625°
- Signal gain (@19GHz) :19 dB
- Channel-to-channel isolation: TBD
- Input P_1dB: -40 dBm
- Gain adjustment range: 31.5 dB
  - Step size: 0.5 dB
- Operating power supply：
  - VDD1P2: +1.2V
  - VDD3P3: +3.3V
  - Internal LDO: +2.5V
- Operating temperature: -40°C to + 85°C
- Integrated temperature sensor
- Package size: 4.4mm×4.4mm×0.58mm
- 4-wire SPI interface

Product description

The ZRF8365 is eight channel receive active beamforming RFIC designed for application in K band planar phased array antennas, each channel has 6-bit of digital shift phase and gain control. The device has 28dB of electronic gain and -40dBm IP1dB. The device integrated an 8-bit ADC for sampling the output of the temperature sensor. The chip features ESD protection on all pins.

Control of all the on-chip registers is through a simple 4-wire serial port interface (SPI). In addition, three address pins allow SPI control of up to 8 devices on the same serial lines.

Applications

Satellite communication, array antenna. ground terminal and other communication equipment.

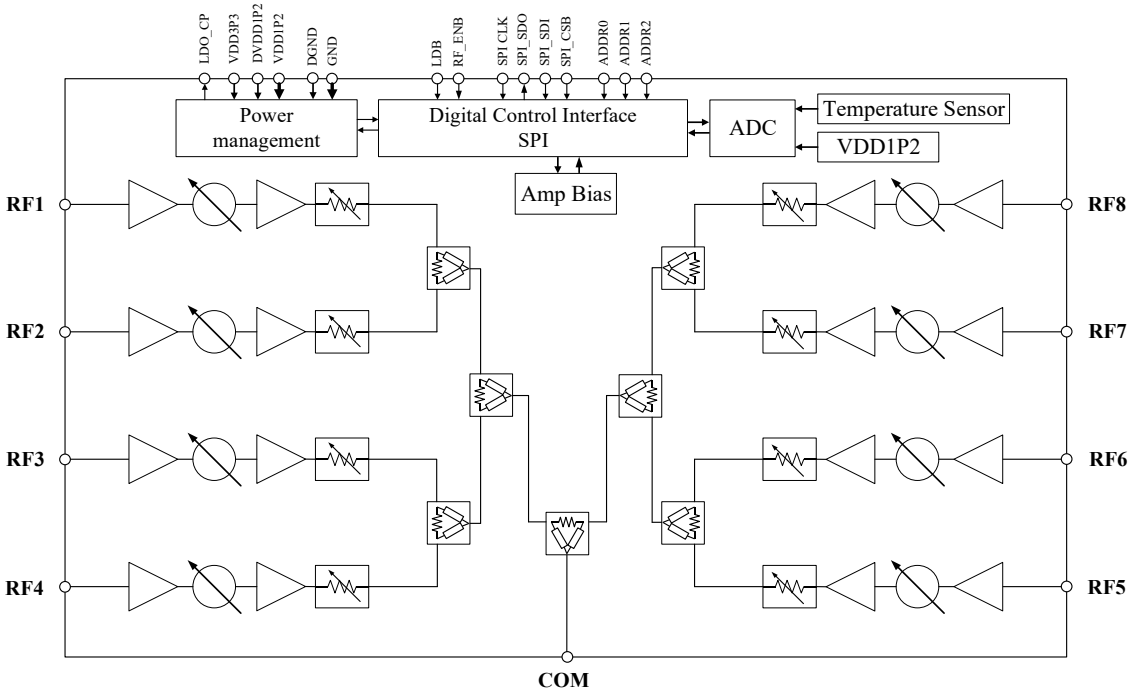

Figure 1. Functional Block Diagram