Features

- Frequency range: 17 to 21.5 GHz
- Noise figure: 3.1dB
- 360° phase adjustment range
  - Step size: 5.625°
- Signal gain (@19GHz): 10 dB
- Adjacent Channel Isolation: TBD
- Input P_1dB: -39 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×7.3mm×0.58mm
- 4-wire SPI interface

Product description

The ZRF8366 is a dual-beam receive active beamforming RFIC designed for application in K-Band planar phased array antennas. The IC has eight RF input ports, two RF output ports, and 16 (8 per beam) phase/amplitude control channels. The eight input ports of the device can be driven by eight single-polarized elements, or four dual-polarized antenna elements. 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.

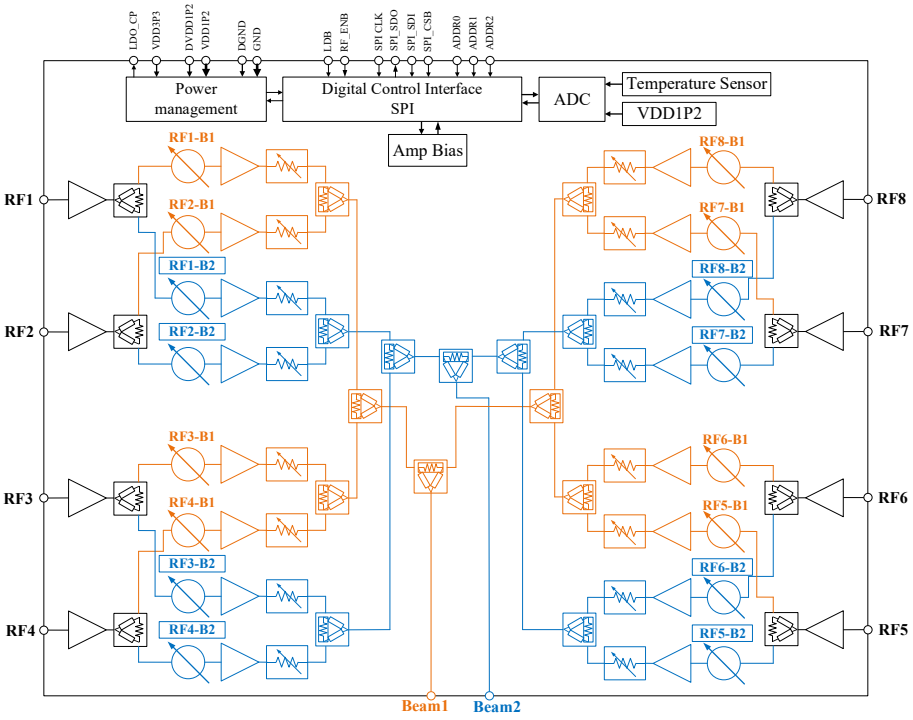

Figure 1. Functional Block Diagram