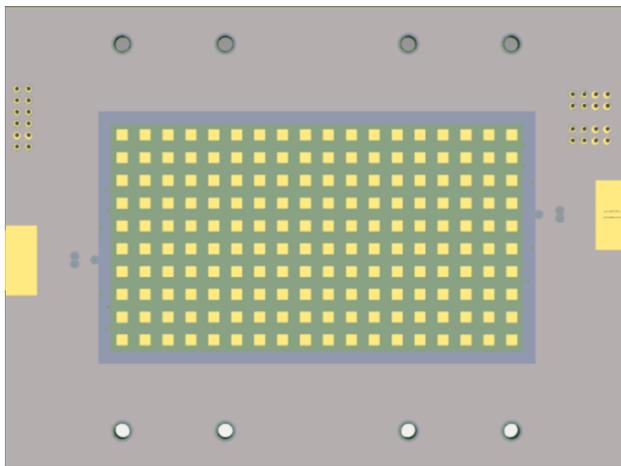




128-element 5G mmWave (26.5 – 29.5 GHz) dual-polarized beamforming array antenna



Sivers Semiconductors' 128-element Summit2629 Array board is designed to meet the demanding requirements of modern wireless communication systems. This state-of-the-art array board is engineered for high efficiency and exceptional linearity, making it an ideal choice for 5G networks and beyond.

At the heart of the 128-element array board is the Summit2629™ beamforming ICs, which ensure optimal performance across a wide range of mmWave applications. The board's high efficiency reduces power consumption and thermal dissipation while its high EIRP with good linearity extends the link range to decrease infrastructure cost.



FWA



5G MMWAVE



BACKHAUL

KEY FEATURES

- 26.5 GHz – 29.5 GHz
- 128-element dual-polarization array antenna
- 32 SUMMIT2629™ ICs as beamforming ICs and 2 SUMMIT2629™ ICs as distribution amplifiers
- Support for 64-QAM modulation
- Full TX/RX TDD beamforming RF chains
- Independent dual-polarization beam directions
- Power sensor for each TX element
- Temperature sensor on each beamforming IC
- Full 360° phase shifting with 11.25° step
- Front-end gain control with 15 dB range and 0.5 dB step
- 20 dB common gain control in beamforming ICs
- Further 15 + 20 dB gain control in distribution ICs

KEY SPECIFICATIONS

- Excellent EIRP performance of +59.5 dBm @ 3% EVM for full BW 64-QAM OFDM
- Ultra-low TX and RX power consumption.
 - TX on: 46.2 W both polarizations @ 3% EVM for full BW 64-QAM OFDM
 - RX on: 8.2 W both polarizations
- 2048-entry on-chip beam table storage

APPLICATIONS

- Fixed wireless access (FWA)
- Backhaul (point-to-point)
- Point-to-multipoint networks

The 128-Element Summit2629 Array is optimized for high performance 5G mmWave applications operating in the 26.5 to 29.5 GHz frequency band. The array board integrates 32 Sivers Semiconductors high performance Summit2629™ mm-wave beamforming ICs, an antenna array, decoupling capacitors and SPI level shifters. In addition, one Summit2629™ IC is used as a distribution amplifier for each of the H and V polarizations.

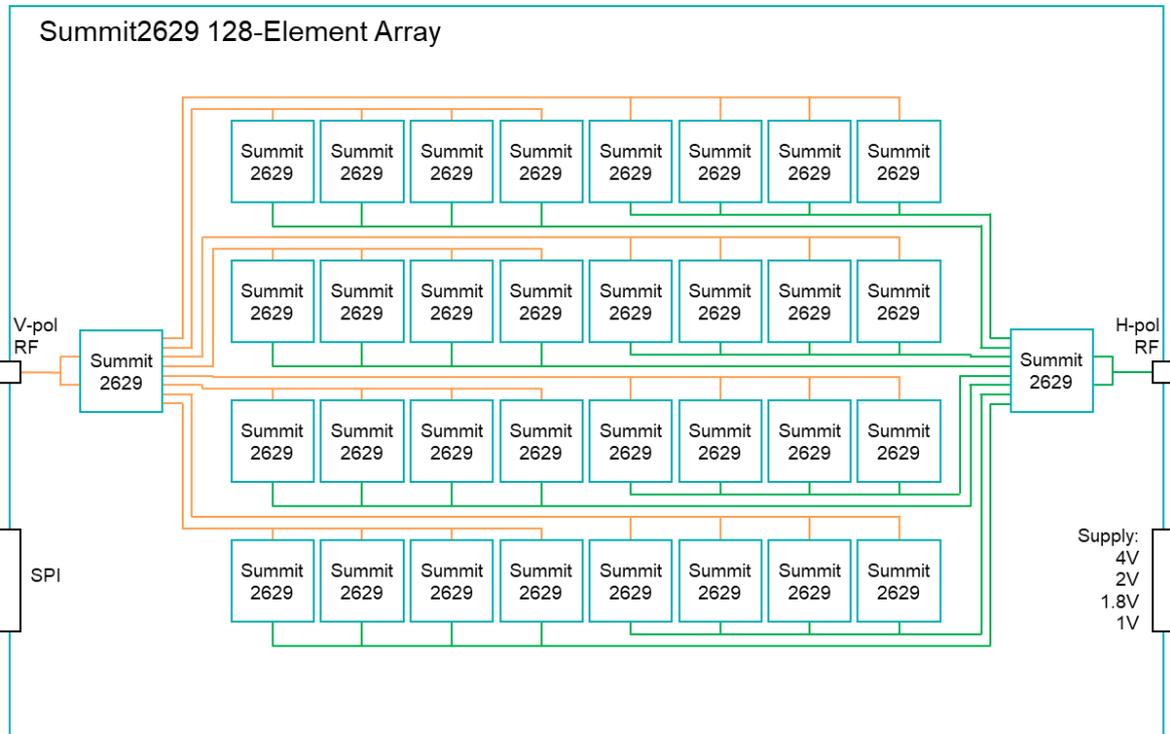


Figure 1: Block diagram

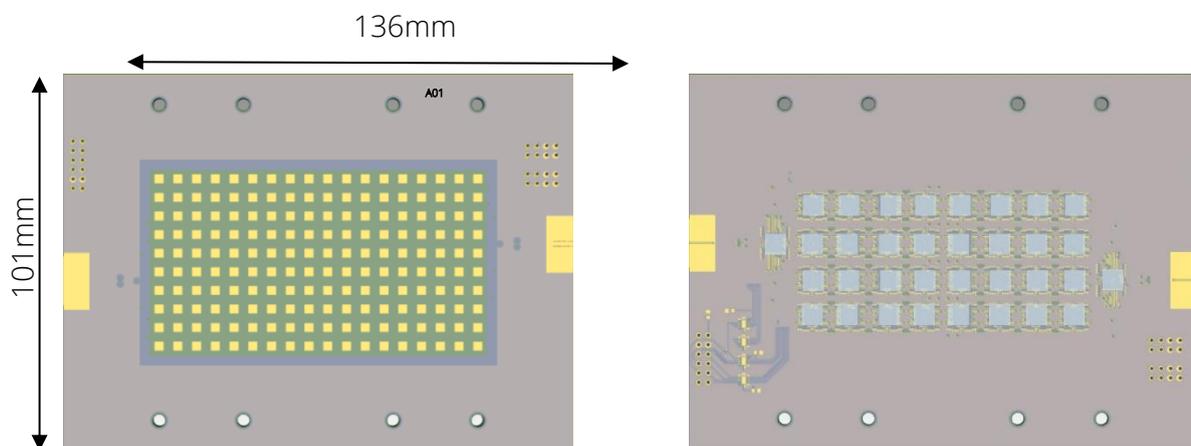


Figure 2: Antenna-side and Chip-side view of the module

For more information please contact: sales@sivers-wireless.com