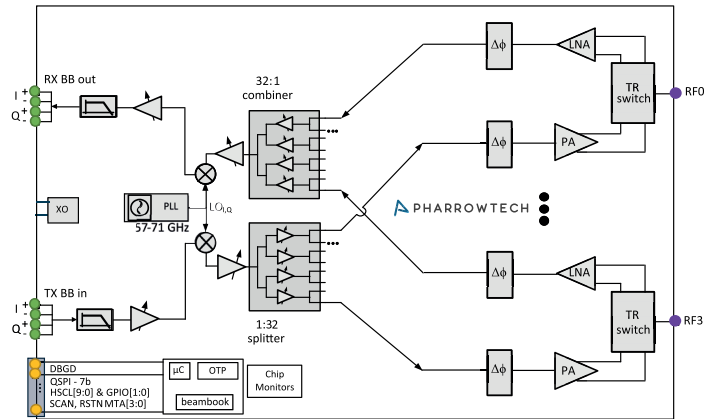# PTR1060 60 GHz Beamforming Transceiver RFIC

Description

Pharrowtech's PTR1060 is a high-performance, low power consumption 60 GHz mmWave CMOS RF transceiver. Developed using CMOS technology, the PTR1060 offers a cost-effective, fully integrated beamforming transceiver solution. It incorporates a low phase noise PLL, which serves as system reference clock, providing user selectable characteristics and enabling phase coherent transmit and receive operations. With 32 transmit and 32 receive paths along with a Tx-Rx switch, the PTR1060 effectively minimizes the system's Bill of Material cost. Modem connectivity is provided through an analog baseband I/Q interface. Furthermore, the PTR1060 has 1024 beam book entries enabling fine beam steering capabilities for both receiver and transmitter, independently. Its on-chip Micro Controller Unit (MCU) allows the execution of real time tasks, such as closed-loop calibrations, beam book management and custom value-add features like interference nulling.

Key Features

- Standard: IEEE 802.11ad/ay, 3GPP (Rel. 17)
- Frequency range: 57-71 GHz
- Channel bandwidth: 270 MHz / 540 MHz / 1.08 GHz / 2.16 GHz
- Signals: SCM and OFDM
- Modulation: Up to 64 QAM
- RF chains: 32 TX and RX
- Tx-Rx Switch: On chip
- Calibrations: PLL, IQ Imbalance and LO Feed-Through, DCO
- Fast automatic recalibration
- Oscillator: On chip PLL & External LO input
- Micro Controller Unit: On chip
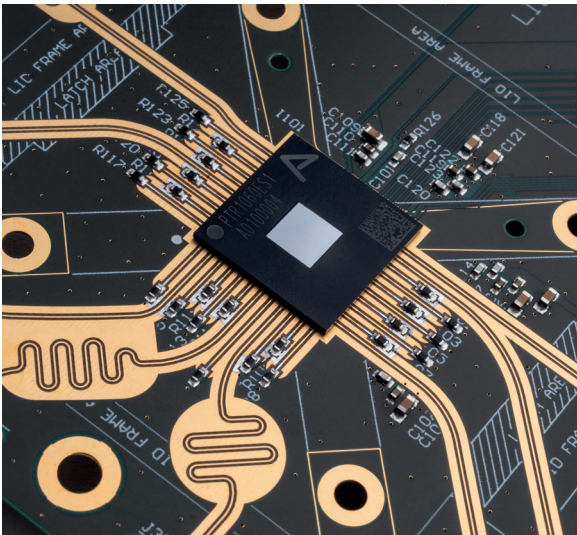- Dimensions: 13 x 13 mm

Block Diagram

Target applications

- Fixed wireless access (FWA)
- Infrastructure connectivity
- 5G Small cell backhaul
- Industrial, Scientific, and Medical (ISM) band data transfer
- High-definition video transmission
- AR/VR

Ordering Information

Ordering Part Number	Package	Shipping
PTR1060	13 x 13 mm FCCSP	Tray

About Pharrowtech

Pharrowtech develops innovative wireless platforms to simplify and accelerate the adoption of millimeter-wave technology for mass-market applications. Our products include radio-frequency and digital semiconductors, phased array antennas, and software solutions.

Pharrowtech's leading products serve fast growing markets including broadband fixed wireless access (FWA) and 5G, as well as high-performance WiFi platforms for consumer electronics, virtual reality (VR) headsets, and smart city IoT applications.).

Contact us at **info@pharrowtech.com** for more information.

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