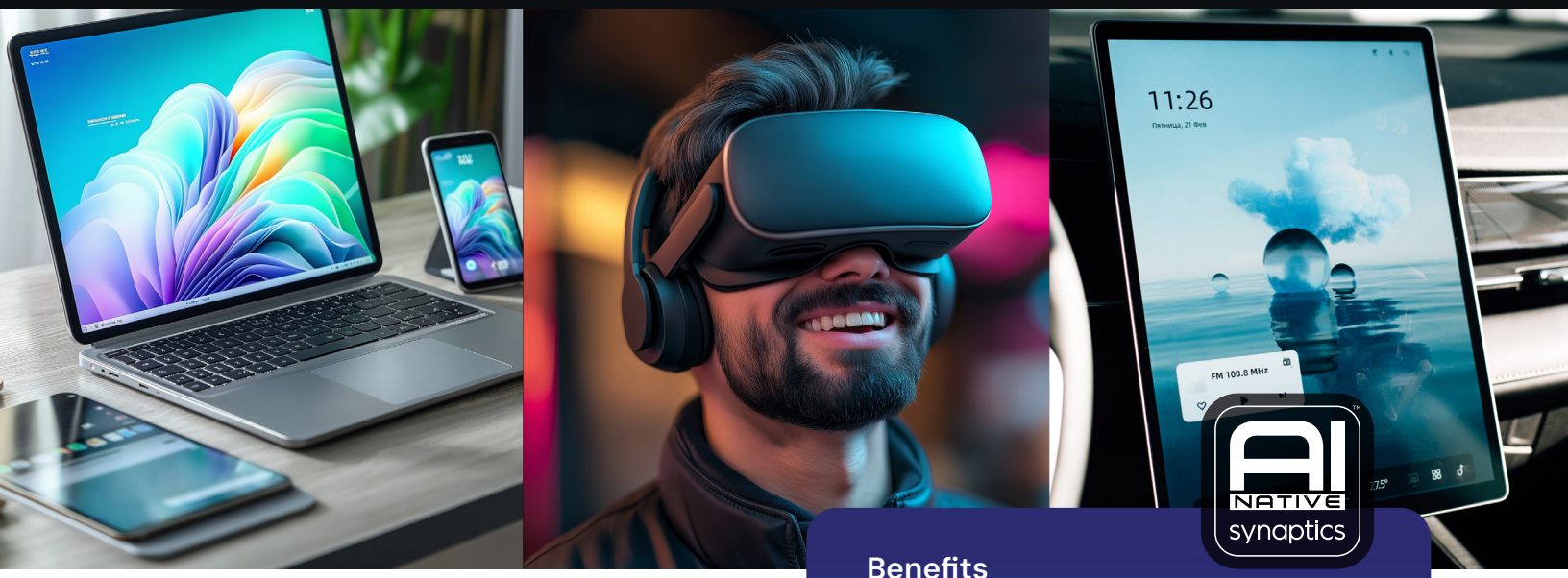
SYN4390 Triple Combo with Wi-Fi 7, Bluetooth/BLE, and IEEE 802.15.4 (Zigbee/Thread)

Product Brief



The Synaptics® SYN4390 is a high-performance wireless SoC optimized for power-conscious IoT and embedded edge applications. As part of the Veros™ Wi-Fi 7 family, it delivers tri-band Wi-Fi 7, Bluetooth® 6.0, and IEEE 802.15.4 (Zigbee/Thread) connectivity in a compact, feature-rich platform. With support for 2x2 MIMO or 2x2 + 2x2 multi-link operation (MLO) across the 2.4, 5, and 6 GHz bands, the SYN4390 delivers exceptional wireless throughput and ultra-low latency—ideal for AR/VR headsets, smart home devices, streaming platforms, gaming peripherals, PCs, tablets, and automotive infotainment. Built on a power-optimized architecture, it combines advanced wireless performance with energy efficiency.

Benefits

- Tri-band Wi-Fi 7 with MLO delivers ultra-low latency and high reliability for real-time applications
- Triple-combo integration simplifies design of Matter-compliant smart home and edge devices
- Optimized for IoT with low power, BOM integration, and host offload

Applications

- AR/VR wireless headsets
- Automotive infotainment
- Smartphones, PCs, and tablets

MULTI-PROTOCOL CONNECTIVITY WITH WI-FI 7, BLUETOOTH AND THREAD/ZIGBEE WITH MATTER

BUILT-IN SUPPORT FOR ASTRA AI-NATIVE PROCESSORS

MAINSTREAM PERFORMANCE SUPPORTING 160MHZ CHANNELS

SUPERIOR RANGE AND INTEROPERABILITY

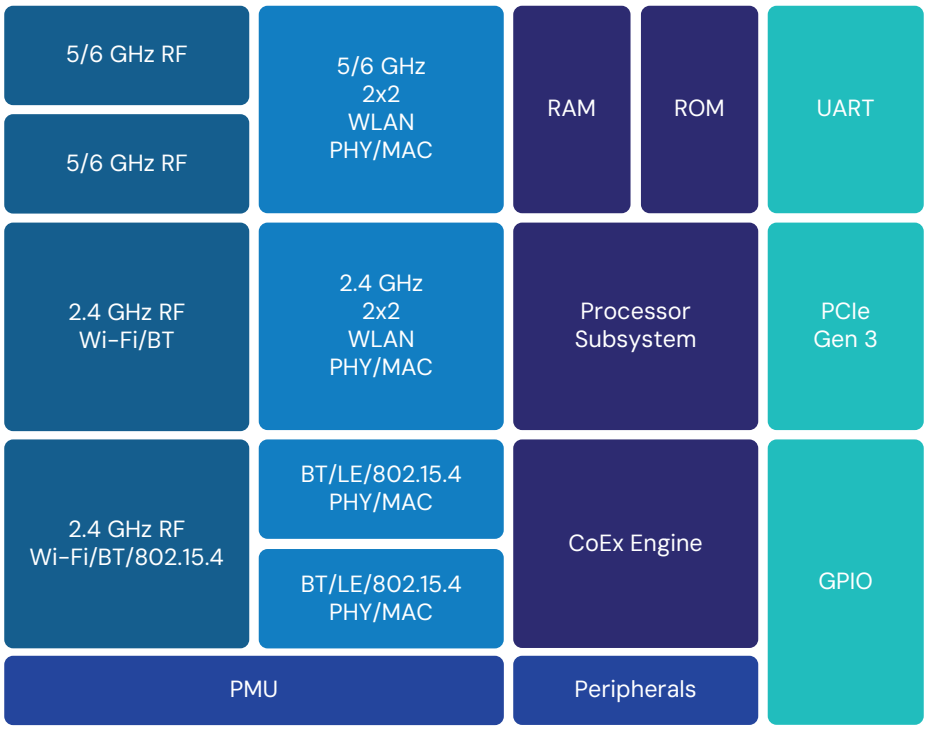
 | | PN: 190-000446-01

Features

- Tri-band Wi-Fi 7 (2.4/5/6 GHz) with 2x2 MIMO or 2x2 + 2x2 MLO
- Optimized for 160 MHz channels, 4096-QAM, and MLO
- Supports Bluetooth 6.0 with LE Audio and Channel Sounding distance measurement
- Zigbee/Thread-ready with IEEE 802.15.4 and Matter support
- Dual Arm® cores with on-chip memory enable low-power modes through host offloading
- PCIe Gen2 host interface and multiple peripheral I/Os
- Ultra-low power modes with integrated PMU
- Compact WLBGA package

Synaptics SYN4390

Triple Combo with Wi-Fi, Bluetooth/BLE, and IEEE 802.15.4 with extensive system BOM integration



System Block Diagram

synaptics

Contact

Visit our website at www.synaptics.com to locate the Synaptics office nearest you.