



The Synaptics Veros™ SYN20708 is a dual-core Bluetooth® 5.4 and IEEE 802.15.4 system on chip (SoC). The Matter-compliant SoC supports Bluetooth (BT) Classic, Bluetooth Low Energy (BLE), Zigbee®, and Thread protocols concurrently on both cores to allow simultaneous connections to multiple endpoints in heterogeneous network environments. The chip support dual-antenna maximum ratio combining (MRC) and transmit beamforming (TxBF) for >2x range, have an integrated transmit/ receive (T/R) switch, and support an external T/R switch with external PAs/LNAs. The SYN20708 also integrates an Arm® Cortex®-M4 CPU running at 160 MHz and has a high-speed UART interface for connection with an external host processor.

Benefits

- Allows simultaneous connections to multiple endpoints in heterogeneous network environments
- Reduces footprint, power, complexity, and time to market while increasing performance
- Robust, long-range, low-latency connectivity

Applications

- Home hubs and soundbars
- Automotive infotainment
- Control and security panels



SIMULTANEOUS BT/BLE + 802.15.4 (Zigbee/Thread)



LONG RANGE



BEST-IN-CLASS 2.4 GHz COEX



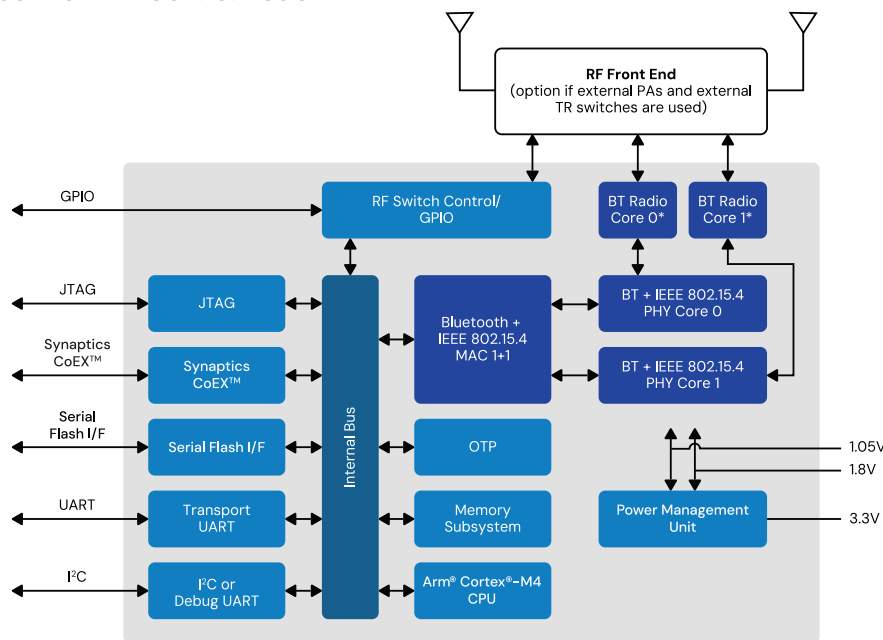
LOW LATENCY

Features

- Complies with Bluetooth Core Specification Version 5.4 with support for Version 6.0, including Bluetooth Channel Sounding
- Supports two 2.4 GHz band radios concurrently
- Supports Bluetooth Class 1 and Class 2 TX operation
- Supports Bluetooth Channel Sounding
- Supports BLE-LR, angle of departure (AoD) and angle of arrival (AoA)
- Supports IEEE 802.15.4 (OpenThread and ZBOSS) up to Version 2
- Supports Secure Boot
- Firmware download over UART for shared flash with a host processor; from local: dedicated serial flash over an SPI

Synaptics SYN20708

Dual-Core Bluetooth & IEEE 802.15.4 SoC



* Each of the radio blocks includes internal PAs and TR switches.

System Block Diagram



Copyright

Copyright © 2024 Synaptics Incorporated. All rights reserved.

Trademarks

Synaptics, the Synaptics logo, and other trademarks here, are trademarks or registered trademarks of Synaptics Incorporated in the United States and/or other countries.

All other trademarks are the properties of their respective owners.

Contact

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

Notice

This document contains information that is proprietary to Synaptics Incorporated ("Synaptics"). The holder of this document shall treat all information contained herein as confidential, shall use the information only for its intended purpose, and shall not duplicate, disclose, or disseminate any of this information in any manner unless Synaptics has otherwise provided express, written permission.

Use of the materials may require a license of intellectual property from a third party or from Synaptics. This document conveys no express or implied licenses to any intellectual property rights belonging to Synaptics or any other party. Synaptics may, from time to time and at its sole option, update the information contained in this document without notice.

INFORMATION CONTAINED IN THIS DOCUMENT IS PROVIDED "AS-IS," AND SYNAPTICS HEREBY DISCLAIMS ALL EXPRESS OR IMPLIED WARRANTIES, INCLUDING BUT NOT LIMITED TO ANY IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, AND ANY WARRANTIES OF NON-INFRINGEMENT OF ANY INTELLECTUAL PROPERTY RIGHTS. IN NO EVENT SHALL SYNAPTICS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, PUNITIVE, OR CONSEQUENTIAL DAMAGES ARISING OUT OF OR IN CONNECTION WITH THE USE OF THE INFORMATION CONTAINED IN THIS DOCUMENT, HOWEVER CAUSED AND BASED ON ANY THEORY OF LIABILITY, WHETHER IN AN ACTION OF CONTRACT, NEGLIGENCE OR OTHER TORTIOUS ACTION, AND EVEN IF SYNAPTICS WAS ADVISED OF THE POSSIBILITY OF SUCH DAMAGE. IF A TRIBUNAL OF COMPETENT JURISDICTION DOES NOT PERMIT THE DISCLAIMER OF DIRECT DAMAGES OR ANY OTHER DAMAGES, SYNAPTICS' TOTAL CUMULATIVE LIABILITY TO ANY PARTY SHALL NOT EXCEED ONE HUNDRED U.S. DOLLARS.