

Welcome!

Texas Instruments New Product Update

- This webinar will be recorded and available at www.ti.com/npu
- Phone lines will be muted
- Please post questions in the chat or contact your sales person or field applications engineer

New Product Update: Matter Overview

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6/24/2021

Agenda

- Overview
- Matter introduction + benefits
- TI as your Matter partner
- Development support

Matter | Overview

What is Matter?



- Matter, formerly known as Project Connected Home over IP (CHIP), is a new connectivity standard developed within the Connectivity Standards Alliance, formerly the Zigbee Alliance targeting home/building automation
- Matter runs on Thread and Wi-Fi® network layers and uses Bluetooth® Low Energy for commissioning

Benefits



- Improved compatibility for consumers with increased interoperability in smart home ecosystems such as Amazon Alexa, Apple Siri and Google Assistant, and others
- Simplified development for manufacturers who can leverage this open-source protocol to accelerate their development.

Why TI?



- Connectivity Standards Alliance leadership
- TI Connectivity portfolio covers Wi-Fi, Thread and Bluetooth LE
- Industry's lowest power for battery applications
- More flexibility in the application with higher SRAM
- Highly efficient integrated PA

Getting Started



- Industry's first live public [demo](#) to promote Matter
- Build a rapid prototype with the CC2652R7 and the LP-CC3235SF



- Expand to full development with existing and upcoming LaunchPad™

Matter | Introduction + Benefits



What is Matter?

- Matter provides an abstracted application layer that builds on top of IP protocols such as Wi-Fi, Ethernet and Thread, as shown in Figure 1
- These IP based technologies like Thread and Wi-Fi are used for networking with Bluetooth LE used for secure provisioning

What does Matter mean for end-equipment developers?

- Matter simplifies the developer experience
- Common layer for device life-cycle events
- Certification for Matter devices guarantees interoperability between various manufacturers

What are the benefits for consumers?

- Matter is compatible with smart home services such as Amazon Alexa, Apple Siri and Google Assistant
- Matter-certified end product will be plug and play, complementing any given smart home ecosystem

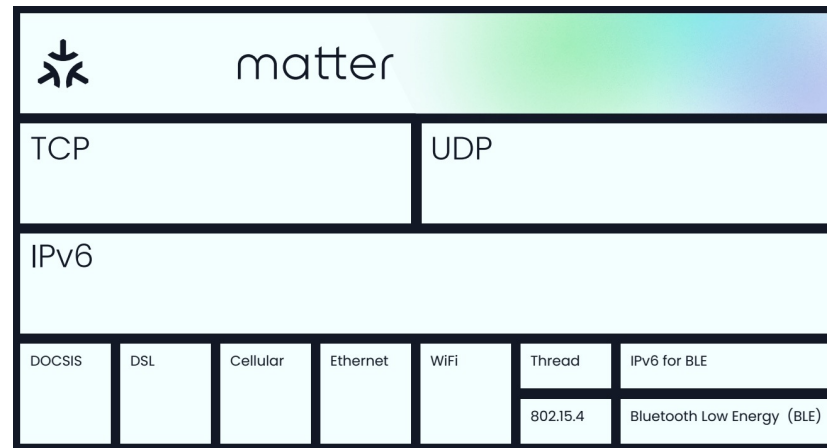
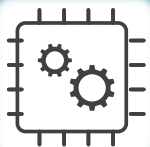


Figure 1: Matter's abstracted application layer builds on top of IP links (Source: Connectivity Standards Alliance)

TI Matter | Partnership

Leadership



- Texas Instruments has been a promoter member of the Connectivity Standards Alliance (formerly Zigbee Alliance) for more than 10 years
- Wi-Fi Alliance contributor member
- Thread Group Contributor Member
- **Early Adopter** in Matter standard
 - Extensive Participation in various CSA working groups to ensure Matter readiness

Innovation



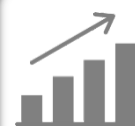
Leader in low power 2.4GHz protocols

- Standby current at <1uA
- 4-year battery life on a coin-cell battery (CR2032) using 5 second polling
- **Lowest power Integrated PA** at 20 dBm
- Enabling 10 dBm TX with coin cell across industrial temperature
- Integrated Sensor controller

Leader in reliable and secure Wi-Fi

- Interoperability tested >230 different AP's
- 30+ embedded security enablers (*secure boot, HW Cryptos, UID, FIPS140-2 validation*)

Market Readiness



- **TI SDK will be ready on day one** when Matter GA releases 1.0 spec
- Matter development software with demo available on GitHub
- Industry's first public live [demo](#) to promote Matter
- Support for all major Thread based topologies for Matter accessories planned
- Certification on supported TI LaunchPad development kits
- Bluetooth Low Energy Integration

Market Readiness

- Development available now on GitHub:
[Matter GitHub](#)
 - Fully functional demo with engineering SDK (Thread + BLE + DMM + Matter) - [TI Lock Example](#)
- Thread FTD/MTD/NCP example applications
- Bluetooth Low Energy integration
 - **Robust concurrent BLE + Thread multiprotocol** software enabled by highly configurable Dynamic Multiprotocol Manager (DMM)
- Active in early test events to ensure Matter readiness
- Wi-Fi demo available on request

Roadmap

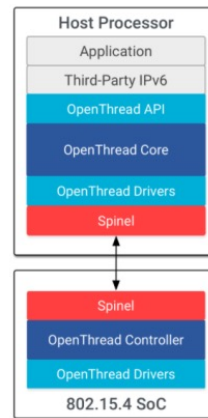
- TI SDK will be ready on day one when Matter GA releases 1.0 specification
- Product portfolio will support all major Thread based system topologies for Matter accessories
 - Matter SoC
 - Thread RCP, NCP + Host
- Certification on supported TI LaunchPad development kits

TI Matter | Device Support

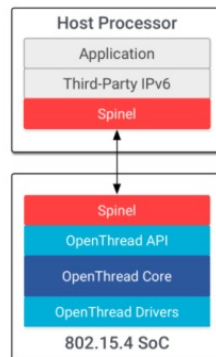
Device	Flash/ SRAM	Matter/Thread device roles	Other capabilities	Release date
<u>CC2652R7</u> CC2652P7	704kB 152kB	SoC - Matter + Thread FTD SoC - Matter + Thread MTD Thread RCP* or Thread NCP*	Concurrent BLE	Production: November 2021
<u>CC2652R</u> <u>CC2652P</u>	352kB 88kB	Thread NCP (FTD or MTD) Thread RCP (FTD or MTD)	Concurrent BLE	IN PRODUCTION
CC2651R3 CC2651P3	352kB 40kB	Thread RCP		Production: 4Q 2021
<u>CC3220SF</u>	1024kB 256kB	SoC - Wi-Fi	Secure boot Secure key storage	IN PRODUCTION
<u>CC3230SF</u>	1024kB 256kB	SoC - Wi-Fi	Secure boot Secure key storage BLE coexistence	IN PRODUCTION
<u>CC3235SF</u>	1024kB 256kB	SoC - Wi-Fi	Secure boot Secure key storage BLE coexistence FIPS 140-2 level 1	IN PRODUCTION

SW API Compatible

Radio Coprocessor (RCP)*



Network Coprocessor (NCP)*



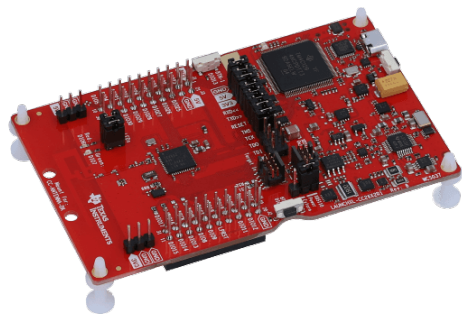
* For Thread RCP and NCP architecture Matter software will run on Host Processor

More flexibility in the application with Higher SRAM than competition.

Matter | Development kits

Expand to full development

- LaunchPad Development Kits
- Higher memory SoCs like CC2652R7



Key features:

- On-board debugger/programmer with EnergyTrace
- USB-powered
- Available for all SimpleLink™ Product Families
- User LEDs & Pushbuttons on-board
- Access to all MCU pins
- BoosterPack-compatible
- [LP-CC26X2R1](#)

Available from \$39 to \$49!

Expand to full development

- LaunchPad Development Kits
- Higher memory SoCs like CC3235SF



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- User LEDs & Pushbuttons on-board
- Access to all MCU pins
- BoosterPack-compatible
- [LP-CC3235SF](#)

Available from \$49 to \$55!

Visit www.ti.com/npu

For more information on the New Product Update series, calendar and archived recordings



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