

Matter

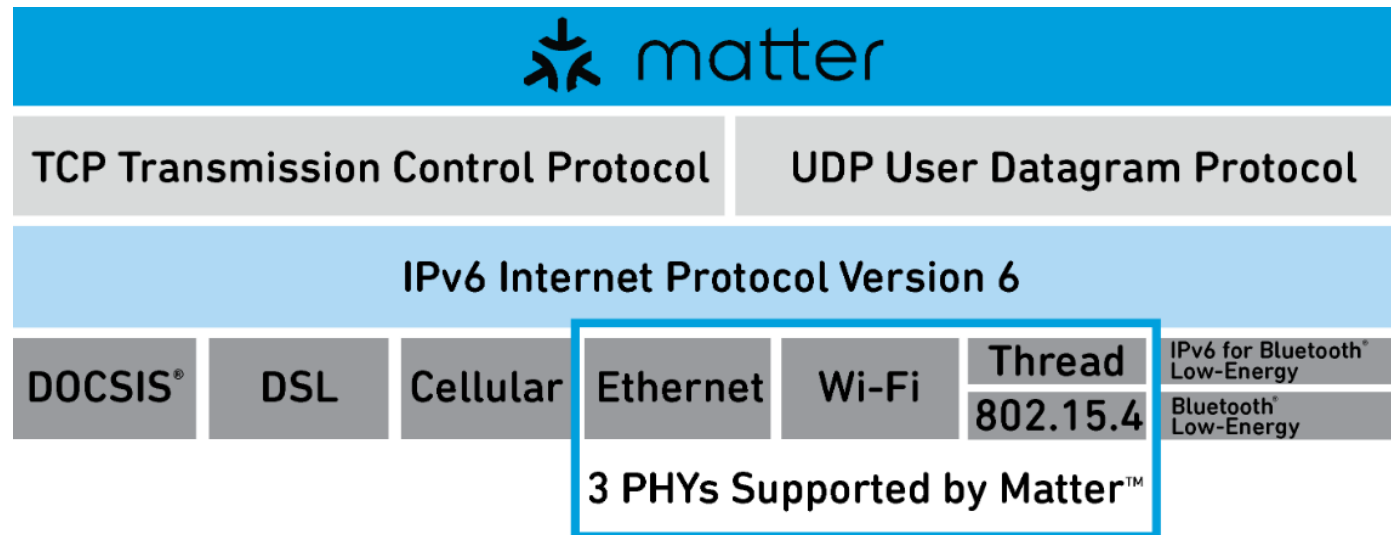
Apr. 2023



RALTRON

What is Matter?

Matter is a new smart home standard conceived by Project Connected Home Over IP (Project Chip) in 2019. It's now maintained by the Connectivity Standards Alliance (CSA), formerly known as the Zigbee Alliance. The standard is royalty-free and encourages interoperability between devices and platforms.



To facilitate communication with different types of devices and standards, Matter supports multiple physical layers. Matter works over Thread, which is a networking technology that is built on top of 802.15.4. Routing data across these different physical layers is done through a border router. **The frequency of Matter is 2.4 GHz.**

Source: <https://www.qorvo.com/innovation/matter>

What are the Benefits of Matter?

The main goal of **Matter** is interoperability. All Matter-compliant devices will work together no matter which brand makes them. Matter promises three big benefits for consumers: greater choice in the products and ecosystems they can use, a simplified user, and lower costs. Here are a few other ways that Matter will improve the smart home experience:

- **Local Control**

Controlling your devices will happen locally on your home network rather than over the internet. Matter devices will continue to work even if their manufacturers go out of business or suddenly decide to shut down their servers.

- **Matter Multi-Admin Control**

Matter also allows you to control devices via multiple smart home systems at the same time through its Multi-Admin feature. There isn't a hard limit to the number of different systems you can have running at the same time.

- **More Competition and More Choice for Consumers**

Despite being backed by the most powerful tech companies in the world, the Matter standard will create more competition for the big four smart home systems (Amazon, Apple, Google, and Samsung).



The Mui Board — a piece of wood that can control your smart home — doubles as a touch interface for controlling your home.

Applicable Raltron Products

Qorvo - QPG6105

32 MHz Crystal Oscillator

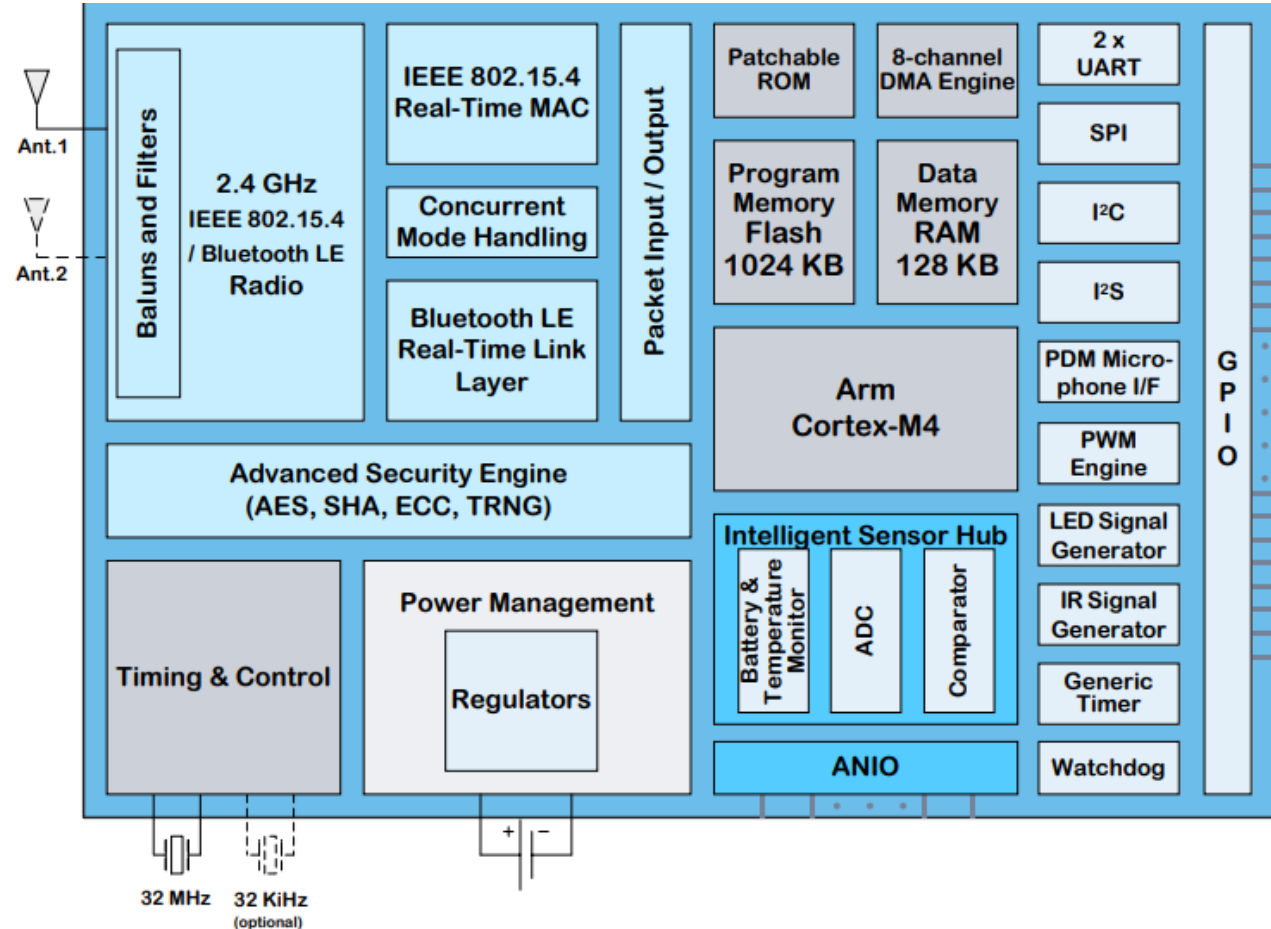
[RH100-32.000-6-F-2020-EXT-TR](#)

[R2520-32.000-6-F-2020-EXT-TR](#)

[R2016-32.000-6-F-2020-EXT-TR](#)

2.4 GHz Antenna

[RST-W2-P-105-RPSMA-H](#)



Applicable Raltron Products

Silicon Labs - EFR32MG24

39 MHz Crystal Oscillator

[RH100-39.000-10-F-2020-EXT-TR-NS](#)

[R2520-39.000-10-F-2020-EXT-TR-NS1](#)

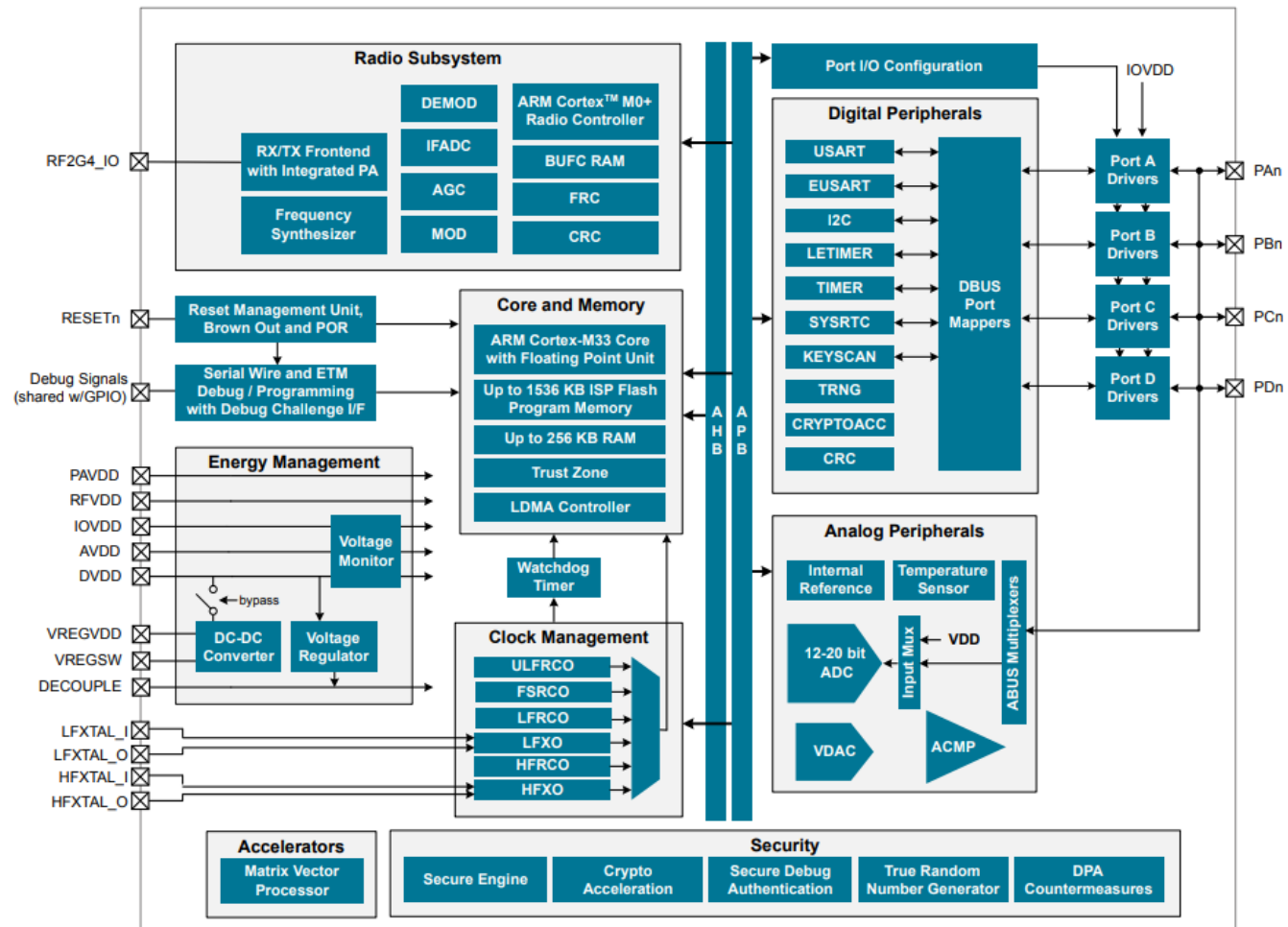
[R2016-39.000-10-F-2020-EXT-TR-NS1](#)

32.768 kHz Crystal

[RT3215-32.768-10-TR](#)

2.4 GHz Antenna

[RCA-3216-A1-TR](#)



Applicable Raltron Products

NXP Semiconductors - IW416

26 MHz Crystal

[R2520-26.000-6-F-1010-EXT-TR-NS1](#)

[R2016-26.000-6-F-1010-EXT-TR-NS1](#)

40 MHz Crystal 5pf 10/10ppm 60 ohm

[R2520-40.000-6-F-1010-EXT-TR-NS1](#)

[R2016-40.000-6-F-1010-EXT-TR-NS1](#)

32.768 kHz Crystal Oscillator

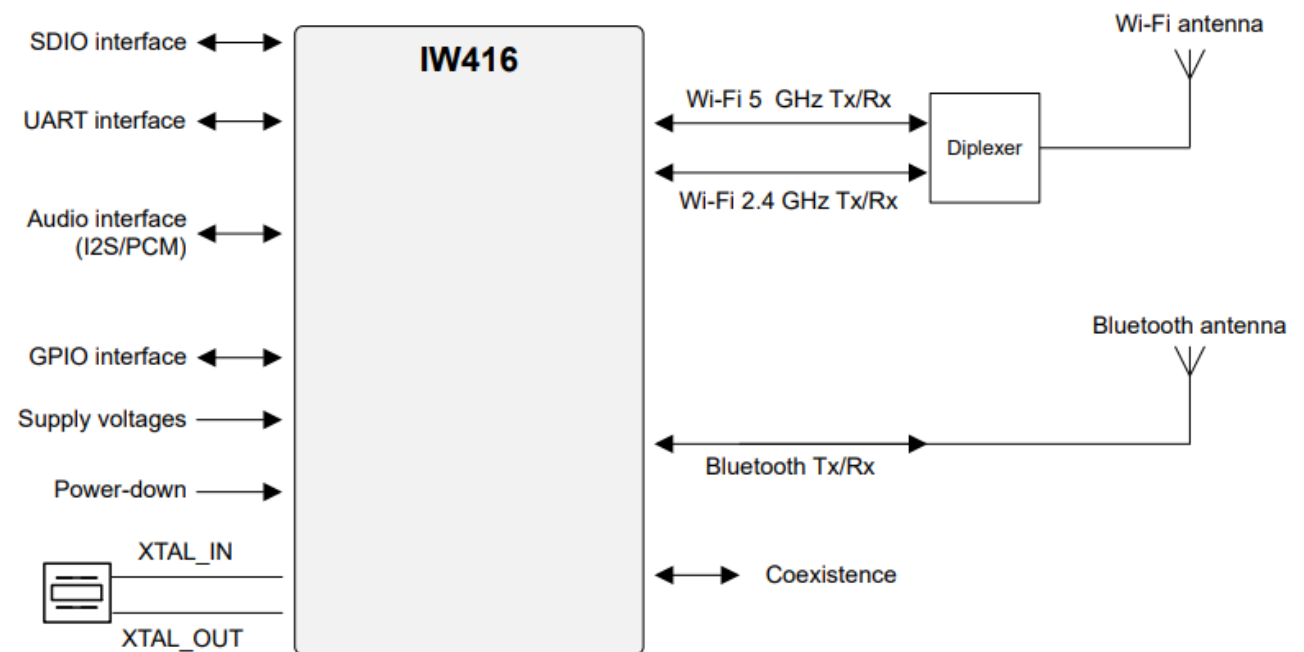
[RT3215-32.768-12.5-TR](#)

2.4 GHz Antenna

[RST-W2-P-105-RPSMA-H](#)

5 GHz Antenna

[RCA-6050L0-TR](#)



Raltron Solutions - MHz Crystals


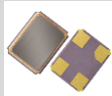

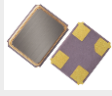

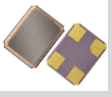


Available Crystal Packages

Part #	Size(mm)
R2016-32.000-6-F-2020-EXT-TR	2.00 x 1.60 x 0.50
R2520-32.000-6-F-2020-EXT-TR	2.50 x 2.00 x 0.65
RH100-32.000-6-F-2020-EXT-TR	3.20 x 2.50 x 0.70

Typical Frequencies:

26 MHz, 32 MHz, 39 MHz, 40 MHz

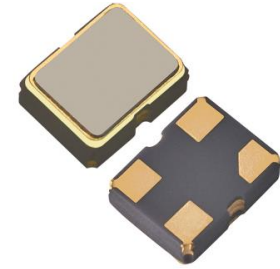
Stock at our Distributors

Product Series	Datasheet	Image	Contact Us / Buy Now
R1612 View products in stock			Buy Now
R2016 View products in stock			Buy Now
R2520 View products in stock			Buy Now
RH100 View products in stock			Buy Now



[See All Crystal Products](#)

Raltron Solutions – Oscillators



Raltron MHz Oscillators Solutions

Part #	Frequency(MHz)
CO2520-48.000-3.3-50-X-T-TR	48
CO2520-16.000-3.3-50-X-TR	16

Raltron kHz Oscillators Solutions

Part #	Frequency(kHz)
CO2016-0.032768-3.3-25-X-T-TR	32.768
CO2520-0.032768-3.3-50-X-TR	32.768

[See Antenna Products for Oscillators](#)

Raltron Solutions - Tuning Fork 32.768 kHz

Available Tuning Fork Crystal Packages

Part #	Size(mm)
RT1210-32.768-9-TR	1.2 x 1.0
RT1610-32.768-12.5-TR	1.6 x 1.0
RT2012-32.768-7-20-EXT-TR	2.0 x 1.2
RT3215-32.768-12.5-TR	3.2 x 1.5
RSE-32.768-12.5-H14-TR	6.9 x 1.4
RSM200S-32.768-12.5-TR	8.0 x 3.8













Load capacitance values: 6 pF, 7 pF, 9 pF and 12.5 pF

Frequency Tolerances: ± 20 ppm and ± 10 ppm



[See All Crystal Products](#)

Stock at our Distributors

Product Series	Datasheet	Image	Contact Us / Buy Now
RT1210 View products in stock			Buy Now
RT1610 View products in stock			Buy Now
RT2012 View products in stock			Buy Now
RT3215 View products in stock			Buy Now
RSE H14			Buy Now
RSM200S View products in stock			Buy Now

Typical example of IC for Matter using a 32.768 kHz crystal as frequency reference:

Texas Instruments - CC1352P7

Using 32.768 kHz crystal

CL: 6, 7 or 12 pF

ESR: 90 k Ω max

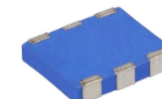
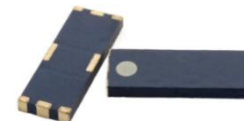
Raltron Solutions – Antennas

Raltron Stub Antennas Solutions

Part #	Frequency(MHz)
RST-W2-P-195-RPSMA-G	2400 ~ 2500
RST-W2A1-20022-17M-TE-001	2400 ~ 2500
RST-W7-30-A-G	2400 ~ 2500

Raltron Chip Antennas Solutions

Part #	Frequency(MHz)
RCA-3216-A1-TR	2450



[See Antenna Products for Matter](#)

Raltron Products – LTCC Filters, Baluns and Diplexers

Raltron LTCC Filters, Baluns and Diplexers Solutions

Part #	Size(mm)
RCF-5500.000-700000-1005-W-001	1.00 x 0.50
RBL-2430.000-1005-EV-001	1.00 x 0.50 x 0.40
RCDI-24-49-1608-W-TR	1.60 x 0.80 x 0.60
RCDI-W2A1-W5A17-1608-W-TR	1.60 x 0.80 x 0.60

[See All LTCC Filters, Baluns and Diplexers Products](#)



Raltron Solutions RF Connectors and RF Cable Assemblies

Raltron RF connectors with low insertion loss and excellent voltage standing wave ratio support the high-level performance demanded by Smart City Applications.



SMA CONNECTORS - [RCN-1M-21419-K-001](#)

BNC CONNECTORS - [RCN-3F-3108-K-001](#)

MCX CONNECTORS - [RCN-4F-28012-K-001](#)

MMCX CONNECTORS - [RCN-5F-33106-K-001](#)

TNC CONNECTORS - [RCN-9M-16205-K-001](#)

N CONNECTORS - [RCN-17M-12816-K-001](#)

Raltron cable assemblies range from simple jumpers to power and high-speed data cables.

SMA TO IPEX CABLE - [RCB-16-F-95-11-SD](#)

MCX TO MCX CABLE - [RCB-21-174-150-DO-001](#)

MCX TO SMA CABLE - [RCB-14-H-100-12-SD](#)

MMCX TO SMA CABLE - [RCB-15-A-100-12-SD](#)

TNC TO SMA CABLE - [RCB-13-J-600-13-SD](#)



[CABLE ASSEMBLIES SHORT FORM CATALOG](#)

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