MEDIOLA OEM SMART HOME 2.0 MODULE

MULTI STACK TECHNOLOGY

Made in Germany

Our mediola OEM SH 2.0 module is designed for integration into motorized drives for shading & sun protection systems, roller shutters, garage doors, and more. It features a flexible architecture based on the innovative, newly developed Multi Stack technology to realize various application scenarios and expansion options. Manufacturers in the industry can use this module to quickly, easily, and cost-effectively adapt their RF-based product lines to the requirements of the new EU cybersecurity regulations and also benefit of the significant market opportunities presented by the new universal Smart Home standard, Matter.

For this purpose, the Multi Stack technology in conjunction with the mediola connect protocol ensures that different application and radio levels can be executed simultaneously. This enables products to be controlled across multiple connections (Wi-Fi, Thread, Bluetooth, Sub 1 GHz) at the same time. So you can use classic Sub 1 GHz handheld remote controls as well as the mediola Connect app or a custom OEM app. Via Matter, the products can also be integrated into the leading smart home platforms from Apple, Google, Amazon, Samsung and controlled and automated with their voice assistants and apps.
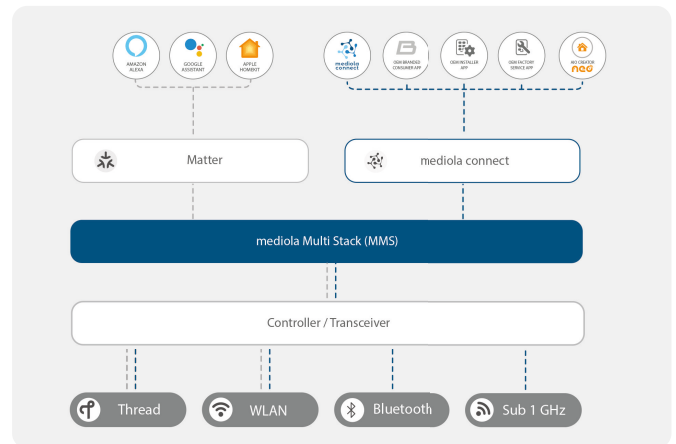
Sub 1 GHz and Matter-ready

To ensure compliance with the EU cybersecurity regulations coming into force in 2025, we offer our Sub 1 GHz variants with 433 or 868 MHz, which include a Matter upgrade option via software update (Matter-ready).

Depending on requirements, you can choose between Matter-over-WiFi or Matter-over-Thread compatibility. Encrypted RF communication and/or update capability via Bluetooth can be added as further options via the mediola Sub1-EUPro RF protocol.

Matter-direct with optional Sub 1 GHz extension

This variant of the module supports Matter directly based on Wi-Fi or Thread. An additional Sub 1 GHz radio transceiver (433 or 868 MHz) can be optionally used to continue using existing radio handheld remote controls with an old Sub 1 GHz radio protocol to control the new Matter devices.

A major advantage, since, for example, Thread does not allow point-to-point control without an additional border router.

Delegated Regulation (EU) 2022/30 under the Radio Equipment Directive (RED)

Manufacturers must act quickly, as from August 2025, wireless-controlled products must meet specific cybersecurity requirements as a mandatory prerequisite for CE marking. These requirements include, among others:
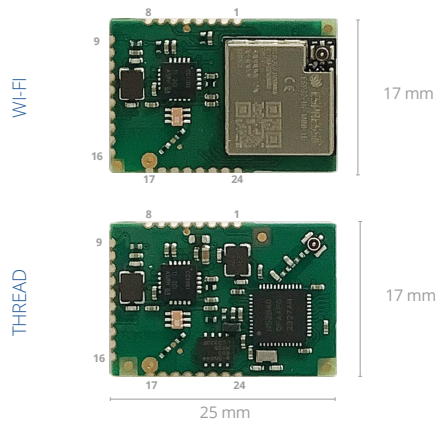
→ Wireless products must include security features that protect against cyberattacks, specifically implementing measures to ensure the confidentiality, integrity, and availability of services and data.
(encrypted communication)

→ Security updates and patches must be provided to address known vulnerabilities ensuring the system remains protected against emerging threats.
(update capability)

What is Matter?

Matter is a new technical standard that overcomes the many existing incompatibilities between different brands. For the first time, almost all relevant industry leaders have agreed on a universal language. Thanks to the standardization via Matter, all Matter-enabled devices can be integrated into the global smart home ecosystems of Apple, Google, Amazon, Samsung, etc. (even simultaneously!) and interact there. Thanks to their outstanding capabilities in terms of voice assistants and AI integration, completely new possibilities for efficiency optimization and automation are emerging. With these developments, a disruptive transformation in the building technology industry is being initiated with a quantum leap to Smart Home 2.0.

MEDIOLA SH 2.0 MODULE WITH MULTI STACK

WI-FI

17 mm

THREAD

17 mm

25 mm

Module Pin Configuration		
1	Programming IO	SWDIO
2	Programming IO	SWCLK
3	Serial IO	I²C SCL
4	Serial IO	I²C SDA
6		NRESET
14	Serial IO	UART_RX
15	Serial IO	UART_TX

For motorized drives - Wi-Fi

Matter-ready over WiFi & Sub 1 GHz	Art.-no.: MSH-2M-WI1, MSH-2M-WI2, MSH-2M-WI3
CPU	Wi-Fi	RISCV	IEEE 802.11 b/g/n
Bluetooth	Matter	Bluetooth LE: Bluetooth 5, Bluetooth mesh	Matter-ready / Matter-direct
Sub 1 GHz-RF-Transceiver (optional)	433 or 868 MHz
Extension 1 (MSE-FW-1IA / MSE-FW-1EA)	Update capability via Bluetooth
Extension 2 (MSE-FW-2RF)	EUPRO-RF-Protocol with encrypted communication

For motorized drives - Thread

Matter-ready over Thread & Sub 1 GHz	Art.-no.: MSH-2M-TH1, MSH-2M-TH2, MSH-2M-TH3
CPU	Thread	Cortex-M4	Thread
Bluetooth	Matter	Bluetooth LE, Bluetooth mesh	Matter-ready / Matter-direct
Sub 1 GHz-RF-Transceiver (optional)	433 or 868 MHz
Extension 1 (MSE-FW-1IA / MSE-FW-1EA)	Update capability via Bluetooth
Extension 2 (MSE-FW-2RF)	EUPRO-RF-Protocol with encrypted communication

CONTROL / INTERFACE FOR SH 2.0 MODULE WITH MULTI STACK

APP / CLOUD/ API		
Setup, configuration, usage commissioning/ Bluetooth control	mediola connect App for iOS and Android (included, free)	mediola OEM-App for iOS and Android (optional according to style guide)
Cloud-Service (optional)	—	Remote access via OEM-Cloud
API		enables integration into the OEM's own (existing) app

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