

Smart Lighting Solution

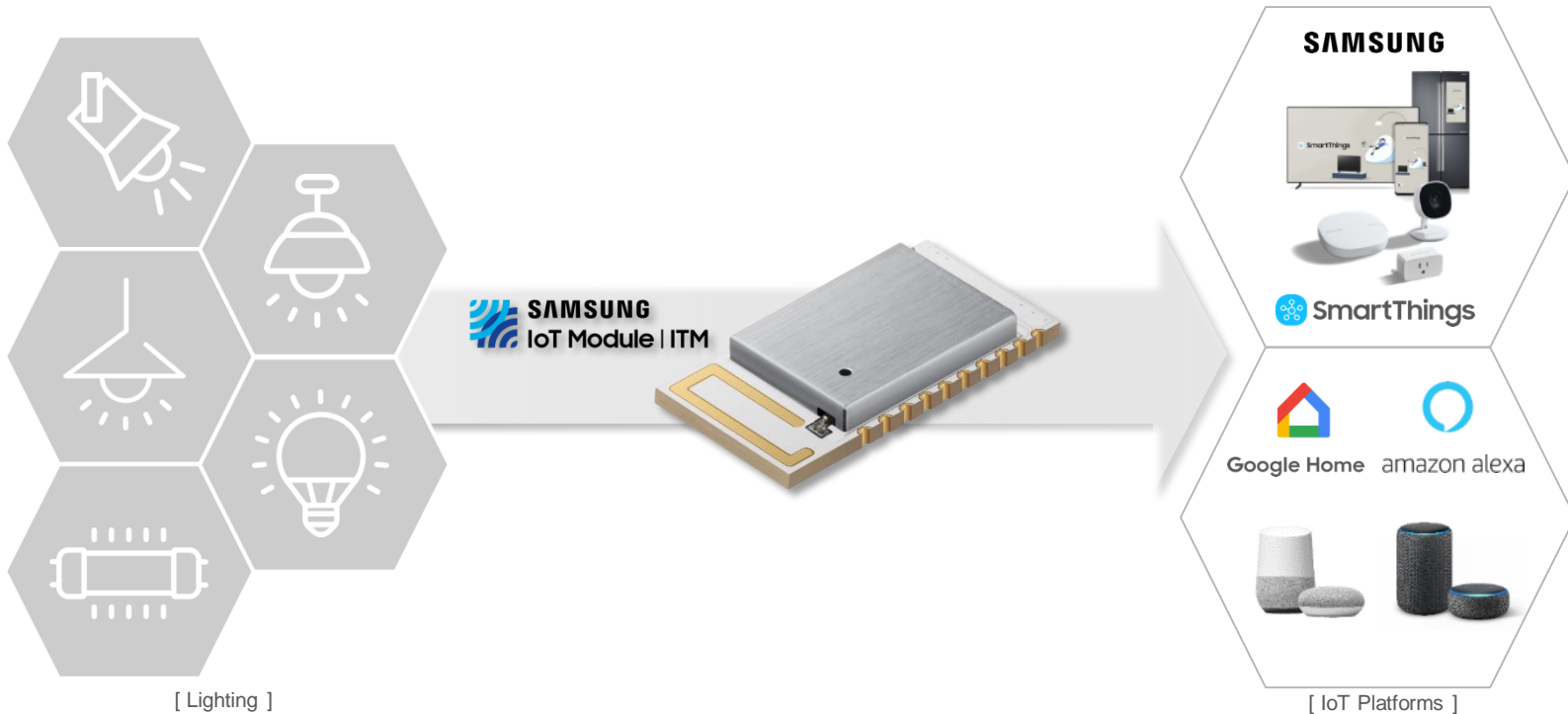
SAMSUNG

Wireless IoT Module with SmartThings Connectivity



IoT Module for Smart Lighting

Samsung IoT module, ITM, connects lighting to IoT platforms

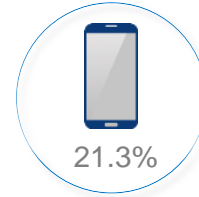


Easy Connection to All Devices with SmartThings

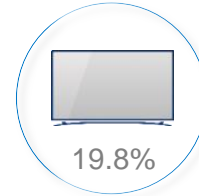
Samsung is the only company that manufactures every home appliance, with leading global market share

#

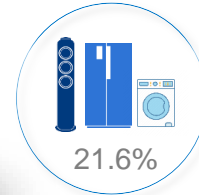
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Mobile Smart Phones
GLOBAL MARKET SHARE



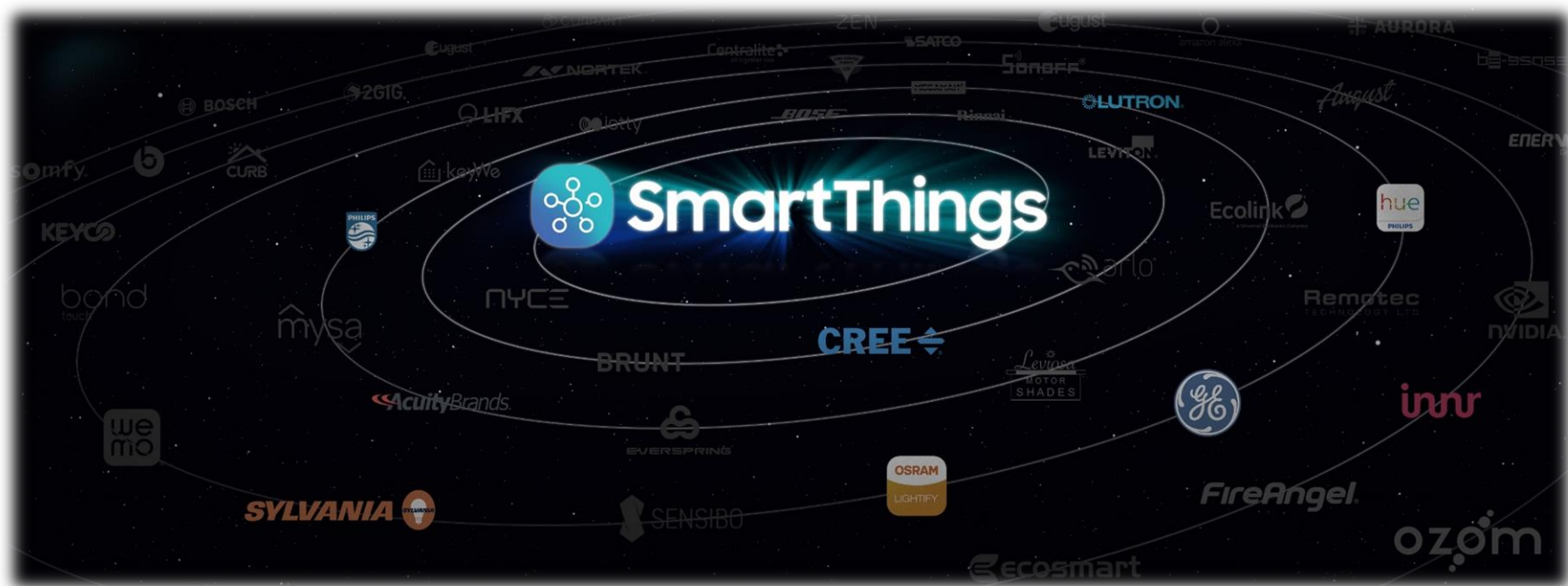
TVs
GLOBAL MARKET SHARE



Home Appliances
US MARKET SHARE

Wide Range of SmartThings Ecosystem

SmartThings is the world's most powerful platform with the greatest number of partners, 107M registered users, 146 brands, 1726 devices



Expanding to Other Open Platforms

SmartThings works with a wide range of connected devices, including Amazon Alexa & Google Home



Difficulties in Using Smart Devices

Excessive Mobile Apps



It is confusing and inconvenient to have multiple separate apps for many different devices

Interoperability Hurdle



There is no straightforward way to connect with each other across standardized protocols

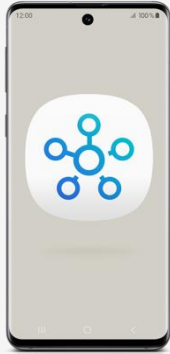
Vulnerable Security



Many users are distrust the information security level when choosing new smart devices

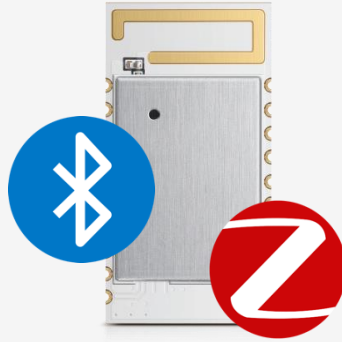
How is ITM Enhancing the User Experience

Single App



Simple and convenient control of all devices via single app

Dual Protocol




Possible to operate through both Zigbee and BLE with or without a hub

End-to-End Security



Devices and users' data are securely managed from hardware to cloud level

Single App for All Things

 **SAMSUNG**
IoT Module | ITM enables lights to
work with all types of SmartThings
ecosystem products*



* Lighting, Speaker, Sensor, Camera, Fridge, Washer, Etc.

Dual Wireless Protocol Connection



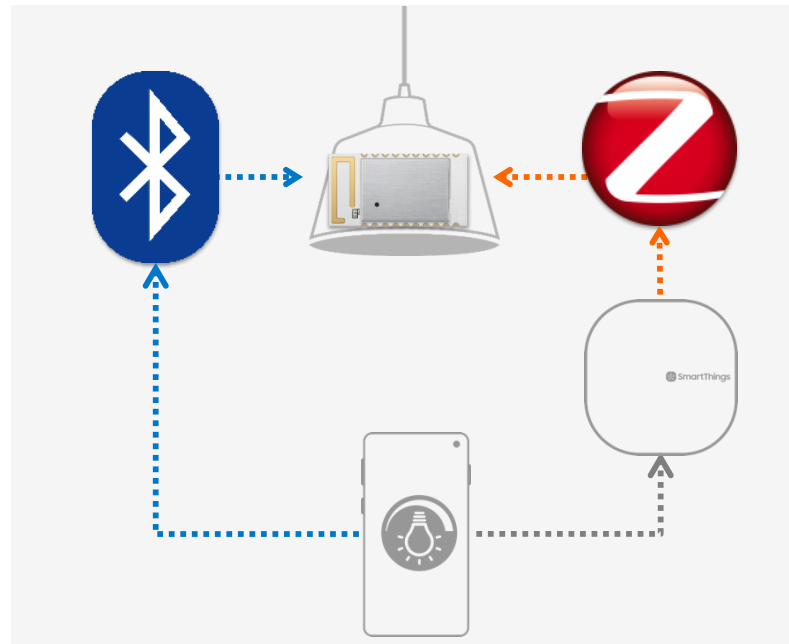
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IoT Module | ITM connects

lightings to smartphones

with or without a SmartThings hub*


owing to Samsung's IoT chip**



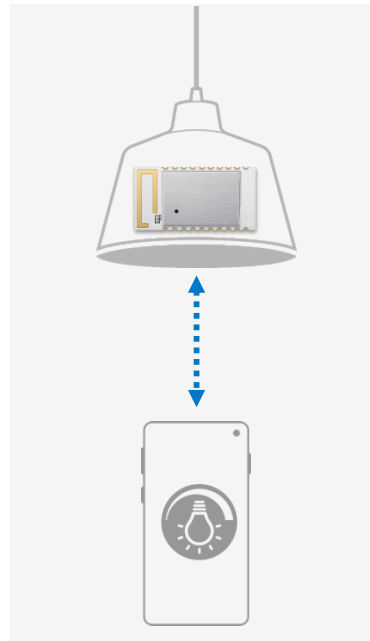
* Zigbee 3.0 or BLE 5.0

** One of Samsung's in-house IoT chips (Exynos i T100)

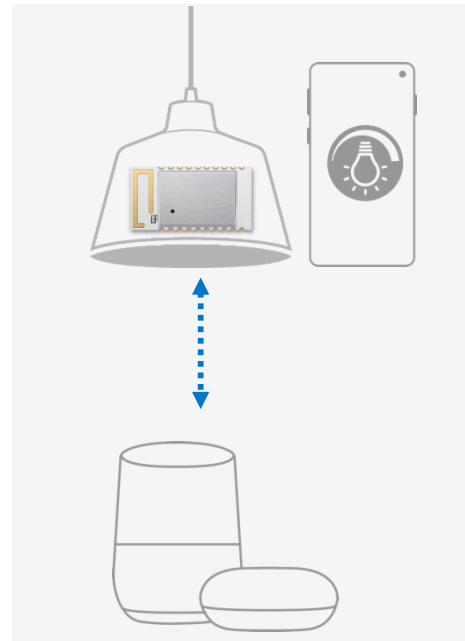
Direct Hubless Connection

 **SAMSUNG**
IoT Module | ITM supports D2D*
connections between lightings and
smartphones or AI speakers

Lighting - Application



Lighting – AI Speakers

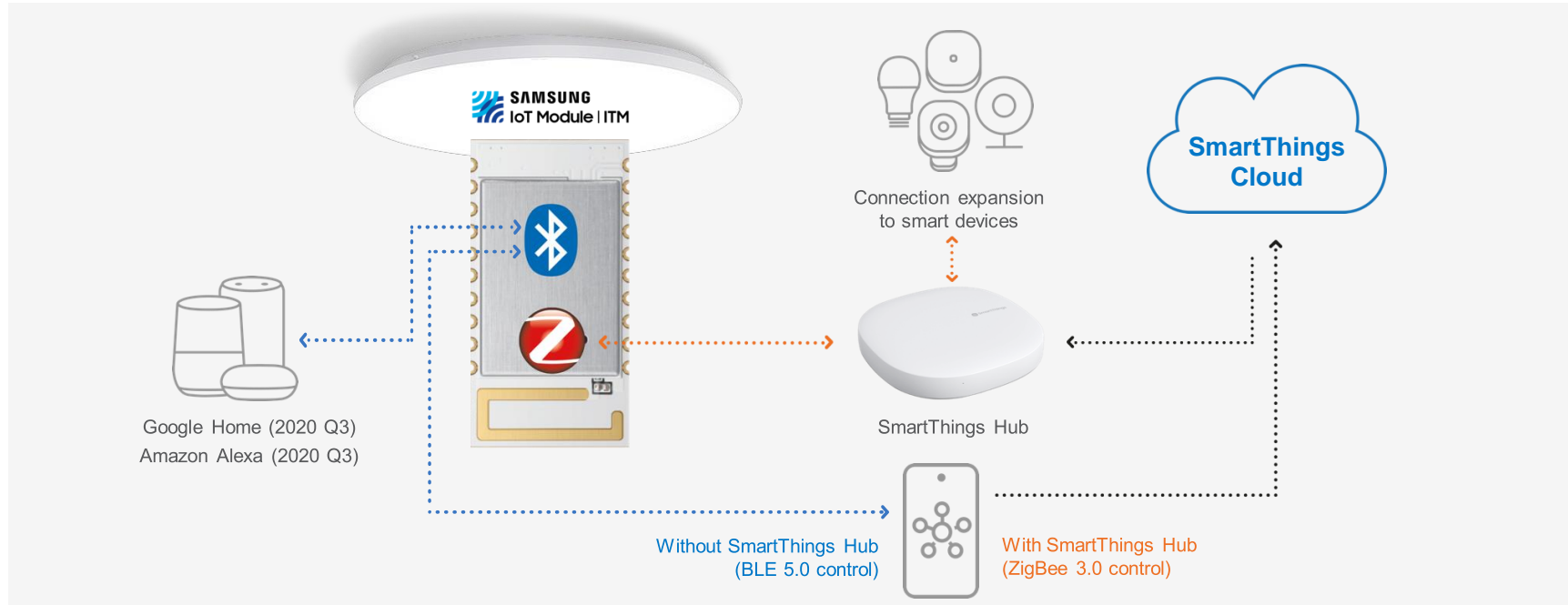


* D2D: Device-to-Device

* Available in Q3

ITM Connection Diagram

ITM is compatible with all IoT devices utilizing dual protocol



Security and Privacy

SmartThings is built from the ground up to protect the device and users' data securely

- Secure boot (SmartThings level 2 security)
- H/W & F/W security (Protected external ports)
- Protected storage / communication (AES-128 encryption)
- Set-up mode / Proximity set-up
- Compliance with CA SB-327



Samsung ITM



Connectivity

- Specification: BLE 5.0, Zigbee 3.0
- Frequency band: 2.4 GHz



Pre-designed Firmware

- On/Off, Dim, CCT tunable
- OTA updates, Secure booting



Flawless Connection to Major IoT Platforms

- SmartThings
- Amazon Alexa & Google Home (2020 Q3)



Memory

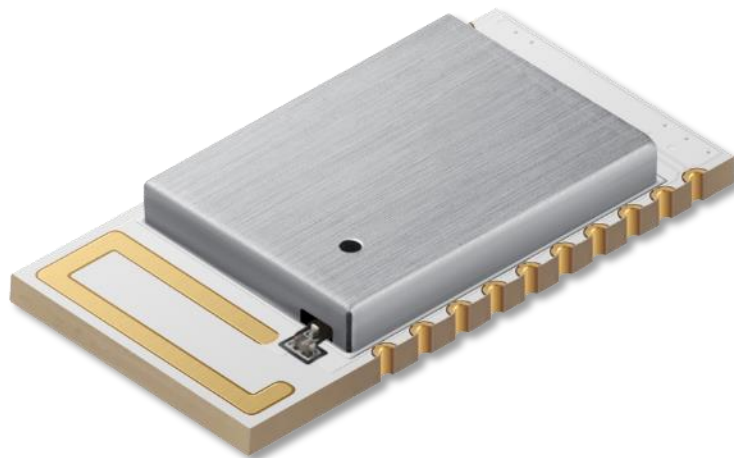
- 1280 KB eFlash
- 192 KB + 24 KB SRAM




Form Factor

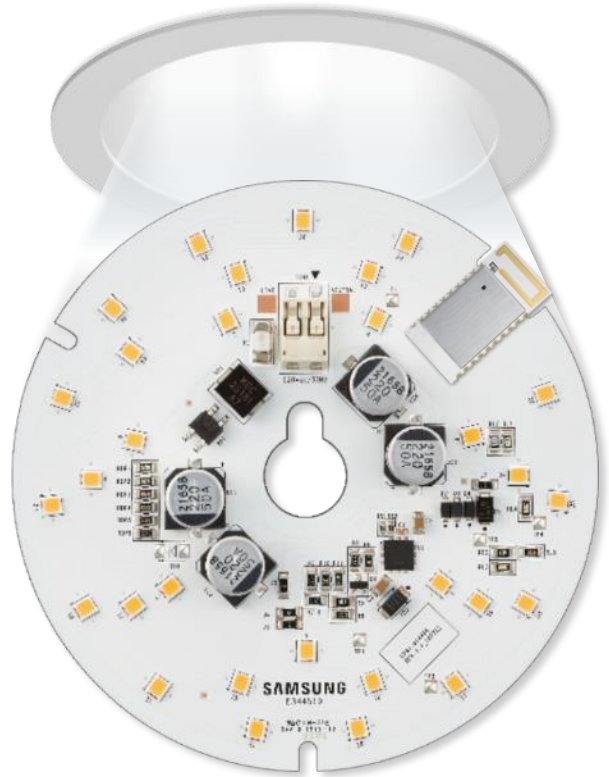
- W 18.5 mm x H 11.5 mm x T 2.2 mm

 **SAMSUNG**
IoT Module | ITM



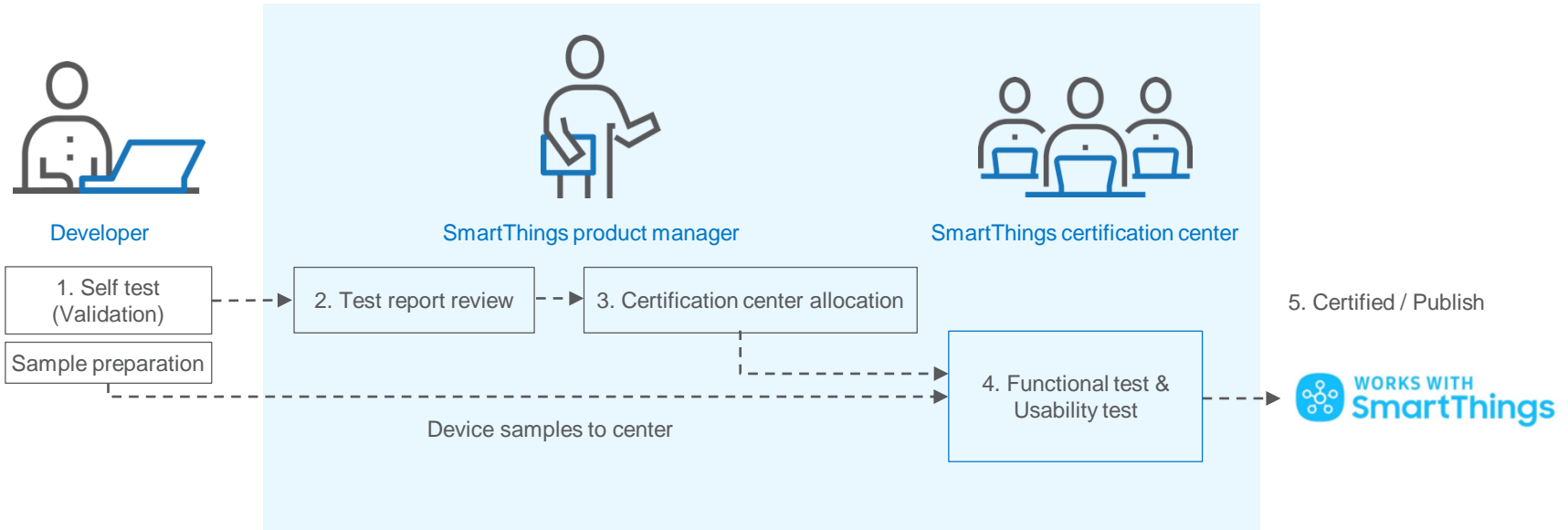
ITM Applications

 **SAMSUNG**
IoT Module | ITM enables **quick**
and easy conversion of various
kinds of luminaires to smart lightings



WwST with ITM

Pre-certified tests help faster WwST* publish



* WwST: Work with SmartThings

※ Normally luminaire can be certified and published to the SmartThings catalog within 30 business days.

Thank you