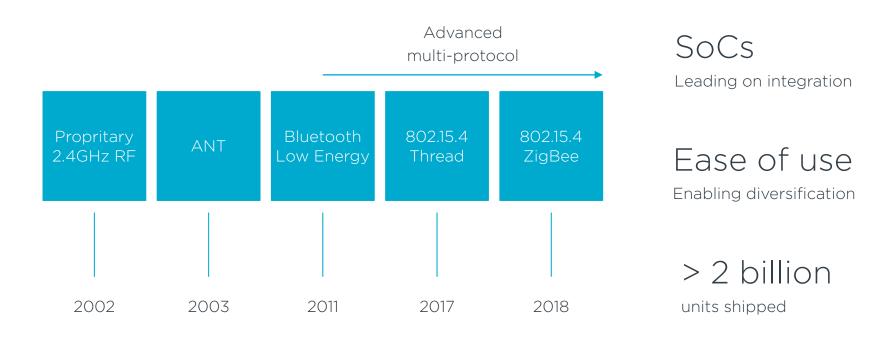
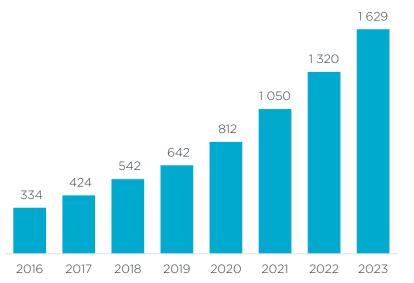


Nordic pioneered short-range low power IoT



Bluetooth Low Energy driving short-range IoT

Total Bluetooth Low Energy shipments (million units)



Source: IHS Markit | Technology, now part of Informa Tech, Wireless IoT Connectivity Intelligence Service, 2019

~1 billion

units to be shipped in 2021

 Have surpassed all other short-range low-power technologies

~26%

unit CAGR 2019-2023

- Continued growth in consumer segments
- Accelerated uptake in non-consumer segments

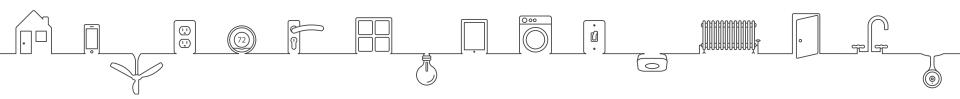
Opportunity for expansion in 802.15.4

- > 250 million units to be shipped in 2020*
- Basis for Thread, ZigBee and Proprietary protocols built on top of 802.15.4
- Smart Home and Industrial/Enterprise Automation

Multi-protocol

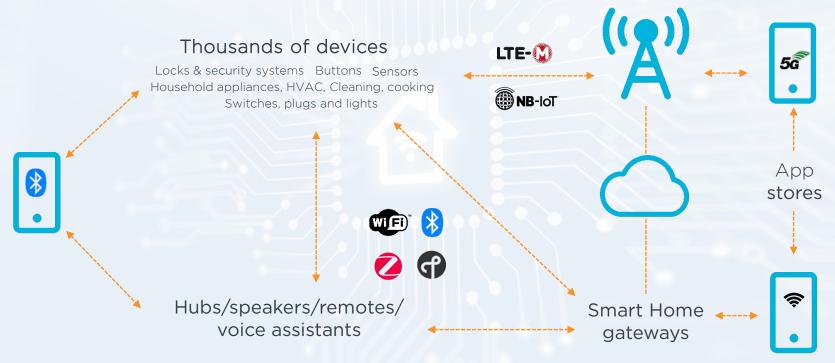
Value add opportunity

- Bluetooth/Thread/Zigbee combo ICs
- Higher end SoCs
- Innovation and value in Software



Large and fragmented ecosystems

Keys: Interoperability - coexistence - security



Extremely diverse market space

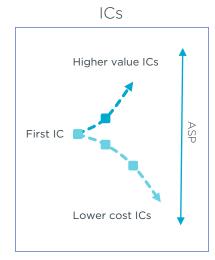


- Many market verticals with complimentary requirements
- Next 5Y; healthy mix of existing large markets and new high-growth markets

Opportunity for value add and differentiation

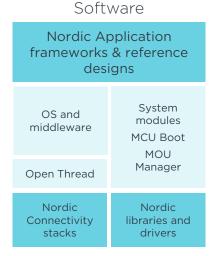
Scalability across technologies, markets and customers

- Investments in platforms
- Maximize
 R&D value



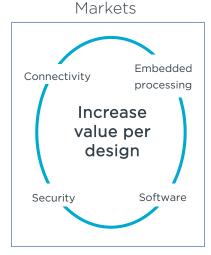
Platform that scale at customers

Rapid, targeted expansion



Framework on top of IC platform

Portability across ICs



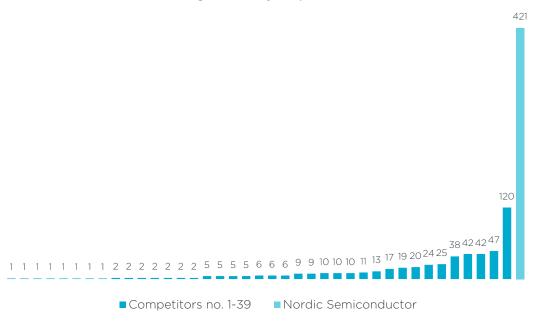
Identifying commonalities

General purpose vs

specifics

nRF52 Series - a winning family

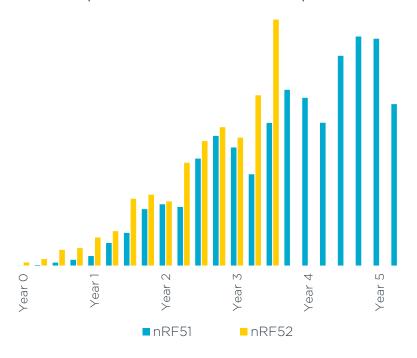
Total Bluetooth LE listings January-September 2019



- Market proven
- Unique market insight through our customer base and design win share
- nRF52 Series allow us to tactically move in the right direction(s)
- Further expansion through new software

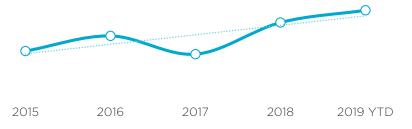
nRF52 Series - a winning family

Revenue per series from introduction quarter

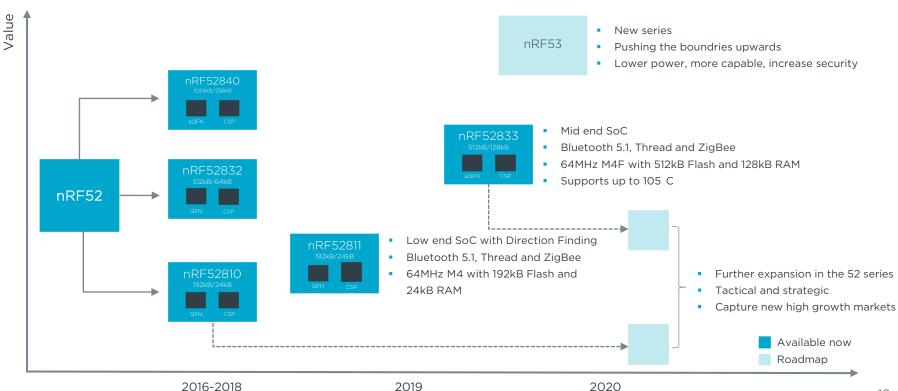


- Platform that will continue to grow over the coming years
- From low-end to high-end and still expanding through active customer engagements
- Recent additions to nRF52 Series has strengthened ASP for our Bluetooth LE

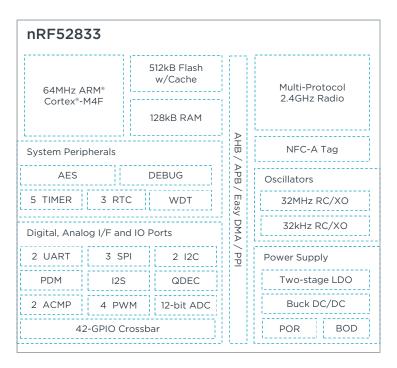
Average selling price, Bluetooth LE (ASP)



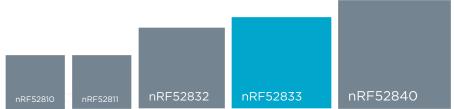
Broad product range maximizes value



Introducing nRF52833 SoC



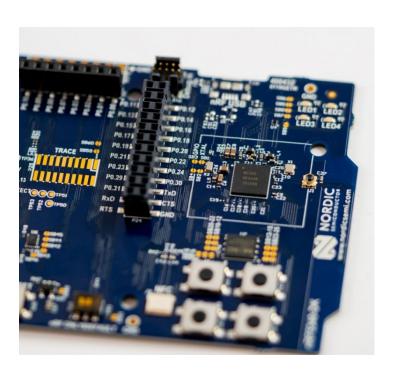
In the higher end of the series



- Extended temperature range up to 105°C
- Bluetooth 5.1, Thread and ZigBee multi-protocol
- Same architecture and software as the rest of the nRF52 Series for ease of adoption

nRF53 - The new flagship SoC

Coming soon



Builds on top of nRF52 Series

Pushing boundaries upwards

- Significantly lower power
- Significant performance increase
- Security advancements

Further aligned with nRF91 Series

Architecture and Software platform

- Large overlapping customer-base for shortand long-range, increases scalability
- Accelerated uptake in non-consumer segment

Significant ongoing software investment

Nordic Application frameworks & reference designs

OS and middleware

System modules MCU Boot MOU Manager

Open Thread

Nordic Connectivity stacks

Nordic libraries and drivers

nRF Connect SDK

Cloud applications and tools

IDE

PC & mobile tools

HW design & kits

Supporting Components

Unifying

- Support for all Nordic ICs (>nRF52 Series)
- Support for all Nordic wireless technologies
 (Bluetooth LE, Thread, ZigBee, LTE, NB-IOT)
- Complete solution from board to cloud

Modern

- RTOS integration for complex designs
- Open source when and where it makes sense
- Modern development and distribution model

Scalable

- For low <u>and</u> high complexity applications
- For single core and multi-core SoCs
- Allow customer to focus on application

nRF52 made stronger through partnerships

Direction Finding

Mesh

Cloud

Locationing









Quuppa RTLS
platform supports
nRF52 Series

Wirepas mesh solution runs on nRF52 Series nRF52840 qualified for Amazon FreeRTOS platform Tile integration in nRF52 SDK from Nordic

Audio partnership with Cirrus Logic



Strong established partnership

Combining excellence of both companies

- Nordic a world leader in low-power RF and Bluetooth
- Cirrus Logic a world leader in audio and voice processing ICs

Demonstration vehicle

Full end-to-end audio over Bluetooth Low Energy

- Industry leading ultra low power consumption
- Active customer evaluations

