

# Support for Nordic nRF52840 in Silvair Firmware

Frequently asked questions

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**SILVAIR**

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**Why did Silvair add support for the Nordic nRF52840 chip? Wasn't the existing nRF52832 chip suitable for lighting control?**

The Nordic nRF52832 chip that we support is well-suited for lighting control. However, due to the growth of our solution, the resources available in the '832 chip may be not enough to support future features. The '840 chip, equipped with four times the RAM, two times the flash memory, and an improved radio gives us and our customers sufficient space for expansion.

**What features are available on the '840 chip that are not available on the '832 chip?**

The Emergency Light Testing feature requires more memory capacity and thus is available only on the '840 chip. Due to the limited memory capacity of the '832 chip, the majority of new features will be available only on the '840 chip. Contact Silvair, if you have any requests for specific new features.

**I saw that the Bluetooth SIG's Mesh Working Group is working on some new features. Will the price of Silvair Firmware increase when these features are included in the new firmware for the '840?**

Enhancements to existing features (updates) will be available to our customers at no extra cost. For completely new features (upgrades), Silvair may require a license fee to enable them.

**The '840 chip is Bluetooth Mesh 1.0 compatible and supports Bluetooth 5 core features.**

**Does this mean it will transmit data faster thanks to the high-speed mode (2 Mbit/s)?**

**What about the long-range mode?**

Both '840 and '832 chips can achieve a transmission speed of 2 Mbit/s when running Mesh 1.0. They both also support the long-range mode. When future versions of the Bluetooth mesh standard introduce support for the long-range mode, both chip versions will be able to support it.

**What about the radio performance of the '840 chip? How does it compare to the '832 chip?**

The '840 chip has an improved power amplifier built into its radio transmitter. Thanks to the higher output power (+8 dBm in '840 vs +4 dBm in '832), the direct range is expected to increase by approximately 50%.

**With the '840, more powerful chip available, how long will the '832 firmware be supported?**

Our policy is to support our firmware for 60 months from its last release. This means that we will support the '832 chip at least until the end of 2028. During this period, bug fixes, security improvements, and developments of existing features will still be available for the '832 chip.

**Can the '840 chip be used as a direct replacement for the '832 chip in my lighting product?**

No. It can't, because the pinout on the '840 and '832 chips is different.

**Will devices based on the '832 chip, compatible with Mesh 1.0, work with '840-based devices compatible with later versions of Mesh?**

Yes, Bluetooth Mesh is backward compatible. However, to use new features, all devices in the network must support them.

**Which chip should I use in my product: the '832 or the '840?**

For new designs that expect to include the future Bluetooth mesh features, we recommend using the '840 chip to ensure that future features developed by Silvair will be supported in your device.