Mid-Range Devices

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Mid-range devices ($25 - $50) add useful features: GPS, better displays, higher transmit power, lower power consumption, or more robust form factors. (Prices below are as of 2026-06-08 and shift over time.)

Heltec V4 - $25 - $35 (as of 2026-06-08)

A direct upgrade over the V3. The V4 adds a solar charging interface, making it well-suited for small solar-powered repeater builds. It uses the same ESP32-S3 family + SX1262 as the V3, though the V4 differs in memory (V3 = ESP32-S3FN8 with 8 MB integrated flash; V4 = ESP32-S3R2 with 2 MB PSRAM + 16 MB external flash). Its LoRa output is the SX1262's native level (~21-22 dBm) unless an integrated PA is confirmed on Heltec's spec sheet.

- **TX power:** ~22 dBm (SX1262 native; confirm against Heltec's current spec - the often-repeated "28 dBm" figure is not documented in Heltec's datasheet and would require an external PA)
- **Solar input:** Yes (dedicated solar charging circuit)
- **Display:** OLED

LilyGo T-Beam - $35 - $45 (as of 2026-06-08)

A full-featured ESP32 board with GPS built in and an 18650 battery holder. The T-Beam is one of the most popular mobile nodes because position reporting works out of the box. The 18650 form factor means you can use widely available rechargeable cells.

- **MCU:** ESP32
- **GPS:** Built-in (the older v1.1 uses a u-blox NEO-6M; current revisions ship newer u-blox modules such as the M8N/M10) - specify by revision when it matters
- **Battery:** 18650 holder (cell not included)
- **Connector:** SMA antenna

Heltec T114 - $30 - $45 (as of 2026-06-08)

Uses an nRF52840 rather than ESP32, which draws significantly less power. The 1.14" TFT colour display is a step up from OLED. Solar-ready. Best choice for a low-power personal node that also has a decent screen.

- **MCU:** nRF52840
- **GPS:** Optional (offered with or without an onboard GPS module depending on variant)
- **Display:** 1.14" TFT colour
- **Power:** Lower than ESP32 equivalents
- **Flashing:** DFU (double-tap reset)

Wio Tracker L1 - $29.90 (as of 2026-06-08)

Bare board with a 1.3" OLED display and GPS (L76K). nRF52840-based. Good value if you plan to build it into a custom enclosure.

Wio Tracker L1 Lite - $27.90 (as of 2026-06-08)

The most affordable Wio option. A bare board with LoRa **and an onboard L76K GPS** - the difference versus the standard L1 is that the Lite drops the OLED screen (and ships without a case or battery), not GPS. Good choice if you want position reporting at the lowest price and don't need the built-in screen.

SenseCAP T1000-E - $35 - $45 (as of 2026-06-08)

Credit-card sized device with IP65 weather resistance, GPS, and nRF52840. One of the most compact GPS-capable options available. Ships pre-assembled in a rugged housing - no enclosure work needed.

- **Form factor:** 85 × 55 × 6.5mm (credit card size)
- **IP rating:** IP65
- **GPS:** Yes
- **MCU:** nRF52840

Mid-Range Summary

Device	Price	MCU	GPS	Display	Solar
Heltec V4	$25 - $35	ESP32-S3	No	OLED	Yes
LilyGo T-Beam	$35 - $45	ESP32	Yes	OLED	No
Heltec T114	$30 - $45	nRF52840	Optional	TFT 1.14"	Yes
Wio Tracker L1	$29.90	nRF52840	Yes	OLED	No
Wio Tracker L1 Lite	$27.90	nRF52840	Yes	-	No
SenseCAP T1000-E	$35 - $45	nRF52840	Yes	None	No

Prices in this table are as of 2026-06-08.

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