

Elon Musk's \$50,000 Neuralink brain chip explained as third patient has it implanted

30 more people could be fitted with Elon Musk's Neuralink brain chip this year alone, the company said.

By Ellie Kemp

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With the news that a third person has been implanted with Elon Musk's Neuralink brain chip, many have been left with questions over what the device actually is and how it all works.

Neuralink was founded by [tech](#) billionaire [Elon Musk](#) in 2016, with the first brain implantation made around a year ago. Noland Arbaugh was the first person to

trial the product, which left him [able to play video games with his mind](#).

During a [Las Vegas](#) interview streamed via his [social media](#) network [Twitter](#) this week, Musk confirmed: "We've got ... three humans with Neuralinks and all are working well."

How does Neuralink work?

Having a chip inserted into your brain might sound like the plot of a wayward sci-fi movie where all hell breaks loose.

But the Food and Drug Administration (FDA) allowed Neuralink to test its devices on humans in May 2023.

And so far, Neuralink patients in clinical trials have yielded some pretty incredible results.

Noland Arbaugh, who was paralyzed below his shoulders after a diving accident, demonstrated how he can now independently play chess, [video games](#) and learn languages when he wasn't physically able to before.

Neuralink works by targeting individual neurons - unlike other BCIs - providing

crucial data for thought-decoding.

How are Neuralink chips implanted?

To implant a chip, the Neuralink device - smaller than a 50 cent coin - is inserted into the skull with microscopic wires.

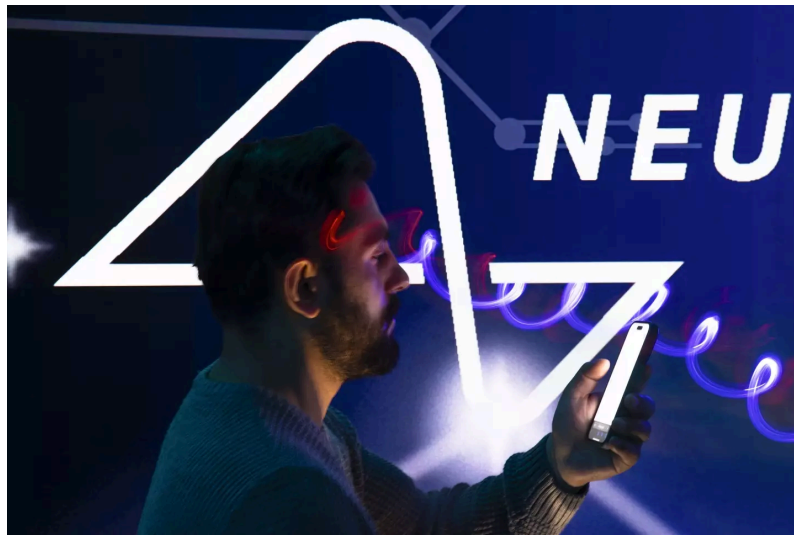
These can record and decode neural signals, which are sent back via electrical stimulation to a receiving unit.

This enables users to control devices solely through thought.

The [business](#) has also developed a robot to surgically implant the device.

Musk says since the first implant, Neuralink has upgraded its chips with 'more electrodes, higher bandwidth and longer battery life.'

He also shared hopes of implanting the devices in up to 30 more people this year.



The first Neuralink implantation took place last year (Dilara Irem Sancar/Anadolu via Getty Images)

How much does a Neuralink chip cost?

As [per](#) Nasdaq, a Neuralink chip is estimated to cost around \$10,500 in 'exams, parts and labor.'

But it's the cost to insurers that's expected to push the BCI up to \$50,000.

The actual price could rack up even higher when you factor in rising costs of the chip's components, the surgical procedure and the hardware that allows the chip to work.



*Musk has high hopes for the tech
(Klaudia Radecka/NurPhoto via Getty
Images)*

How might Neuralink chips be used in the future?

Ever-ambitious Musk hopes his BCIs will eventually help enhance user memory and cognitive abilities, as well as restore a user's motor, sensory, and visual functions.

The chips could also help treat neurological disorders including epilepsy and diseases such as Parkinson's.

It might be a good while until these sorts of medical trials open up, though.

So, if it's something you're eager to try, best get saving...

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