ONE-PAGE GUIDE · NO JARGON

What Is a Data Diode?

A quick, plain-English explainer — written for anyone who isn't an engineer, but needs to know what this box does and why it matters.



Think of a **letterbox in a front door**. You can push a letter through from outside — but you can't reach back through the slot to grab something from inside. A data diode does exactly this with information: it lets data flow in **one direction only**, and makes the reverse direction physically impossible.



Why it's different from normal security

Firewalls and passwords are **software** — rules that can be misconfigured, guessed, or hacked. A data diode is **hardware**. There's no setting to change and no password to steal, because there is simply no wire for information to travel back down.



What it's actually for

Many critical sites — power stations, factories, hospitals — need to send out readings and alerts for monitoring, but must never let anything come back in. A data diode lets the useful data out, while keeping the sensitive, dangerous, or fragile systems completely untouchable from outside.

Data diode vs. a firewall, in plain terms

A FIREWALL IS LIKE…

A security guard

Checks IDs at the door, following a rule book. A clever enough impostor, or a guard who makes a mistake, can still let the wrong person through.

A DATA DIODE IS LIKE…

A one-way letterbox

There is physically no door to walk back through. It doesn't matter how clever the attacker is — the path backwards simply does not exist.

Where you'll find them



Power & energy grids



Factories & production lines



Hospitals & patient data



Banks & government

In short: anywhere that getting hacked isn't just inconvenient — it's dangerous.

Connexite's ConnexONE

A data diode built for real-world industrial and business sites.

connexite.co.uk/connexone