



An Extended Guide · No. 1763

Protecting Smart-Home Devices

Hubs, cameras, doorbells,
thermostats, and speakers

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! Read this first — two kinds of protection, one safety rule

There are two kinds of surge protection in this guide, and they are not the same job. A whole-home surge protector wires into your electrical panel, where the power is always live and a mistake can be deadly — that is strictly a licensed electrician's work, almost always with a permit, and never a do-it-yourself project. (It isn't something I do myself, either; I help you understand it, choose wisely, and line up a trustworthy local pro.) The other kind — the surge-protector strips and plug-in units you use at the wall — are perfectly safe for you to set up on your own. One honest note either way: no surge protector is a lightning rod or an iron-clad guarantee, so in a violent electrical storm, unplugging a treasured device is still the surest protection of all. For your smart-home devices, the most important thing to protect is the network they all lean on — and nearly all of that is the easy, plug-in kind you can do yourself.

Let's protect the little helpers around your home

Smart speakers, video doorbells, cameras, thermostats, and hubs make life easier — until a surge takes one out. Let's keep them safe, in plain English, without turning it into a project.

I'm Bill, and I run Bill's Home Tech here in Portage County. I set up a lot of these gadgets for folks, and I'll tell you the honest truth up front: you can't put a surge protector on every single one, and you don't need to. There's a smarter way to think about it.

Here's the whole idea: nearly every smart device leans on your home network — the modem, router, or hub that connects them all. Protect that first, because if it goes down, everything goes down. Then guard the plug-in devices where it's practical. Simple, and nothing to memorize.

★ Ask me anything, anytime

If any of this feels like a foreign language, that's alright — it's just new. Call or text me at (330) 200-8042 and I'll walk you through it as many times as you like, with nothing to sell you.

The whole guide, on one page

If you remember only these few things, your smart home is already far better protected than most.

- ❑ Nearly every smart device leans on your network — so protect the router, modem, or hub first. It's the single weak point.
- ❑ A small battery backup on the network keeps your internet, and your cameras, alive through a brief blink.
- ❑ Indoor plug-in devices are easy: a good surge protector does the job.
- ❑ Outdoor and hardwired gear — video doorbells, cameras, thermostats — is more exposed and is where a whole-home protector helps.
- ❑ You can't put a strip on everything, and you don't need to. Focus on the network and the plug-in devices.
- ❑ A whole-home protector at the panel is a licensed electrician's job, never a do-it-yourself one.

✓ One picture to hold onto

Think of your network as the trunk of a tree and the devices as the branches. Protect the trunk first — if it falls, every branch comes down with it.

Why a smart home has one weak point

Understanding this one idea makes every other choice in the guide fall into place.

A smart home is really a little team of gadgets, and they only work because they can talk to each other and to the internet — through your modem, router, and sometimes a 'hub,' a small box that a set of devices reports to. That network is the thread that ties everything together.

Which means it's also the single point of failure. Lose one smart plug and you've lost one gadget. But lose the router or the hub to a surge, and every camera, doorbell, thermostat, and speaker in the house goes quiet at once. That's why we guard the network before anything else.

✓ Protect the trunk, save the tree

If you only ever protect one thing in your smart home, make it the router, modem, and hub. It's the least glamorous box in the house and the most important one to keep alive.

Start at the hub: protect the network first

Here's exactly how to guard the most important gear, and it's the easy, plug-in kind you can do yourself.

Your modem, router, and any hub are delicate electronics, so plug them into a real surge protector — one that plainly says 'surge protector' and has an indicator light — not a plain power strip. If your protector has a jack for the incoming cable or data line, run that through it too, since surges travel those lines. Our computer-and-network guide goes deeper on guarding the modem and router if you'd like it.

- ❑ Plug the modem, router, and hub into a good surge protector.
- ❑ Run the incoming cable or data line through the protector's jack if it has one.
- ❑ Keep the indicator light in view so you'll know the protection is still working.
- ❑ Consider a small battery backup here, so a blink doesn't drop your whole network.

✓ One protector for the network corner

The modem, router, and hub usually sit together, so a single good surge protector — ideally with a battery backup — can guard the whole corner at once. Just never chain one strip into another.

What a smart home is made of

Let's put names to the gadgets, so you know which is which and how each one is guarded.

Device	How to guard it
Router, modem, hub	Surge protector, plus a UPS
Smart speaker	A surge protector
Wi-Fi camera (plug-in)	Guard it and the network
Video doorbell	Whole-home helps most
Thermostat	Whole-home helps most
Smart plug	It's on your outlet already

✓ **Two big families**

It helps to split your gadgets into two families: the indoor, plug-in ones you can easily guard yourself, and the outdoor or hardwired ones that lean on a whole-home protector. The next pages take each in turn.

Indoor plug-in devices: the easy wins

This family is the simple one — if it plugs into a wall indoors, you can guard it yourself in a minute.

- **Smart speakers and displays:** plug them into a good surge protector like any other electronic.
- **Plug-in Wi-Fi cameras:** guard both the camera's power and, just as importantly, the network it reports through.
- **Smart plugs:** these are little protectors' cousins that sit in the outlet — they don't need a strip, but the device plugged into them might.
- **Indoor hubs and bridges:** guard these right along with the router; they're part of the network's trunk.

✓ Guard the network, help the devices

Notice the pattern: for a Wi-Fi gadget, protecting the network it depends on does as much good as protecting the gadget itself. Both together are best, but the network comes first.

Outdoor gear is more exposed

The gadgets that live outside — doorbells and cameras — face the weather and the wiring in ways indoor devices never do.

Anything mounted outside is closer to the wires and the weather, so a nearby lightning strike or a surge on the lines has an easier path to it. And many of these are wired to a small low-voltage transformer — a little box, often near the panel or in a closet, that steps your house power down to the gentle level a doorbell uses.

Because that transformer is wired into your home's power, a surge coming through the panel can reach it and the doorbell beyond. That's why the outdoor, hardwired family leans on a whole-home protector — which guards everything wired in, including those transformers.

! Guarding outdoor wiring is a pro's job

Adding or moving the wiring or transformer for a doorbell or an outdoor camera is a licensed electrician's work, not a do-it-yourself task — and certainly not something to attempt in a storm. When it comes to that, I'll line you up with a trustworthy pro.

Hardwired doorbells and thermostats: where whole-home helps

Some smart devices don't plug into an outlet at all — they're wired into your home — and those are a special case.

A hardwired video doorbell runs off that low-voltage transformer, and a smart thermostat is wired into your heating and cooling system. Neither one plugs into a wall outlet, so you can't simply put a surge protector on it. That's exactly the gap a whole-home protector fills.

A whole-home surge protector installs at your electrical panel and guards everything wired in — including the doorbell's transformer, the thermostat, and the furnace it controls. It knocks a big surge down before it can spread to any of them. Our whole-home guide explains it in full.

! The panel is an electrician's job — always

A whole-home protector wires into your live electrical panel, where a mistake can be deadly. That is strictly a licensed electrician's work, almost always with a permit — never a do-it-yourself project. I help you understand and choose it, then line up the pro.

Cameras that run over network cable

Some cameras get both their power and their picture through a single network cable, which changes how you guard them.

You may have cameras that use what's called PoE — power over ethernet — meaning one network cable carries both the electricity and the video. There's no wall plug to put a protector on. Instead, the camera's lifeline runs back to your network gear, so guarding that gear is how you guard the camera.

- Protect the network switch or box the cameras plug into — that's their power and their connection both.
- A long network cable that runs outdoors is more exposed; it's worth asking an electrician or installer about protection for that run.
- A whole-home protector backs all of this up by guarding the power that feeds the network gear in the first place.

✓ Guard the box the cables come home to

With these cameras, all roads lead back to the network box in your closet or basement. Keep that box on good surge protection, and you've protected the cameras at the far end of every cable.

Two kinds of homes, two sets of needs

Where you live changes how exposed your smart home is — and a country place on a well faces a different picture than a home in town.

If you live in town or the suburbs

In town or the suburbs, the lines feeding your home are often shorter, and sometimes buried, so nearby lightning has fewer chances to jump aboard. Your internet is usually steady, and outages tend to be short.

- Guarding the router, modem, and hub with a surge protector covers most of what matters.
- A small battery backup on the network keeps your cameras and doorbell watching through a brief blink.
- Indoor plug-in devices are quick, do-it-yourself wins with a good protector.
- A whole-home protector at the panel is a fine backstop for a hardwired doorbell or thermostat — an electrician's job.

If you are out in the country on a well

Out in the country, long overhead lines run for miles, giving lightning far more chances to put a surge on your power lines. Storms roll through with little in the way, and outages tend to run longer.

- That extra exposure makes a whole-home protector especially worthwhile for outdoor cameras, doorbells, and thermostats.
- Longer outages make a battery backup on the network a real comfort — so your security cameras don't blink out at the worst moment.
- Rural security setups often rely on outdoor cameras, so protecting the network box they report to matters even more.
- Have a licensed electrician handle the whole-home unit at the panel, with a permit — it's never a do-it-yourself job.

★ Not sure which picture is yours?

Plenty of homes land somewhere in between. Tell me what smart gadgets you have and how your power behaves in a storm, and I'll help you sort out what's worth doing. No pressure — call (330) 200-8042.

You can't put a strip on everything — and that's fine

Let me take some pressure off: nobody protects every last gadget, and you don't have to either.

Smart homes spread little devices all over — a sensor here, a bulb there, a plug in the corner. Trying to put a surge protector on each one would be a tangle, and it isn't the point. The point is to protect the few things that matter most and let the small stuff be.

- ❑ Protect the network first — router, modem, and hub. This does the most good by far.
- ❑ Guard the devices you'd truly miss or that cost the most to replace.
- ❑ Let a whole-home protector cover the outdoor and hardwired gear you can't reach with a strip.
- ❑ Don't fret over every little sensor or bulb — they're cheap and easily replaced.

★ Let's pick what's worth protecting

On a visit I'll walk your home with you, point out the handful of things genuinely worth guarding, and set up the plug-in protection right there. No overkill, no upsell. Call (330) 200-8042.

A small battery backup for the network

This is the upgrade that quietly does the most for a smart home, and it's worth a page of its own.

A battery backup — a UPS, or uninterruptible power supply — is a surge protector with a battery inside. Put one on your network corner and, when the power blinks or dips, the router and modem keep right on running. Most battery backups include surge protection too, so it does both jobs.

Why does this matter for a smart home? Because when the network drops, so does everything that leans on it — your cameras stop recording, your doorbell stops answering, your automations pause. A battery backup on the network keeps the whole team on its feet through the brief outages that happen most often.

✓ Keep the cameras watching

If home security is why you have cameras and a doorbell, a battery backup on the network is the difference between cameras that keep watching during a blink and cameras that blink out just when you'd want them most.

A few wiring do's and don'ts

These simple habits keep your setup both safe and truly protected — and they cost nothing.

- **Do** plug protectors straight into a properly grounded three-prong wall outlet.
- **Don't** daisy-chain — never plug one strip or protector into another one.
- **Don't** force a three-prong plug into an old two-prong outlet with a 'cheater' adapter; it defeats the protection.
- **Do** keep the network corner ventilated — these boxes run warm and like a little air.
- **Do** label the plugs so you know which is the router, which is the modem, and so on.

! A good ground is the whole point

Surge protection works by shunting extra energy safely to ground. Without a real ground — a genuine risk in older homes — a protector can't do its job. Our grounding guide explains how to check this, and an electrician can confirm it.

Severe storms: what to unplug, and what you can't

A smart home is a little different at storm time, because some of it you'd rather keep running — but the honest rules still hold.

No plug-in protector reliably survives a direct lightning strike. In a truly violent storm, the surest protection for a device is to unplug it — power and any data line both. The catch with a smart home is that you may want the cameras and doorbell to keep watching, so there's a balance to strike.

- ❑ If a storm is severe and right overhead, unplugging the router protects it — but know your cameras go offline while it's unplugged.
- ❑ A whole-home protector lets you leave more running with less worry, since it guards the wired-in gear.
- ❑ When a long outage ends, the power can return with a jolt — a good reason to keep protection in place.
- ❑ After a big storm, glance at your protectors' lights to be sure they're still protecting.

! Your safety comes first

Don't fuss with cords while lightning is right on top of you, and stay away from wired devices and plumbing during the worst of it. A gadget can be replaced; you cannot.

Protectors wear out — watch the light

Here's the catch that fools almost everyone, so it's worth knowing before it fools you.

A surge protector is sacrificial — its protective parts wear down a little with each surge and with age, until one day they can't protect anymore. The sneaky part is that a worn-out protector **still powers your gear**. The router still runs, so folks keep trusting protection that's long gone.

That's what the indicator light is for. If the 'protected' light is out while the strip still has power, the protection is used up — replace the unit, even though the network is still online. Replace it too after a known big surge or a nearby strike, and every few years as a matter of course.

✓ When in doubt, replace it

A surge protector is the cheap part of the equation, and your network and gadgets are the expensive part. If you're ever unsure whether a protector still has life in it, just swap in a fresh one.

A simple shopping checklist

Keep this handy when you shop, in the store or online. It's all you really need for the plug-in side.

- ❑ It plainly says 'surge protector' — not just 'power strip.'
- ❑ For the network corner, a battery backup (UPS) that also lists surge protection.
- ❑ An indicator light, ideally both 'protected' and 'grounded.'
- ❑ A jack for the incoming cable or data line if you want to guard that through it.
- ❑ Enough well-spaced outlets, and a UL-listed safety mark.

✓ Don't chase a single number

You'll see 'joule' ratings — a rough measure of how much a protector can soak up over its life, where higher generally lasts longer. Glance at it, but don't obsess over one figure. Our choosing-a-protector guide explains it plainly.

Common mistakes people make

Knowing the usual slip-ups ahead of time is half the battle. Here are the ones I see most with smart homes.

- **Guarding the gadgets but not the network** — protecting branches and leaving the trunk exposed.
- **Trusting a plain power strip** on the router — it only adds outlets, no protection.
- **Trying to protect every last device** and giving up in frustration instead of guarding the few that matter.
- **Forgetting outdoor and hardwired gear** needs a whole-home unit, not a strip.
- **Daisy-chaining strips** in the network corner when there aren't enough outlets.

! The unprotected trunk

If I had to name the one mistake I see most with smart homes, it's fussing over the gadgets while the router sits on a plain power strip. Guard the network first — everything else depends on it.

A few myths, cleared up

Smart homes attract some tall tales. Here are the ones I hear most, set straight.

- **'I need a surge protector on every smart device.'** No — focus on the network and the devices that matter; let the small stuff be.
- **'A power strip protects my router.'** No — a plain strip only adds outlets. You need a real surge protector.
- **'A surge protector keeps my cameras on during an outage.'** No — that's a battery backup's job. A protector only stops spikes.
- **'My hardwired doorbell can't be protected.'** It can — a whole-home protector guards the wiring and transformer it runs on.
- **'Newer gadgets don't need protection.'** Backwards — they're full of delicate electronics, so they need it more.

✓ There's a whole guide on the myths

If any of these surprised you, that's the point. Our 'common myths' guide and the 'protector versus power strip' guide dig into each one in friendly detail.

Where to begin, without overthinking it

You don't have to do everything at once. Here's a calm order that fits most homes.

First, protect the network — put a good surge protector, and ideally a small battery backup, on the router, modem, and hub. That single step guards the trunk that everything else grows from, and you can do it this week.

Then, guard the indoor plug-in devices you'd truly miss. And when you're ready, ask a licensed electrician about a whole-home protector at the panel, which covers the outdoor and hardwired gear a strip can't reach. There's no rush; each layer is a real gain.

★ A plan that fits your budget

No need to spend it all at once. Tell me what gadgets you have and what you'd hate to lose, and I'll help you put it in a sensible order — starting with the easy, inexpensive wins. Call or text (330) 200-8042.

How I can help

Sorting out which smart gadgets to protect, and setting it up neatly, is exactly the sort of job I love to take off your plate.

I'll come to your home, protect the network corner with the right surge protector and a battery backup, guard the plug-in devices worth guarding, and manage the cords so nothing's a hazard. I'll show you which lights to glance at, so you always know your protection is still working.

For a whole-home protector to cover your outdoor doorbell, cameras, or thermostat, I don't do the panel work myself — that's a licensed electrician's job. But I'll help you understand it and line up a trustworthy local pro, so you're never sorting that out alone.

★ Real help, close to home

A first in-home visit is a flat \$99, and for the simple things I can often help right over a screen-share for \$49. Every visit comes with a 30-day, come-back-free guarantee. Call or text (330) 200-8042.

Common Questions

The questions I hear most about protecting smart-home devices, answered plainly.

Q: If I protect one thing, what should it be?

The network — your router, modem, and hub. Nearly every smart device leans on it, so if it goes down, everything goes down. Guard the trunk before the branches.

Q: Do I really need to protect every smart device?

No — and that's a relief. Focus on the network first, then the plug-in devices you'd truly miss. Let the small, cheap sensors and bulbs be; guarding every last one isn't practical or necessary.

Q: How do I protect a video doorbell or a hardwired thermostat?

You can't put a strip on them, since they're wired in, not plugged in. A whole-home protector at the panel guards the wiring and transformer they run on — that's a licensed electrician's job.

Q: What about cameras that use a single network cable?

Those get power and picture over one cable running back to your network gear, so there's no wall plug to guard. Protect the network box they connect to, and a whole-home unit backs that up.

Q: Will a surge protector keep my cameras on during an outage?

No — a protector only stops spikes. To keep the network and cameras running through a blink or short outage, you want a battery backup (a UPS) on the network corner. Most include surge protection too.

Q: Is a plain power strip good enough for my router?

No. A plain power strip only splits one outlet into several — no surge protection at all. Look for the words 'surge protector' and an indicator light; if it doesn't say so, assume it's just a strip.

★ Still have a question?

That's what I'm here for. Call or text me at (330) 200-8042 and ask away — there's truly no such thing as a silly question about this.

You don't have to do this alone

You just have to remember that a friendly, patient person is one call away.

I hope this guide made protecting your smart-home devices feel a little less daunting and a lot more doable. Keep it in a drawer with your other home papers, come back to a page whenever you need it, and don't worry about memorizing anything.

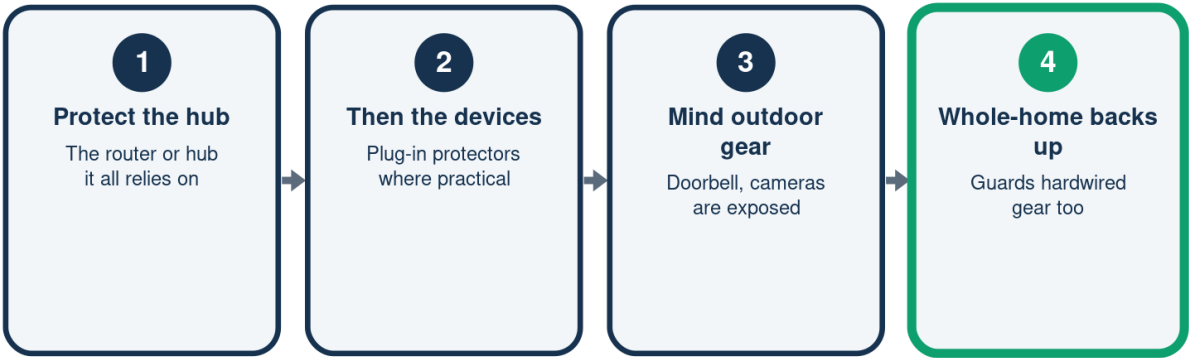
When you'd rather have a hand, that's exactly what I do. I come to your home, work at your pace, and never make you feel rushed or silly for asking. A first visit is a flat \$99, and for the parts that don't need me on-site I can often help right on your screen for \$49. Every visit comes with a 30-day, come-back-free guarantee. I don't do the licensed electrical work myself — for that I'll help you line up a trustworthy local pro.

★ Bill's Home Tech — real help, close to home

Call or text me at (330) 200-8042, or visit BillsHomeTech.com. Serving Atwater and all of Portage County. 30+ years of patient, plain-English tech help — and if you're ever not 100% happy with a visit, I'll make it right or refund it. That's a promise. — Bill

Start at the Hub

Protect what everything else leans on



The network is the single weak point -- guard it first.

What Each Device Needs

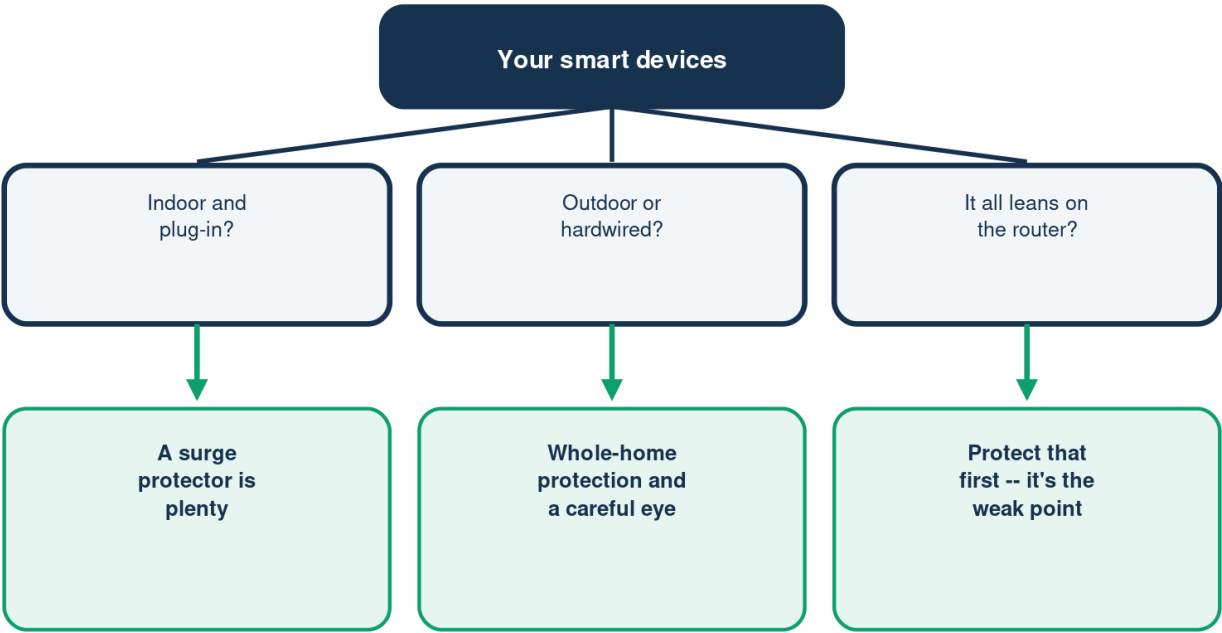
A quick guide, device by device

How to guard it	
Hub / router	Surge and a UPS
Cameras	Network and power
Doorbell	Whole-home helps
Speaker	A surge protector

Outdoor and hardwired gear leans on a whole-home protector.

How Should You Guard It?

Let the device point the way



Outdoor and hardwired work is a licensed electrician's job, never DIY.

Illustration - a schematic, not to scale. Your setup may differ.

If This Fails, What Stops?

Why the network comes first

	What stops working
Router	Just about all
Hub	Your automations
Power	All of it

Lose the network and every device that leans on it goes quiet.



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Bill can screen-share and fix many things remotely — a flat \$49, free for Support Plan members.



A Note From Bill

A quick note from Bill.

I write these guides to make home tech a little less frustrating, and I do my best to keep every step accurate and up to date. Still, every home, device, and setup is a bit different, so I can't promise a guide will match yours exactly or fix your particular problem. These guides are for general information only — they're not professional, legal, or financial advice, and they don't replace your device's own manual or the manufacturer's instructions. Please go slow, use your own good judgment, and use everything here at your own risk. If a step involves electrical wiring, a gas appliance, a water heater, plumbing, or climbing a ladder — or if anything just doesn't feel safe — please stop and call a licensed professional (or give me a call at 330-200-8042). Bill's Home Tech and Bill Davis can't be responsible for any damage, data loss, or injury that comes from using these guides. Thanks for reading, and stay safe out there.

— *Bill*



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