

EM8 CONNECT

Managed 4G Router & Remote Access

User Guide & Training Manual

Unlimited 4G on site, a WiFi hotspot, a network you manage from the portal, and a permanent internet address for any device behind it — without touching the router.

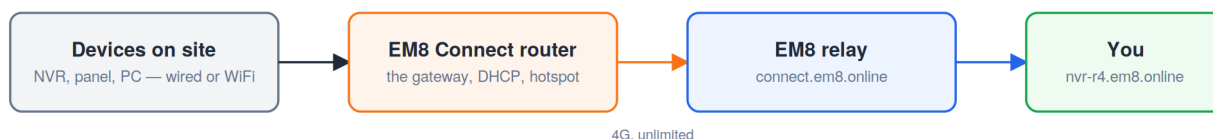
Version 1.0

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EM8 Connect at a glance

How EM8 Connect works

A managed 4G router on site; a fixed address on the internet; nothing to configure on the router.



A port forward gives a device on site its own permanent address on the internet, through the relay — no public IP, no dynamic DNS.

Every setting is applied by the router within a minute of saving, and undone by the router itself if it would have cut it off.

Router on site, relay in the middle, a fixed address for you.

EM8 Connect is a managed 4G router. Engineer M8 ships it configured for your account; you plug it in and it is online. It is the gateway for everything on its network — it hands out addresses, runs a WiFi hotspot, and gives any device behind it a permanent address on the internet through the EM8 relay. All of it is set on the EM8 Connect page in the portal; the router applies each change itself within a minute, checks it still has its connection, and undoes the change on its own if it does not.

Panel	What it does
Router card	Each router with its name, serial, status, 4G signal, and its em8.online address.
Hotspot	The router's WiFi network name and password.
Network	The router's own address, the network size, DHCP range and lease time, and DNS.
Fixed Addresses	Devices that must always get the same address — anything you publish through a port forward.
Devices on This Router	What the router can see on its network, refreshed every minute.
Port Forwarding	Publish a device on the network at its own em8.online address (web) or an allocated public port (TCP/UDP).

- **No router configuration** — no login page, no firmware to learn. Everything is on the portal page.
- **A permanent address without a public IP** — the router connects out to the EM8 relay, and the relay publishes the address. Works on any SIM, any signal, anywhere.
- **Changes that cannot lock you out** — the router applies a network change, verifies its connection survived, and rolls it back if not.
- **Two modes** — the £25-a-month 4G router that is the site's gateway; or a remote-access unit on a site that already has internet, giving you a way in to one device's web interface.

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1. Getting started	The page, the router card, status and signal
2. Hotspot and network	WiFi, addresses, DHCP, DNS, fixed addresses
3. Port forwarding	Publishing a device at an em8.online address or a public port
4. Quick reference and common questions	

1. Getting started

1. Sign in to the EM8 Portal and choose **EM8 Connect** from the left-hand menu.
2. Each router you have is a card. Click the card for its settings.

If the page says you have no routers yet, none has been assigned to your account — contact Engineer M8.

1.1 The router card

Shows	Means
Status	Online (checking in), or how long since it last did. A router checks in every minute.
Signal	Excellent, Good, Fair or Poor. Fair works; Poor is worth moving the router or the aerial.
Public address	The router's own em8.online name. "Domain pending" for a minute or two after it first comes online.
Network	Whether the last network change has been confirmed by the router, is still waiting, or was undone.

1.2 Installing it

1. Fit the aerial and put the router where the signal is best — high, near a window, away from the metal cabinet.
2. Connect power. Plug wired devices into the LAN port, or join the hotspot.
3. Within a couple of minutes the card shows Online and the address is allocated.

2. Hotspot and network

2.1 Hotspot

Set the **network name (SSID)** and **WiFi password** (8 to 63 characters) and save. Devices that join get online through the router with no other setup. Change the password when a contractor leaves; every joined device drops and must rejoin.

2.2 Network settings

Leave these as shipped unless a device on site needs a specific range. If you do change them:

Setting	What it is
Router address on its network	The router's own address, which devices use as their gateway — 192.168.1.1 by default.
Network size	/24 (254 addresses) is right for almost every site. Larger sizes exist for the rare site that needs them.
Hand out addresses automatically (DHCP)	On, with a From and To range. Off only if something else on site is the DHCP server.
Lease time	How long a device keeps an address. 12 hours is recommended.
DNS	Use the mobile network's, or specific servers you name.

The router checks its own work. Save, and within a minute the router applies the change and confirms it. If the change would have cut the router off, it undoes it and the page says "The router undid the last network change — it is still running the previous settings". Adjust and save again. You cannot lock yourself out from here.

Changing the network means every device on it picks up a new address. Do it out of hours, and re-check any fixed addresses and port forwards afterwards.

2.3 Fixed addresses

Anything published through a port forward needs an address that never changes. **Add Fixed Address:** pick the device from the list the router can see (its hardware address fills in), or type the MAC printed on it; set the address to always give it; name it. The router gives that device the same address from its next lease.

2.4 Devices on this router

Everything the router can see on its network — address, hardware address, name where known, last seen — refreshed every minute. Fixed devices are tagged. **Give this device a permanent address** on any row jumps straight to a fixed-address entry for it.

3. Port forwarding

A port forward publishes a device on the router's network on the internet, through the EM8 relay. The router connects outward to the relay; the relay answers on the public side. Nothing inbound reaches the router directly.

1. Click **Add Port Forward**.
2. Name it — "NVR Web Interface".
3. Choose the **type**: **HTTPS** or **HTTP** for a web interface (it gets its own em8.online address); **TCP** or **UDP** for anything else (it is allocated a public port on connect.em8.online).
4. Pick the **device** from the list the router can see, or type its address. Enter the **device port** — 80 or 443 for a web interface, 554 for RTSP, and so on.
5. For a web forward, set the **web address prefix** — "nvr" becomes nvr-yourcompany-r4.em8.online. It defaults to the name.
6. Create. The address is published within a minute and shown on the row.

Forwards can be **disabled** without deleting them, and removed when no longer needed. Give the device a fixed address first (2.3) — a forward pointing at an address DHCP has since given to something else publishes the wrong device.

What you publish is on the internet. A forward to an NVR's web interface is reachable by anyone who knows the address. Keep the device's own login strong, use HTTPS where the device supports it, and disable forwards you are not using.

3.1 Remote-access units

An EM8 Connect unit can also be fitted on a site that already has internet, with no SIM. It joins the site's network like any other device and gives you a port forward to something on that network — a recorder's web interface, a panel — without opening anything on the site's own router. On these units the router is not the gateway, so the Network and Fixed Addresses panels do not apply; addresses for published devices are fixed on the site's own router instead.

4. Quick reference and common questions

When	What	Where
New site	Plug in; check Online and signal; set the hotspot password	Router card, Hotspot
Publishing a device	Fix its address; add a port forward	Fixed Addresses, Port Forwarding
Contractor leaves	Change the hotspot password; disable their forwards	Hotspot, Port Forwarding
Router offline	Power, aerial, signal; then contact Engineer M8	Router card

The router shows offline.

Check power and the aerial. Poor signal at the last check-in means it is struggling to reach the network — move it. If it stays offline with good signal, contact Engineer M8; the SIM or the unit may need attention.

The network change is stuck on "waiting".

The router checks in every minute and confirms after it applies. Give it two minutes. If the page then says the router undid the change, the settings would have cut it off — most often a router address outside its own network size.

My forward opens the wrong device.

The device's address changed under DHCP. Give it a fixed address and point the forward at that.

The browser warns about the certificate on an HTTP forward.

An HTTP forward is plain; use HTTPS type where the device supports it, and the em8.online address carries a valid certificate.

Can I use it as a backup to our broadband?

No — EM8 Connect is the gateway for its own network, not a failover for another router. Put the devices that must stay up on the EM8 Connect network.

A page shows an error after an update.

Refresh the page.

Need help? Your Engineer M8 contact is your first port of call for anything this guide does not cover.