

WiFi Requirements for Silver Shield

What's Needed

Silver Shield relies on a stable WiFi connection to operate. This is how it communicates alerts, syncs data, and stays up to date. Without it, the system can't perform its core functions.

Why It Matters

WiFi powers every part of Silver Shield's functionality - from detecting falls and sending alerts, to updating settings and integrating with your care management software. If the connection is weak, unstable, or unsecure, the system can't do its job reliably.



Supported Network Types

Silver Shield is compatible with the following WiFi configurations:



Open networks



WPA Personal



WPA Enterprise (username and password only)

Recommended Signal Strength

Signal Strength	Quality	Description
-30 dB	Maximum	Exceptional - likely right next to the access point
-50 dB	Excellent	Strong, stable connection
-60 dB	Good	Reliable for most usage
-67 dB	Minimum Recommended	The lowest acceptable level for stable performance
-70 dB	Weak	May support very limited functions (e.g. email only)
-80 dB	Unreliable	Likely to experience connection issues
-90 dB	Very Poor	Unusable - internet connectivity is unlikely

Connectivity



- **Wireless Standard:** Wi-Fi **IEEE 802.11 b/g/n** (2.4 GHz)
- **Protocol:** Encrypted MQTT over TLS
- **Port Requirement: 8883** (must allow **two-way communication**)
- **Cable Connection: Micro USB to USB 2.0**
- **Device Port: Micro USB**

Wi-Fi Network



- **Frequency Band:** 2.4 GHz only
- **Signal Strength:** Minimum **-67 dBm** at installation point
- **Security Standards:** WPA2 or WPA3 recommended
- **SSID:** Use a dedicated SSID where possible for maximum stability

Performance



- **Minimum Upload/Download Speed: 2 Mbps per device**
- **Latency:** Under **100ms** for real-time alerts
- **QoS:** Prioritising Silver Shield traffic recommended

Firewall & Security



- Allow **inbound and outbound traffic** on **port 8883**
- Ensure no firewall rules or network restrictions block **bidirectional communication**
- All data is **encrypted end-to-end** to maintain security and compliance

Why It Matters

Silver Shield's advanced fall detection relies on **continuous, secure data exchange** between the sensors and care dashboard. Allowing **two-way encrypted traffic** ensures:

- Real-time alerts reach care teams instantly
- Continuous updates on health metrics and presence data
- Seamless delivery of remote support and firmware updates

Troubleshooting Tips

If you're unsure about the WiFi quality in a specific area:



Use a WiFi analyser app to measure the signal where the sensor will be installed



If the signal is below the recommended level, consider adding a WiFi extender or additional access point nearby

When the WiFi is strong and stable, Silver Shield remains fully connected - ensuring care and safety are never out of reach.

Need Support?

Spark Care Email: hello@spark-care.co.uk

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Spark Care Website: <https://spark-care.co.uk/silvershield/>