SOPHIA
Our Network Explained

by **Cafection** | **EVOCA** GROUP

Cellular Connectivity

How it Works

Through a **cellular modem (LTE)**, our brewer* communicates with Sophia via a secure network, allowing you to access it whenever it pleases you. Your modifications are then encrypted and sent back to the coffee machine, which will be modified according to your new settings.

We teamed up with the best telecommunication companies to offer you the most reliable cellular connectivity. Users in USA can count on **AT&T** and **T-Mobile**, while clients in Canada can rely on **Bell**.

No need to puzzle over picking the service provider, the modem will automatically select the best signal available in the machine area.

Sophia   Sophia

Secure Network
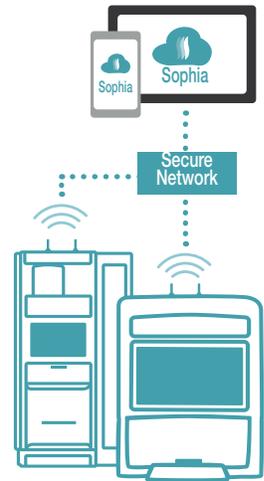
Frequency of Connection

As any cellular-connected system, Sophia is subject to bandwidth availability and network traffic fluctuations. It is therefore possible that, from time to time, a machine logged on Sophia gets disconnected from a cellular tower when demand is too high.

Depending on network availability,
your brewer will connect at least once every 24 hours.

Even if a brewer is not online 100% of the time, **it does not compromise the good functionning of the connection between Sophia and a machine**. If a unit cannot connect to the cellular network for any good reason there may be, everything will be saved on the brewer until the next connection, where all new data will be uploaded to Sophia.

Network Security

Cafection | Evoca's network offers private cellular connections that do not go over the public internet. What does this approach mean for you? More reliability, lower latencies and higher security than typical internet connections. And as Sophia is a web-based application, no installation is required, therefore reducing the risk of a security breach.

Remotely manage your brewers without compromising
your data or the security of your network.

Our Sophia cellular connection enables the cloud to appear as another endpoint on Cafection's MPLS VPN network, making the cloud accessible to any coffee machine and avoiding the need to send data over the public internet. It is therefore impossible to reach the coffee machine or customer's private data using an external network.

Advantages of this approach include:

- Superior network performance, with as much as 50 % lower latency.
- Up to 3x greater availability.
- Enterprise grade security, avoids routing traffic over the public internet.
- User information is encrypted into the database (one-way hash).

Cellular modem is optional on certain models.

Optimize Your Cellular Connection

Some actions can be taken to ensure the best possible connection of your machine to Cafection | Evoca's cellular network.

Optimize the connection of your machine

1 Your machine is turned on

It may look obvious, but your machine needs to be up and running in order to connect to the cellular network.

2 Antennas are properly positioned

The two cellular antennas are facing upward and located near the strongest signal point.

3 Cellular network is available and signal is strong

Like any connected device, a signal must be availble for the unit to establish a link to the cellular network.

To verify the availability and strength of the signal, we strongly suggest to install the OPENSIGNAL app on a cell phone (available on Android and iOS) and to open it in the surroundings of the machine.

Opensignal should help confirm that your area, and most importantly the specific location of your machine, are covered by AT&T, T-Mobile or Bell, and that the signal is free from interferences.
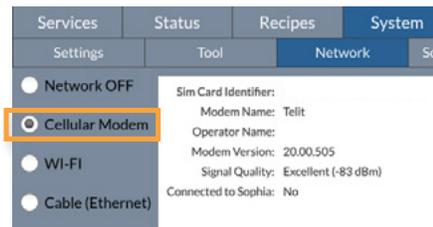
If necessary, you can move the antennas to enhance the signal.

4 Modem is correctly activated through the unit software

Enter Service mode, then go in the System tab. Under the Network sub tab, make sure the "Cellular Modem" option is activated.

Validate your connection status

**The cellular icon is displayed on the screen**

If the machine is connected to the cellular network, this icon should appear on the top left corner of the brewer screen.

The cellular network link is established

In Service mode, under the Status tab, the "Network Status" should state "Cellular link OK".

Make a complete backup from Sophia

To validate the stability of the signal at the specific location of your machine, we recommend trying to make a complete online backup from Sophia. If the backup is successful, then the quality of the signal is satisfying.
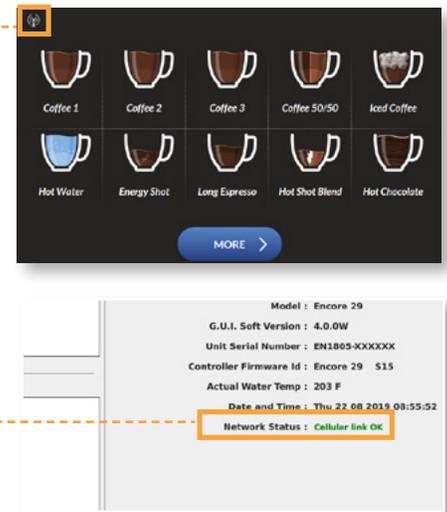
Proven Efficiency

Striving to make sure our brewers connectivity was as reliable as expected, we conducted an experiment with one of our clients to test the reliability of our cellular network. The Cafection | Evoca team tested the LTE connectivity on our client's units in 52 USA cities, throughout 5 different States.

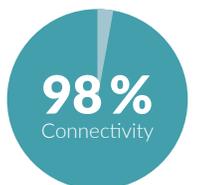**The Results?**

Average data per unit over 1 month

6.5 MB*

A good connectivity should use around **5 MB** per month

Brewers were connected **98%** of the time over 6 months

98% Connectivity

The average bandwith observed during our experiment **exceeded by 30% our good connectivity standards.**

*Results may vary depending on location, strength of the cellular signal, and accuracy of the connection information in the software.

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