Kigen

Selecting the right SIM hardware and SIM functions for your next cellular IoT design

Cellular connectivity can enrich a wide range of IoT use cases. The right choice of SIM hardware (form factor) and its Operating System's (OS) functionality can ensure your device's cellular capability is fitting. Identifying your device's use case and the deployment environment will clarify its associated cellular and security needs over its entire life in service. This in turn ensures future proofing and avoids early obsolescence.

But it's a complex landscape and you may need to compromise. However reasoned choices will lead to the best possible level of simplicity, supportability, efficiency, flexibility and security needed for your cellular device operation and its in-life management.

Are any of the following a design consideration / factors?

- Minimal device size
- Restrictive component space
- Homeotic sealing
- Positioned in hard to access or remote locations
- Remotely managed connectivity provider migration
- Extended life in service (10 – 20 years)
- Enhanced durability for harsh environment operation
- Installed in unattended or insecure locations

NO → Include a SIM tray into your circuit design and leverage traditional removeable SIM technology.

YES

NO → **Specify embedded SIM hardware, MFF2 or WLCSP, which will realize:**
- Reduction in hardware size
- Increased durability
- Physical security
- Reduced hardware costs

Do you also need to achieve any of the following:

- Conserve power?
- Further reduce your device's hardware footprint?
- Rationalize your Bill of Material (BOM) cost?
- Remove SIM hardware logistics?

YES

Specify an integrated SIM (iSIM) that offers:

- Consumes no dedicated circuit board footprint
- Elimates the discrete SIM component cost
- Lessens power consumption through optimization
- Flexible subscription deployment models

The embedded or integrated SIM cannot be removed once introduced.

Will the same cellular network provider deliver its connectivity for the life of the device?

NO

YES

You'll need to consider a Remotely Provisionable SIM OS which offers support to allow for the delivery of network providers' profiles over the air from centralized certified platforms.

You will need to find a connectivity provider that will be able to support your SIM choice and service in your target deployment region or location.

Currently the management of such profiles can be conducted either from the certified remote platform (M2M / push scenarios) or locally by a user from the device (consumer / pull scenarios).

The device will allow for local management.

The device will need centralized remote management.

Your SIM will need to employ a GSMA certified Consumer RSP OS in your device.

Your SIM will need to employ a GSMA certified M2M RSP OS in your device.

If you plan to offer connectivity management for your devices, you'll also need to select a GSMA accredited RSP service (remote management platform) provider.

Discover how we can help you to build and manage secure SIM solutions:
www.kigen.com/contact