

# Requirements for eSIM

[Main Page](#) > [Frequently Asked Questions - FAQ](#) > **Requirements for eSIM**



## Contents

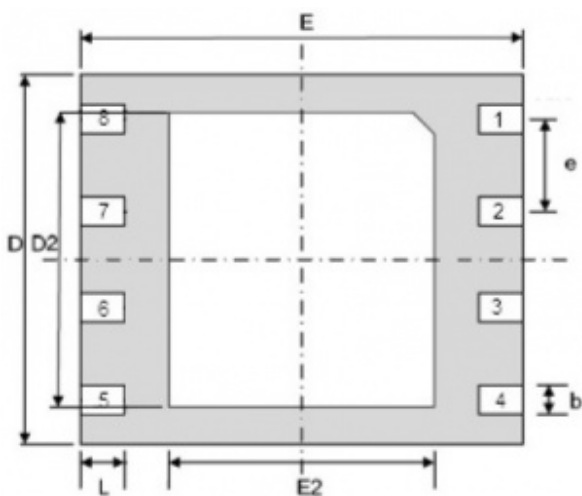
- [1 eSIM dimensions](#)
- [2 eSIM pin-out](#)
- [3 Requirements for eSIM packing reel:](#)
- [4 Compatibility with Teltonika FM devices](#)
- [5 SIM card sizes](#)

An embedded-SIM (eSIM) or embedded universal integrated circuit card (eUICC) is a form of programmable SIM card that is embedded directly into a device. The surface mount format provides the same electrical interface as the regular size (2FF), 3FF, and 4FF SIM cards, but is soldered to a circuit board as part of the manufacturing process. In machine to machine (M2M) applications where there is no requirement to change the SIM card, this avoids the requirement for a connector, improving reliability and security. An eSIM can be provisioned remotely; end-users can add or remove operators without the need to physically swap a SIM from the device.

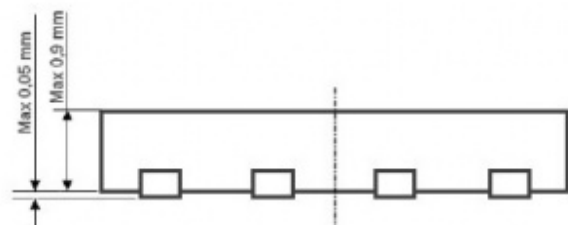
In order to use eSIM with Teltonika FM devices, some basic requirements must be met.

## eSIM dimensions

Must match standard MFF2 eSIM size:



Parameter	Dimension (mm)	
	Typ	Max
E	6,00	6,15
D	5,00	5,15
L	0,6	0,7
b	0,4	0,5
E2	3,40	3,50
D2	4,20	4,30
e	1,27	



# eSIM pin-out

There are two default eSIM pin-outs:

1	GND	GND
2	NC/IO	IO
3	IO/NC	NC
4	NC	NC
5	NC	NC
6	CLK	CLK
7	RST	RST
8	VDD	VDD

The only difference in pin-outs is the IO pin - 2 or 3. Both versions of pin-outs are suitable for devices with eSIM.

## Requirements for eSIM packing reel:

13" in diameter.

## Compatibility with Teltonika FM devices

Project	Current SIM configuration	Possibility to solder eSIM?	Possibility to have eSIM + another SIM?
<a href="#">FMB110/FMB120/FMB130/FMB140/FMB230/FMB240</a>	Micro SIM	Yes	Yes. Micro SIM + eSIM *
<a href="#">FMB122/FMB125/FMB225</a>	Dual Standard SIM	Yes	Yes. Standard SIM + eSIM *
<a href="#">FMC125/FMM125/FMC225</a>	Dual Standard SIM	Yes	Yes. Standard SIM + eSIM *
<a href="#">FMC130/FMM130/FMC230/FMM230</a>	Micro SIM	Yes	Yes. Micro SIM + eSIM *
<a href="#">FMB202/FMB204/FMB206</a>	Micro SIM	Yes	Yes. Micro SIM + eSIM *
<a href="#">FMB209</a>	Micro SIM	Yes	Yes. Micro SIM + eSIM *
<a href="#">FMB900/FMB920</a>	Micro SIM	Yes	Yes. Micro SIM + eSIM *

<a href="#">FMC920/FMM920</a>	Micro SIM	Yes	No. Only 1 SIM type can be used (either eSIM or Micro SIM)
<a href="#">FMB910</a>	Micro SIM	Yes	No. Only 1 SIM type can be used (either eSIM or Micro SIM)
<a href="#">FMB965</a>	Nano SIM	Yes	No. Only 1 SIM type can be used (either eSIM or Nano SIM)
<a href="#">FMB930</a>	Micro SIM	Yes	Yes. Micro SIM + eSIM *
<a href="#">FMB641</a>	Dual Standard SIM	Yes	Yes. 2 x eSIM Possible
<a href="#">FMB001/FMB010</a>	Micro SIM	Yes	Yes. Micro SIM + eSIM
<a href="#">FMB002/FMB020/FMB003</a>	Nano SIM	No	No
<a href="#">FMT100</a>	Micro SIM	Yes. Special Hardware	No. Only 1 SIM type can be used (either eSIM or Micro SIM)
<a href="#">FMP100</a>	Nano SIM	Yes	Yes. Nano SIM + eSIM
<a href="#">TFT100</a>	Micro SIM	Yes (With custom HW assembly)	No. Only 1 SIM type can be used (Micro SIM or eSIM with HW assembly changes)
<a href="#">FMC003/FMM003</a>	Micro SIM	Yes	No. Only 1 SIM type can be used (either eSIM or Micro SIM)
<a href="#">GH5200</a>	Micro SIM/eSIM	Yes (With custom HW assembly)	No. Only 1 SIM type can be used (either eSIM or Micro SIM)
<a href="#">TMT250</a>	Micro SIM	No	No
<a href="#">TAT100</a>	Micro SIM	Yes (With custom HW assembly)	No. Only 1 SIM type can be used (either eSIM or Micro SIM)
<a href="#">TAT140/TAT141</a>	Micro SIM	Yes (With custom HW assembly)	No. Only 1 SIM type can be used (either eSIM or Micro SIM)
<a href="#">FMB150/FMC150/FMM150</a>	Micro SIM	Yes	No. Only 1 SIM type can be used (either eSIM or Micro SIM)
<a href="#">FMM001/FMC001</a>	Micro SIM	Yes	No. Only 1 SIM type can be used (either eSIM or Micro SIM)
<a href="#">FMC650/FMM650</a>	Dual Standard SIM	Yes	Yes. 2 x eSIM Possible
<a href="#">FMC800/FMM800/FM80A</a>	Micro SIM	Yes	No. Only 1 SIM type can be used (either eSIM or Micro SIM)
<a href="#">FMC880/FMM880</a>	Micro SIM	Yes	No. Only 1 SIM type can be used (either eSIM or Micro SIM)

\* - On special Request

## SIM card sizes

The three currently used sizes of SIM cards are the following:

Type	Form Factor	Dimensions (in mm)
Standard (Mini) SIM	2FF	25 x 15 x 0.76
Micro SIM	3FF	15 x 12 x 0.76
Nano Sim	4FF	12.3 x 8.8 x 0.67