

CE Marking Radio Module Checklist



Europe – Radio Module Checklist

Question	See Note	Check	
1. Is the device a radio module?	1	Yes	No*
2. Does the module have a CE Mark?	2	Yes	No*
3. Do you have a copy of the DoC	3	Yes	No*
4. Are the standards listed and current?	4	Yes	No*
5. Do you have a copy of the test reports?	5	Yes	No*
6. Have you changed the module in a way that may affect compliance?	6	No	Yes*
7. Does the module have a host-mounted antenna?	7	No	Yes*
8. Are you using the module in the temperature range covered by the existing compliance evidence?	8	Yes	No*
9. Is the radio module co-located and capable of simultaneous transmission with another transmitter?	9	No	Yes*
10. Is the equipment portable, body worn or used against the head?	10	No	Yes*

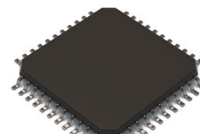
*If you have any answers in this column then you may have some additional considerations

Note 1: Is the device a module or a chipset?

There is a deal of confusion between the definitions of modules and chipsets. For this document a module comprises an RF chipset and all peripheral circuitry (Voltage Reg, IO Buffers, Oscillator, Integrated Antenna or Antenna port) on a PCB that can be installed into an end product to provide radio functionality.



Radio Module



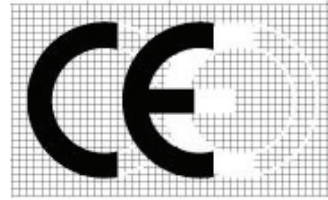
Radio Chipset

Yes	Go to question 2.
No	If the device is a chipset then an assessment against the relevant Article 3.2 requirements will be required.

Note 2: Does the module have a CE Mark?



CE Mark



China Export

The CE Mark looks like the image on the left, and should not be confused with similar markings like the China Export mark (right). If the device does not have a CE Mark there is no compliance for you to carry forward, and you must re-test the product.

Yes	Go to question 3.
No	If the device does not have a CE Mark then you will need to ascertain the level of compliance that the module carries and if it is not sufficient then you will need to take steps to ensure that your end product is compliant against all applicable requirements.

Note 3: Do you have a copy of the Declaration of Conformity?

Manufacturers of modules are required to sign a Declaration of Conformity before CE Marking the device and placing it onto the market or putting it into service. They should provide this to you at point of sale, and are required to provide it on request.

Yes	Go to question 4.
No	Obtain a copy of the DoC from the module manufacturer. They are obliged to provide it on request.

Note 4: Are the standards listed on the DoC current on the RED Official Journal (2014/53/EU)?

The DoC should list the standard(s) the module was assessed against. You should check that these are the correct standards, and that they are in date. You can check these on the RED Official Journal (2014/53/EU).

Standards are listed on the OJ and in date	If the standards are listed in the Official Journal then they can be used to claim 'Presumption of Conformity'. Go to question 5.
Standards are not listed on the OJ	If the standards are not listed in the Official Journal then additional work may be required to bring the compliance up to date.

Note 5: Do you have a copy of the test report?

Ideally you should obtain copies of the test reports to all of the listed standards. While the manufacturer is not obliged to provide them, if they fail to do so on request it does raise the question of whether the testing has been done correctly, or at all. If you cannot obtain these reports and continue to sign your DoC, you would be doing so with little evidence to back up your presumption of conformity.

Yes	If you have a copy of the test reports then you have tangible evidence to substantiate your claim of compliance. Go to question 6.
No	If you do not have a copy of the test reports then you have no evidence to substantiate a claim of compliance.

Note 6: Have you changed the module in a way that may affect the module's compliance?

If you have made any changes to the module then you may not be able to carry forward the compliance of the module. Common alterations involve a change of antenna or frequency allocation.

Yes	If you have modified the module in a way that could affect its compliance then it is your responsibility to assess the impact of the modification on the module.
No	Go to question 7.

Note 7: Does the module use a host-mounted antenna?

Occasionally modules will not have a built-in antenna, but will have an antenna connector instead. Often in the case of cellular radios the antenna is host-mounted, and not mounted on the module. In this case there will be some modification to the RF chain, usually in the form of a small PCB trace between the module and the host-mounted antenna connector. This can compromise the compliance, and so limited 'verification' testing will be required.

Yes	It may be prudent to perform some Radiated Spurious Emissions Testing to verify that the installation to the host-mounted antenna has not affected the compliance.
No	Go to question 8.

Note 8: Are you using the module in the temperature range covered by the existing compliance evidence?

The test reports will have a designated temperature range outside of which the radio is not shown to be compliant. For use outside this range further testing will be required.

Yes	Go to question 9.
No	Additional temperature testing may be required depending on the applicable Harmonized Standard.

Note 9: Is the radio module co-located and capable of simultaneous transmission with another transmitter?

For products with multiple radios that are capable of simultaneous transmission there is a requirement for an intermodulation investigation in accordance with ETSI TR 102 070-2 to ensure there are no spurious emissions caused by the interaction of these transmitters.

Yes	It is the manufacturer's responsibility to ensure that there are no spurious emissions present in multi-radio equipment that cannot be attributed to a single transmitter, ie. those that are only present when the transmitters are simultaneously transmitting.
No	Go to question 10.

Note 10: Is the equipment portable, body worn or used against the head?

Equipment that is body-worn, handheld, or used against the body will require an RF Exposure evaluation and possibly an SAR assessment.

Yes	SAR needs to be considered for the end product.
No	RF Exposure needs to be considered for the end product.

North America – Radio Module Checklist

Question	See Note	Check	
1a. Does the module have an FCC ID / IC ID?	10	Yes	No**
1b. Does the module have full modular approval?	10	Yes	No**
2. Has the module been installed in accordance with the Grant conditions?	11	Yes	No**

**If you have any answers in this column then you may have some additional considerations

Note 10: Does the module have an FCC ID / IC ID?

In order to be a certified module, that device must bear an FCC / IC ID. All certified modules, (ie. those with an FCC ID) are subject to meeting very specific guidelines. These guidelines are available from the FCC website: Transmitter Module Equipment Authorization Guide 996369 Do1. In order to have full modular approval a radio module must meet with the eight specific requirements. Full modular approval will also be specified on the Grant.

Note 11: Has the module been installed in accordance with the Grant conditions?

Each radio module comes with a 'Grant of Equipment Authorization' on which there are specific requirements that need to be maintained in order for the integrator to carry forward the existing certification. If the conditions are met then the end product may be labelled with 'this device contains FCC ID (that of the radio module)'. If the conditions are breached then additional testing and certification filing will be required.

To view the 'Grant of Equipment Authorization', enter the FCC ID on the module into the FCC OET Authorization Search tool. A list of certifications will be displayed – click on the relevant 'tick' in the 'Display Grant' column to display the 'Grant of Equipment Authorization' for the module.

Common deviations from the Grant conditions:

Question	Check	
1. Change of antenna to one not covered in the Grant	No	Yes [†]
2. EUT to be co-located with another transmitter	No	Yes [†]
3. EUT to be used closer to the body than specified in the Grant	No	Yes [†]
4. EUT to be used as portable when grant only covers fixed usage etc.	No	Yes [†]

[†]If you have any answers in this column then you may have some additional considerations

FCC ID:

IC ID:

Notes: