



# TACS4 Regulatory & Approval Database

Bluetooth

Medical

ZigBee



Wireless Charging



GNSS receivers

## TACS4

Testing, Approvals & Certification System

Automotive Radar

Broadcasting Receivers

5G



UWB

WLAN

3GPP LPWAN



LTE

Intelligent Transport Systems

Immobilizers

3G

LPWAN

Active medical implants and peripherals

RFID



2G

Telecommand and Telemetry

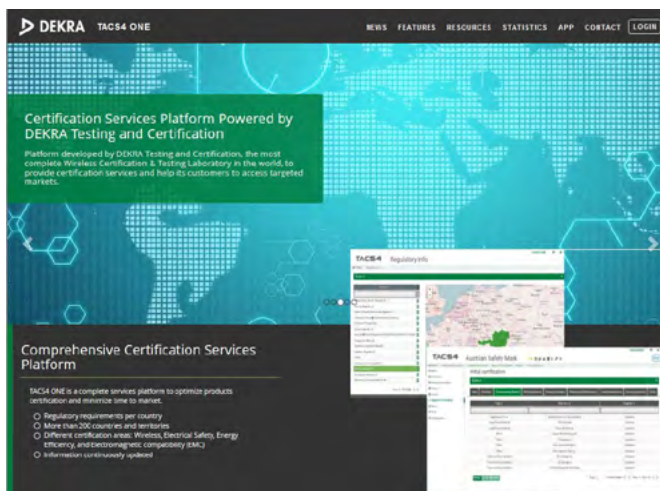


## The first Regulatory & Approval Database on the market

Approvals Strategic Support - Product Planning - Real Time Reporting

“TACS4 - Regulatory & Approval Database” is an innovative online database service that includes detailed RF regulatory & approval requirements in over 226 geographical areas for a large number of cellular and wireless technologies.

“TACS4 - Regulatory & Approval Database” is a service powered with TACS4 “Testing, Approvals & Certification System”.



In-country radio approval regulations vary significantly from country to country. In fact, the certification process can become a challenging task when launching radio products in different markets. Nowadays, there is an important tendency to have radio technologies embedded in different products for markets such as telecoms, automotive, IT, consumer electronics, health, security, logistics,... This leads to the increasing need of Radio Type Approval for any devices that will be introduced in the global market.

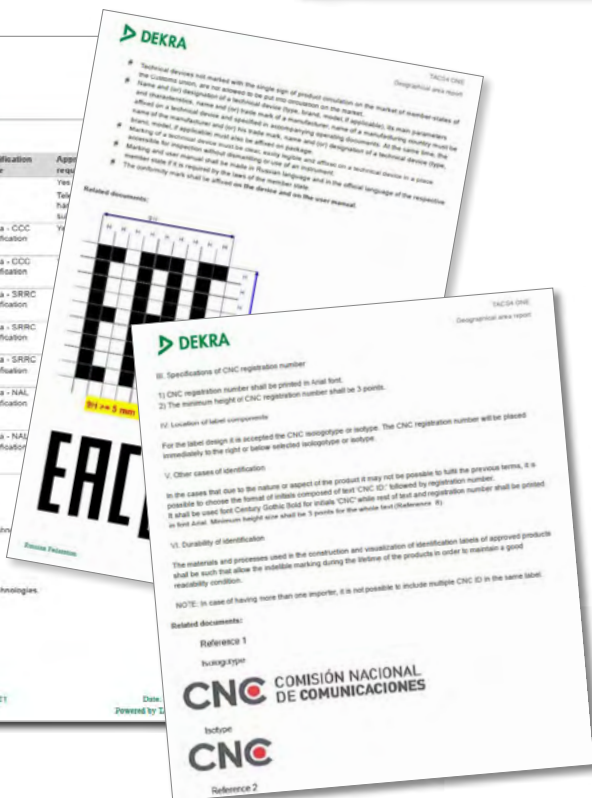
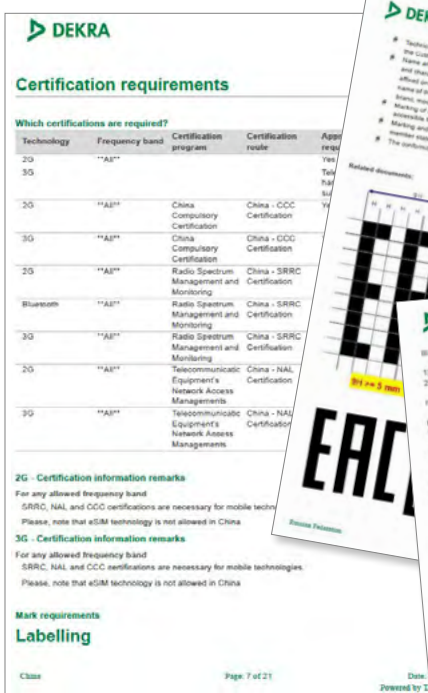
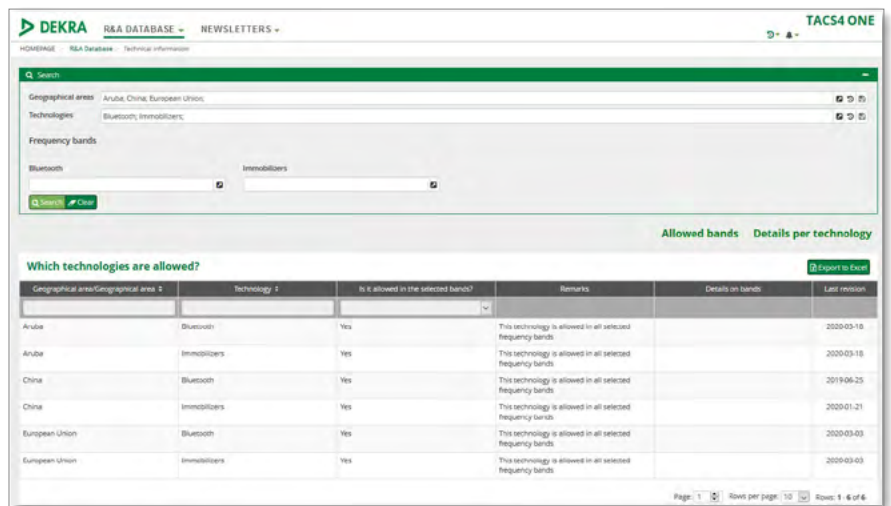
<https://one.tacs4.com/>

DEKRA offers this innovative Regulatory and Approval Database as a part of its International Type Approval Services portfolio. The service provides a powerful online tool, developed and continuously updated by a team of experts in International Type Approval, allowing its users to access detailed information about specific regulations applicable to the most important radio technologies across the world in real time. This service is extremely useful when it comes to product planning and approvals budgeting for an international launch, and can save a significant deal of time and resources to its users. DEKRA supports its know-how and updates all information with the help of a network of over 100 partners globally and through our dedicated & experienced team who has successfully acquired thousands of certificates for our customers.

## TACS4 - Regulatory & Approval Database

### Functional Characteristics

- Creation of reports by technologies and/or geographical area
- Printable pdf version available
- Information displayed with the latest updates
- Certification FAQ's (Frequently Asked Questions about certification issues)



### Some Type Approval Process Details

- Is certification required?
- Type of certificate
- Details on certification process
- Validity of the certificate
- Need of local representation
- Marketing requirements:
  - Labelling
  - Packaging
  - User manual

## Technologies available at a worldwide level

- **LTE** (Band 01, Band 02, Band 03, Band 04, Band 05, Band 07, Band 08, Band 12, Band 13, Band 14, Band 17, Band 20, Band 25, Band 28, Band 38, Band 40, Band 41)
- **2G** (GSM 1900, GSM 1800, GSM 900 and GSM 850)
- **3G** (FDD - Band I, FDD - Band II, FDD - Band V and FDD - Band VIII)
- **Automotive Radar** (24 GHz (24.05 - 24.25 GHz), 60 GHz (57-66 GHz) 77 GHz (76 - 77 GHz), 79 GHz (77 - 81 GHz))
- **Bluetooth** (2.4 GHz (2400 - 2483.5 MHz))
- **Video broadcasting receivers (DVB-T/T2)**
  - 170-240 MHz
  - 470MHz-786 MHz
- **Audio broadcasting receivers**
  - Below 30 MHz (DRM)
  - 87.5-108 MHz (FM band)
  - 174-240 MHz (DAB)
- **GNSS Receivers**
  - 1559 - 1610 MHz - L1 band
  - 1215-1260 MHz - L2 band
- **Immobilizers** (119 - 140 KHz)
- **NFC** 13.56 MHz (13.553-13.567 MHz)
- **RFID** (119-140 KHz, 13.56 MHz, 315 MHz, 433.92 MHz, 868 MHz, 915 MHz, 2.4 GHz, 5.8 GHz)
- **Telecommand and Telemetry** (315 MHz (312 - 316 MHz), 433.92 MHz (433.05 - 434.79MHz), 868 MHz (863 - 870 MHz), 915 MHz (902 - 928 MHz))
- **WLAN**
  - 2.4 GHz (2400 - 2483.5 MHz)
  - 5.1 GHz (5150 - 5250 MHz)
  - 5.2 GHz (5250 - 5350 MHz)
  - 5.4 GHz (5450 - 5725 MHz)
  - 5.8 GHz (5725 - 5850 MHz)
  - 6 GHz (5925-7125 MHz)
  - 60 GHz (57 - 66 GHz)
- **Medical - Active medical implants and peripherals** (9 - 315 KHz, 401 - 402 MHz, 402 - 405 MHz, 405 - 406 MHz)
- **ZigBee** - (2.4 GHz (2400 - 2483.5 MHz))
- **Wireless charging**
  - 6.78 MHz (6.765-6.795 MHz)
  - 100-119 kHz
  - 119-140 kHz
  - 140-148.5 kHz
  - 148.5-300 kHz
- **LPWAN** (433.92 MHz (433.05-434.79 MHz), 915 MHz (902-928 MHz), 868 MHz (863 - 870 MHz))
- **Low Power Data Communication System** (60 GHz)
- **UWB** (11 Bands)

\*To be included along 2022

## Technologies available in some specific geographical areas

- **3GPP LPWAN\*** (38 Bands)
- **LTE\*** (66 Bands)
- **5G\*** (60 Bands)
- **Intelligent Transports Systems\***  
(C-V2X, DRSC): 5.8 GHz (5725-5850 MHz) , 5.9 GHz (5850-5935 MHz), 60 GHz \*

| Technical information                     |   |  |                    |  |
|---|---|--|--------------------|--|
| <b>Which technologies are allowed?</b>    |   |  |                    |  |
| Technology                                | Is it allowed in the selected bands?          | Remarks  | Details on bands   |  |
| Bluetooth                                 | Yes   | This technology is allowed in all selected frequency bands.<br>Last revision: 2019-06-25 |                    |  |
| <b>Which frequency bands are allowed?</b> |   |  |                    |  |
| Technology                                | Frequency bands                               | Is it allowed?   |                    |  |
| Bluetooth                                 | 2.4 GHz                                       | Yes  |                    |  |
| <b>TECHNOLOGY: Bluetooth</b>              |   |  |                    |  |
| <b>Technical parameters restrictions</b>  |   |  |                    |  |
| Frequency bands                           | Regulatory category                           | Parameter  | General remark     | Value  |
| 2.4 GHz                                   | WLAN, Bluetooth, spread spectrum devices, etc | Frequency Range  |                    | 2400 - 2483.5 MHz  |
| 2.4 GHz                                   | WLAN, Bluetooth, spread spectrum devices, etc | Indoor/Outdoor   | Indoor and Outdoor | Automotive: The interior of a car is considered indoor. There is no regulation stating whether the inside of a car is indoor or outdoor, but, in practice, it is possible to obtain SDRIC certificates for WLAN 5.1 and 5.2 GHz for vehicle terminals. |
| 2.4 GHz                                   | WLAN, Bluetooth, spread spectrum devices, etc | Is spectrum license required?  |                    | No.  |
| 2.4 GHz                                   | WLAN, Bluetooth, spread spectrum devices, etc | Power restrictions   |                    | Power spectral density <= 10 dBm/MHz when the antenna gain is <= 10 dBi.<br>Power spectral density <= 17 dBm/MHz when the antenna gain is >= 10 dBi.   |
| Class                                     |   | Page: 2 of 9   |                    | Date: 2020-04-28<br>Prepared by: TACS4 GHS   |

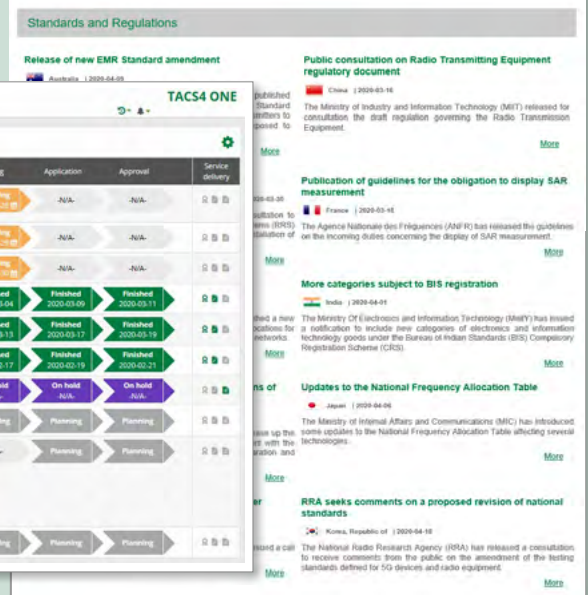
Information related to **interesting technical parameters** (from a **certification perspective**) such as: **maximum power, work cycle, antenna gain, etc.**

## Other Certification Services

- International Type Approval Services Globally
- TCB (Telecommunications Certification Body) by FCC
- FCB (Foreign Certification Body) by ISED
- Notified Body for the RED 2014/53/EU
- Notified Body for the EMC Directive 2014/30/EU
- BQC (Bluetooth Qualification Consultant)
- ULE Alliance (Qualification Body)
- NFC Forum
- Wi-Fi Alliance (WFA)
- PTCRB certification

Certification Experience in over 226 geographical areas

TACS4 - Regulatory & Approval Newsletter



| Product  | Service | Geographical area | Status              | Doc. needed | Last update | Preparation         | Testing             | Application         | Approval            | Service delivery |
|--|---------|-------------------|---------------------|-------------|-------------|---------------------|---------------------|---------------------|---------------------|------------------|
| RF_EN 300 523 (BT)                                       |         |                   | Pending Test Report | Pending     | 2023-04-28  | Finished 2023-04-22 | On going 2023-04-22 | N/A                 | N/A                 |                  |
| EMC_FCC 47 CTR Part 15B / ICES-003                       |         | Canada            | On going            | Pending     | 2023-04-28  | Finished 2023-04-20 | On going 2023-04-20 | N/A                 | N/A                 |                  |
| EMC_EN 301 429-xx  |         |                   | On going            | Pending     | 2023-04-28  | Finished 2023-04-20 | On going 2023-04-20 | N/A                 | N/A                 |                  |
| Korea, Republic of - MSIT Registration (KOR_S_REG)       |         | South Korea       | Finished            | Validated   | 2023-03-11  | Finished 2023-03-04 | Finished 2023-03-04 | Finished 2023-03-11 | Finished 2023-03-11 |                  |
| Korea, Republic of - MSIT Registration (KOR_S_REG)       |         | South Korea       | Finished            | Validated   | 2023-03-19  | Finished 2023-03-19 | Finished 2023-03-19 | Finished 2023-03-19 | Finished 2023-03-19 |                  |
| Korea, Republic of - MSIT Registration (KOR_S_REG)       |         | South Korea       | Finished            | Validated   | 2023-02-21  | Finished 2023-02-19 | Finished 2023-02-19 | Finished 2023-02-21 | Finished 2023-02-21 |                  |
| Turkey - CERTIFANCE Certification (TUR_CERTIFANCE)       |         | Turkey            | On hold             | Pending     | 2023-04-28  | On hold N/A         | On hold N/A         | On hold N/A         | On hold N/A         |                  |
| Russian Federation - ROSSNIAZ Certification (RUS_TEL_DK) |         | Russia            | On going            | Pending     | 2023-04-28  | On going            | Planning            | Planning            | Planning            |                  |
| Russian Federation - ROSSNIAZ Certification (RUS_TEL_DK) |         | Russia            | On going            | Pending     | 2023-04-28  | On going            | Planning            | Planning            | Planning            |                  |
| Russian Federation - ROSSNIAZ Certification (RUS_TEL_DK) |         | Russia            | On going            | Pending     | 2023-04-28  | On going            | Planning            | Planning            | Planning            |                  |

TACS4 - Project Management System

| Geographical area/Geographical area | Certification program 2 | Answer 2  | Created    |
|-------------------------------------|-------------------------|---|------------|
| Mexico                              | BT                      | On the basis of a file for the equipment from the 0-17 to 3.136 of revision of the authorized device  | 2018-03-27 |
| Turkey                              | TESE                    | At the request, it is not specifically defined. However, under the Telecommunications Regulation and the Broadcasting Act, the Regulator has the power to give permission (approve or not) complying with the regulation.   | 2023-02-25 |
| Turkey                              | TESE                    | 1. A file of between VMD 2002009 and 3000016 for acts of being to raise devices of certification under the supervision of conformity according to regulations.<br>2. A file of between VMD 2002009 and VMD 2002009 for any of the following acts:<br>a) Manufacturing and importing equipment on the list of information technology and communication technology products and goods subject to certification and declaration of conformity, when such certification and declaration of conformity have not been carried out or the equipment has not been affected with the required conformity marking.<br>b) Manufacturing and importing equipment on the list of information technology and communication technology products and goods subject to declaration of conformity when such declaration of conformity has not been carried out or the equipment has not been affected with the required conformity marking before its introduction in the market.<br>c) Carrying out public telecommunications networks of equipment on the list of telecommunications equipment being to enter conformity by being to perform certification and declaration of conformity as required in existing legislation concerning the marking of equipment.<br>d) Re-marking.<br>e) Re-marking.<br>f) Re-marking.<br>g) Re-marking.<br>h) Re-marking.<br>i) Re-marking.<br>j) Re-marking.<br>k) Re-marking.<br>l) Re-marking.<br>m) Re-marking.<br>n) Re-marking.<br>o) Re-marking.<br>p) Re-marking.<br>q) Re-marking.<br>r) Re-marking.<br>s) Re-marking.<br>t) Re-marking.<br>u) Re-marking.<br>v) Re-marking.<br>w) Re-marking.<br>x) Re-marking.<br>y) Re-marking.<br>z) Re-marking. | 2023-04-11 |

TACS4 ONE

### TACS4 - Regulatory & Approval Database

**Technical information**

Check the allowed technologies, bands and relevant parameters conforming to the current spectrum regulations and the applicable testing standards.

**Certification requirements**

Consult the applicable approval processes and certification programs details in addition to the required marketing requirements.

**FAQ**

Frequently Asked Questions about certification issues.

**Geographical area report**

Download in a pdf or word format a report comprising technical restrictions, certification requirements and FAQ for a geographical area.

**Updates log**

Keep informed on latest regulatory changes in a concise and structured way.

**Documents search**

Find the legal basis, spectrum regulations and testing standards by filtering according to the document name, technology, date and/or geographical areas.

DEKRA Testing & Certification S.A.U.

Parque Tecnológico de Andalucía

C/ Severo Ochoa, 2 & 6

29590 Málaga - Spain

Tel: + 34 952 61 98 20

wireless.global.es@dekra.com