**Joint Action on HARmonized Products 2021 JAHARP2021-05**

**Grant Agreement No. JA2021-05**

**Call for Tender for Test Laboratories**

**Radio Equipment: WLAN 5 GHz**

Appendix I – Detailed Product Testing Requirements and Price List

The testing of WLAN 5 GHz Radio Equipment to be carried out in the framework of this Joint Market Surveillance Action will be based on the harmonized standard ETSI EN 301 893 V2.1.1 (2017-05) *5 GHz RLAN; Harmonised Standard covering the essential requirements of article 3.2 of Directive 2014/53/EU* (hereinafter – ETSI EN 301 893 V2.1.1).

The purpose of testing is to verify the compliance of WLAN 5Ghz Radio Equipment (hereinafter – product) with the essential requirements stated by the Article 3.2. of the Radio Equipment Directive (RED). Identifying of non-compliances will allow a market surveillance authority to decide whether and what actions to take against a specific product.

The framework of the project allows for the testing of 44 sampled Radio Equipment products.

In the table below please provide the price in Euros per clause, for testing of any single product sample and the production of a short-form test report for each product under test and a total price for product testing and suitable test report production for each product under test.

The number of identical items of single product sample for each test should be clearly indicated.

Prices should be given for Conducted and Radiated testing separately (where these testing services are provided).

Any excluded product type(s) or product set up condition(s) (including reasons for multiple samples) should be listed and detailed. Separate prices should be provided in brackets to cover any product type(s) or product set up exclusions where applicable.

**Disclaimer**

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| **Pricing** | | | | | | | | |
| Please provide indicative prices for each of the testing requirements listed. Testing will be conducted according to the harmonised standard ETSI EN 301 893 V2.1.1. It is understood that all applicable physical requirements and software conditions of products required to determine compliance to legal requirements would also be recorded in test reports.  Sampled products may be fitted with non-detachable integral antenna or provided with an antenna connector. Some models may be provided with more than one antenna.  If your laboratory does not provide testing/compliance check for any parameter/requirement, please identify it by recording “**Not Available**” in the appropriate box.  In the last column l**ist any excluded product types or product set up conditions and add separate pricing (where applicable) in brackets to cover these exclusions (Include details of any exclusions)** | | | | | | | | |
| **Fixed Priced Costings** | | | | | | | | |
| **Testing Parameter/Requirement** | | | | | **Cost per single product sample (€)** | | **# Identical items for 1 sample** | **Types of exclusion and separate pricing** |
| **No.** | **Description** | **Reference: Clause No** | **U/C** | **Condition** | **Conducted** | **Radiated** |
| 1 | Carrier frequencies | 4.2.1 | U |  |  |  |  |  |
| 3 | RF output power | 4.2.3 | U |  |  |  |  |  |
| Transmit Power Control (TPC) | 4.2.3 | C | 1)Not required for channels whose nominal bandwidth falls completely within the band 5 150 MHz to 5 250 MHz  2)Not required for devices that operate at a maximum mean e.i.r.p. of 20 dBm when operating in 5 250 MHz to 5 350 MHz or 27 dBm when operating in 5 470 MHz to 5 725 MHz. |  |  |  |  |
| Power Density | 4.2.3 | U |  |  |  |  |  |
| 7 | DFS: Channel Availability Check | 4.2.6.2.2 | C | 1) Not required for channels whose nominal bandwidth falls completely within the band 5 150 MHz to 5 250 MHz.  2) Not required for Slave devices with a maximum transmit power of less than 200 mW e.i.r.p.  3) Not required at initial use of a channel for slave devices with a maximum transmit power of 200 mW e.i.r.p. |  |  |  |  |
| 8 | DFS: Off-Channel CAC - Radar Detection Threshold Level | 4.2.6.2.3 | C | 1) Where implemented by the manufacturer.  2) Not required for channels whose nominal bandwidth falls completely within the band 5 150 MHz to 5 250 MHz.  3) Not required for slave devices with a maximum transmit power of less than 200 mW e.i.r.p  4) Not required at initial use of a channel for Slave devices with a maximum transmit power of 200 mW e.i.r.p |  |  |  |  |
| 9 | DFS: Off-Channel CAC - Detection Probability | 4.2.6.2.3 | C | 1) Where implemented by the manufacturer.  2) Not required for channels whose nominal bandwidth falls completely within the band 5 150 MHz to 5 250 MHz.  3) Not required for slave devices with a maximum transmit power of less than 200 mW e.i.r.p.  4) Not required at initial use of a channel for Slave devices with a maximum transmit power of 200 mW e.i.r.p. |  |  |  |  |
| 10 | DFS: In service Monitoring | 4.2.6.2.4 | C | 1) Not required for channels whose nominal bandwidth falls completely within the band 5 150 MHz to 5 250 MHz.  2) Not required for Slave devices with a maximum transmit power of less than 200 mW e.i.r.p. |  |  |  |  |
| 11 | DFS: Channel shutdown | 4.2.6.2.5 | C | Not required for channels whose nominal bandwidth falls completely within the band 5 150 MHz to 5 250 MHz. |  |  |  |  |
| 12 | DFS: Non-occupancy period | 4.2.6.2.6 | C | 1) Not required for channels whose nominal bandwidth falls completely within the band 5 150 MHz to 5 250 MHz.  2) Not required for Slave devices with a maximum transmit power of less than 200 mW e.i.r.p. |  |  |  |  |
| 13 | DFS: Uniform spreading | 4.2.6.2.7 | C | 1) Not required for channels whose nominal bandwidth falls completely within the band 5 150 MHz to 5 250 MHz.  2) Not required for slave devices. |  |  |  |  |
| 16 | User Access Restrictions | 4.2.9 | U |  |  |  |  |  |
| **Testing Cost Reduction Plan** | | | | | | | | |
| Laboratories are invited to provide plan on how the testing costs listed above could be reduced and, where applicable, what percentage price reduction could be achieved for each test through implementation of this plan.  Examples could include reduced number of product samples per test (no percentage discount would be recorded by laboratory) OR a streamlined test in terms of number of bandwidths or channels tested OR limiting tests to specific types of WLAN 5Ghz products (laboratory would add in % reduction from cost listed in previous section for each test). To ensure that plan can be evaluated, laboratories should provide as much detail as possible concerning each cost saving plan. Additional rows may be added where more than 2 test cost reduction proposals are identified per test item. | | | | | | | | |
| **Testing Parameter/Requirement** | | | **Test Cost Reduction Item Name** | **Percentage (%) Test Cost Reduction** | **Detail concerning test cost reduction plan** | | | |
| **No.** | **Description** | **Reference: Clause No** |
| 1 | Carrier frequencies | 4.2.1 |  |  |  | | | |
|  |  |  | | | |
| 3 | RF output power | 4.2.3 |  |  |  | | | |
|  |  |  | | | |
| Transmit Power Control (TPC) | 4.2.3 |  |  |  | | | |
|  |  |  | | | |
| Power Density | 4.2.3 |  |  |  | | | |
|  |  |  | | | |
| 7 | DFS: Channel Availability Check | 4.2.6.2.2 |  |  |  | | | |
|  |  |  | | | |
| 8 | DFS: Off-Channel CAC - Radar Detection Threshold Level | 4.2.6.2.3 |  |  |  | | | |
|  |  |  | | | |
| 9 | DFS: Off-Channel CAC - Detection Probability | 4.2.6.2.3 |  |  |  | | | |
|  |  |  | | | |
| 10 | DFS: In service Monitoring | 4.2.6.2.4 |  |  |  | | | |
|  |  |  | | | |
| 11 | DFS: Channel shutdown | 4.2.6.2.5 |  |  |  | | | |
|  |  |  | | | |
| 12 | DFS: Non-occupancy period | 4.2.6.2.6 |  |  |  | | | |
|  |  |  | | | |
| 13 | DFS: Uniform spreading | 4.2.6.2.7 |  |  |  | | | |
|  |  |  | | | |
| 16 | User Access Restrictions | 4.2.9 |  |  |  | | | |
|  |  |  | | | |
| **Bulk discount for testing service per additional product(s)** | | | | | | | | |
| Laboratories are invited to provide a bulk discount rate after a defined number of products. Laboratories should include the discount rate in % per product and identify how many products need to be tested before the discount rate can be applied to future product tests. The discount rate will apply once per tested product after the minimum number of products defined by the laboratory. | | | | | | | | |
| Minimum number of products to be tested before discount rate applies | | | |  | | | | |
| % discount | | | |  | | | | |