

# Test Report

No. 1-2329-26-06-10\_TR1-R01

May 12. 2026

|                   |                                                  |
|-------------------|--------------------------------------------------|
| Applicant         | Pepperl+Fuchs SE                                 |
| Product           | RFID System                                      |
| Model             | IQH4-18GM-V1   IQT4-18GM-R4-V1   IQT4-18GM-IO-V1 |
| Tested Technology | RFID                                             |
| Test Standard     | FCC 47 CFR Part 2                                |
| FCC ID            | 2AXZAIQR418GM                                    |

Verdict **TEST EXEMPTION FULFILLED**

The test results apply only to the equipment specified in this document.

This test report is electronically signed and valid without handwritten signature.  
Public keys for verification of the electronic signatures can be requested at the testing laboratory.



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## 1. Disclaimer

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## 2. Document history

### 2.1. Current release

Release No.: R01  
Date of release: May 12. 2026  
Applied changes: Initial release

### 2.2. Previous releases

| Version | Applied change | Date of release |
|---------|----------------|-----------------|
| n/a     |                |                 |

### 3. Test laboratory

#### 3.1. Contact information

cetecom advanced GmbH  
Untertuerkheimer Str. 6-10  
66117 Saarbruecken  
Germany

#### 3.2. Involved test locations

##### Saarbrücken Lab

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Untertürkheimer Strasse 6 – 10  
66117 Saarbrücken  
Germany

#### 3.3. Subcontracted laboratories

None.

#### 3.4. Laboratory listings and recognitions

|      | Saarbrücken  | Essen        |
|------|--------------|--------------|
| FCC  | DE0002       | DE0003       |
| ISED | DE0001 3462C | DE0001 3462D |

## 4. Client information

### 4.1. Applicant

Name: Pepperl+Fuchs SE  
Address: GERMANY, 68307 Mannheim, Lilienthalstraße 200  
Contact Person: Martin Schmitt  
Contact Person's Email: mschmitt@de.pepperl-fuchs.com

### 4.2. Manufacturer

Name: Pepperl+Fuchs SE  
Address: GERMANY, 68307 Mannheim, Lilienthalstraße 200  
Contact Person: Martin Schmitt  
Contact Person's Email: mschmitt@de.pepperl-fuchs.com

## 5. Test sample information

The data about the test samples is given/supplied by the customer and not under control by cetecom advanced GmbH.

### 5.1. General Information

#### 5.1.1. General Data of Main EUT as Declared by Applicant

FCC ID

2AXZAIQR418GM

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## 6. Measurement details

### 6.1. Test methodology

The testing laboratory (area of testing) is accredited according to DIN EN ISO/IEC 17025 (2018-03) by the Deutsche Akkreditierungsstelle GmbH (DAkkS).

The accreditation is valid for the scope of testing procedures as stated in the accreditation certificate with the registration number D-PL-12047-01-00.

| Test method, standard, rule | Description                                                                                                                           |
|-----------------------------|---------------------------------------------------------------------------------------------------------------------------------------|
| FCC 47 CFR Part 2           | Federal Communications Commission, 47 code of federal regulations, Part 2:<br>General Rules & Regulations for Equipment Authorisation |

## 7. SAR test exclusion (KDB 447498 D01 General RF Exposure Guidance v06)

### 7.0.1. 4.3.1. Standalone SAR test exclusion considerations

Unless specifically required by the published RF exposure KDB procedures, standalone 1-g head or body and 10-g extremity SAR evaluation for general population exposure conditions, by measurement or numerical simulation, is not required when the corresponding SAR Test Exclusion Threshold condition(s), listed below, is (are) satisfied. These test exclusion conditions are based on source-based time-averaged maximum conducted output power of the RF channel requiring evaluation, adjusted for tune-up tolerance, and the minimum test separation distance required for the exposure conditions. The minimum test separation distance defined in 4.1 f) is determined by the smallest distance from the antenna and radiating structures or outer surface of the device, according to the host form factor, exposure conditions and platform requirements, to any part of the body or extremity of a user or bystander. To qualify for SAR test exclusion, the test separation distances applied must be fully explained and justified, typically in the SAR measurement or SAR analysis report, by the operating configurations and exposure conditions of the transmitter and applicable host platform requirements, according to the required published RF exposure KDB procedures. When no other RF exposure testing or reporting are required, a statement of justification and compliance must be included in the equipment approval, in lieu of the SAR report, to qualify for SAR test exclusion. When required, the device specific conditions described in the other published RF exposure KDB procedures must be satisfied before applying these SAR test exclusion provisions; for example, handheld PTT two-way radios, handsets, laptops and tablets, etc.

a) For 100 MHz to 6 GHz and test separation distances  $\leq 50$  mm, the 1-g and 10-g SAR test exclusion thresholds are determined by the following:

$$[(\text{max. power of channel, including tune-up tolerance, mW}) / (\text{min. test separation distance, mm})] \cdot [\sqrt{f(\text{GHz})}] \leq 3.0 \text{ for 1-g SAR, and } \leq 7.5 \text{ for 10-g extremity SAR, where}$$

$f(\text{GHz})$  is the RF channel transmit frequency in GHz

Power and distance are rounded to the nearest mW and mm before calculation

The result is rounded to one decimal place for comparison

The values 3.0 and 7.5 are referred to as numeric thresholds in step b) below

The test exclusions are applicable only when the minimum test separation distance is  $\leq 50$  mm, and for transmission frequencies between 100 MHz and 6 GHz. When the minimum test separation distance is  $< 5$  mm, a distance of 5 mm according to 4.1 f) is applied to determine SAR test exclusion.

b) For 100 MHz to 6 GHz and test separation distances  $> 50$  mm, the 1-g and 10-g SAR test exclusion thresholds are determined by the following:

1)  $\{[\text{Power allowed at numeric threshold for 50 mm in step a)}] + [(\text{test separation distance} - 50 \text{ mm}) \cdot (f_{(\text{MHz})}/150)]\}$  mW, for 100 MHz to 1500 MHz

2)  $\{[\text{Power allowed at numeric threshold for 50 mm in step a)}] + [(\text{test separation distance} - 50 \text{ mm}) \cdot 10]\}$  mW, for  $> 1500$  MHz and  $\leq 6$  GHz

c) For frequencies below 100 MHz, the following may be considered for SAR test exclusion (also illustrated in Appendix C):

For test separation distances  $> 50$  mm and  $< 200$  mm, the power threshold at the corresponding test separation distance at 100 MHz in step b) is multiplied by  $[1 + \log(100/f_{(\text{MHz})})]$

For test separation distances  $\leq 50$  mm, the power threshold determined by the equation in c) 1) for 50 mm and

100 MHz is multiplied by  $\frac{1}{2}$

SAR measurement procedures are not established below 100 MHz.

| MHz  | 5  | 10 | 15  | 20  | 25  | mm |
|------|----|----|-----|-----|-----|----|
| 150  | 49 | 77 | 116 | 155 | 194 |    |
| 300  | 27 | 55 | 82  | 110 | 137 |    |
| 450  | 22 | 45 | 67  | 89  | 112 |    |
| 835  | 16 | 33 | 49  | 66  | 82  |    |
| 900  | 16 | 32 | 47  | 63  | 79  |    |
| 1500 | 12 | 24 | 37  | 49  | 61  |    |
| 1900 | 11 | 22 | 33  | 44  | 54  |    |
| 2450 | 10 | 19 | 29  | 38  | 48  |    |
| 3600 | 8  | 16 | 24  | 32  | 40  |    |
| 5200 | 7  | 13 | 20  | 26  | 33  |    |
| 5400 | 6  | 13 | 19  | 26  | 32  |    |
| 5800 | 6  | 12 | 19  | 25  | 31  |    |

## 7.0.2. Results

customer declared minimum safety distance: 199 mm

| Technology | Note | Frequency<br>[MHz] | Threshold<br>1g, 10g | Threshold<br>100 MHz, 50mm | Powerlimit<br>[mW] | P <sub>max</sub><br>[dBm] | P <sub>max</sub><br>[mW] | Limit<br>[%] |
|------------|------|--------------------|----------------------|----------------------------|--------------------|---------------------------|--------------------------|--------------|
| RFID       | A    | 13.56              | 3                    | 573.67                     | 1071.48            | 23.71                     | 234.96                   | 21.93%       |

### Value Explanation

|              |                                                                                                                          |
|--------------|--------------------------------------------------------------------------------------------------------------------------|
| Output Power | The larger of the maximum conducted power or equivalent isotropic radiated power (EIRP), source-based and time-averaged. |
| Limit        | SAR-based threshold in mW.                                                                                               |
| Limit %      | Output Power / Limit                                                                                                     |

### Notes & References

| # | Document                                              | Document Type           | Additional Information |
|---|-------------------------------------------------------|-------------------------|------------------------|
| A | Operational_Description_IQT4-18GM-IO-V1_IO-Link_v4_en | Operational Description | 23.71 dBm              |

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