

## Annex 1: Measurement diagrams 20-1-0127501T02a-A1

|                                                         |                                                                                                                                                                                                                                                                                                                                                        |                        |                            |
|---------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------|----------------------------|
| <b>Number of pages:</b>                                 | 4                                                                                                                                                                                                                                                                                                                                                      | <b>Date of Report:</b> | 2021-Mar-16                |
| <b>Testing company:</b>                                 | CETECOM GmbH<br>Im Teelbruch 116<br>45219 Essen Germany<br>Tel. + 49 (0) 20 54 / 95 19-0<br>Fax: + 49 (0) 20 54 / 95 19-150                                                                                                                                                                                                                            | <b>Applicant:</b>      | ElektronikSystem i Umeå AB |
| <b>Product:</b><br><b>Model:</b>                        | EMS<br>LoRa device                                                                                                                                                                                                                                                                                                                                     |                        |                            |
| <b>FCC ID:</b>                                          | 2ANX3-EMS01                                                                                                                                                                                                                                                                                                                                            | <b>IC:</b>             | 26904-EMS01                |
| <b>Testing has been carried out in accordance with:</b> | <b>FCC Regulations:</b><br>Title 47 CFR, Chapter I<br>FCC Regulations, Subchapter A<br>Subpart B: §15.109 (Class B limits)<br><br><b>ISED Regulations:</b><br>ICES-003, Issue 6 (2016+Update 2019)<br><br>Deviations, modifications or clarifications (if any) to above mentioned documents are written in each section under "Test method and limit". |                        |                            |



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## 1 Measurement diagrams

### 3.01

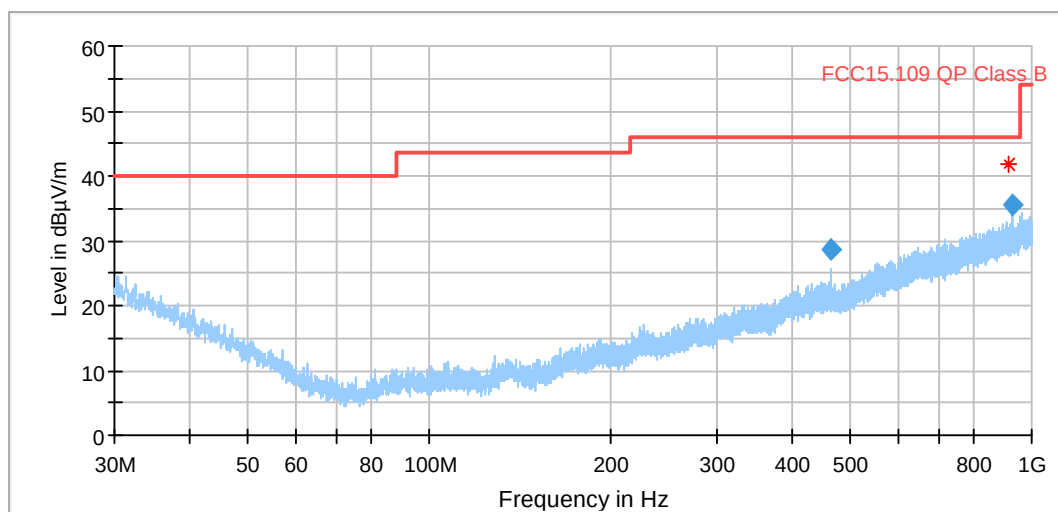
#### Common Information

|                            |                                                  |
|----------------------------|--------------------------------------------------|
| Test Description:          | Radiated field strength emission in 3 m distance |
| Test Site:                 | CETECOM GmbH Essen                               |
| Test Standard:             | FCC 15.109 Unintentional Radiator                |
| Antenna polarisation:      | horizontal/vertical                              |
| Operating Mode:            | 1                                                |
| Environmental Conditions:: | Humidity : 40 %rH; Temperature: 21 °C            |
| Operator:                  | JRi                                              |
| Verdict:                   | Passed                                           |

#### EUT Information

|               |                            |
|---------------|----------------------------|
| PMT number:   | 20-1-01275S04_C01          |
| Manufacturer: | ElektronikSystem i Umeå AB |

Full Spectrum



#### Final\_Result

| Frequency (MHz) | QuasiPeak (dBµV/m) | Limit (dBµV/m) | Margin (dB) | Meas. Time (ms) | Bandwidth (kHz) | Height (cm) | Pol | Azimuth (deg) | Corr. (dB/m) |
|-----------------|--------------------|----------------|-------------|-----------------|-----------------|-------------|-----|---------------|--------------|
| 928.400000      | 35.46              | 46.00          | 10.54       | 1000.0          | 120.000         | 178.0       | H   | 7.0           | 26.8         |
| 462.480000      | 28.67              | 46.00          | 17.33       | 1000.0          | 120.000         | 156.0       | H   | 6.0           | 22.1         |

## 4.01

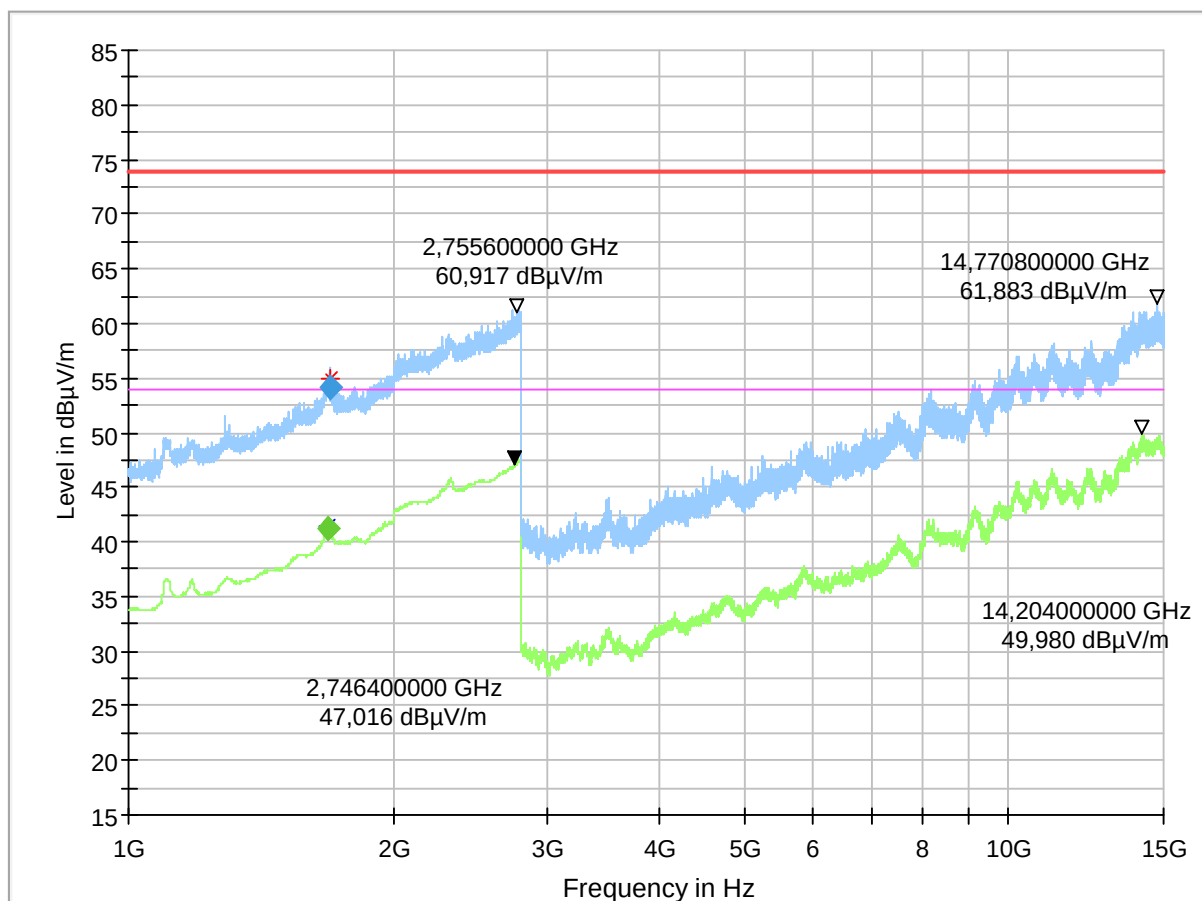
### Common Information

|                           |                                                |
|---------------------------|------------------------------------------------|
| Test Description:         | Radiated Field Strength Emission               |
| Test Site Location:       | CETECOM GmbH Essen                             |
| Test Site:                | Fully Anechoic Chamber (FAC1) - EMC32 V10.50.0 |
| Test Standard:            | FCC Part 15.109, class B / RSS-Gen., Issue 4   |
| Operating Mode:           | GPS receiving mode                             |
| Equipment Class:          | Class B                                        |
| Environmental Conditions: | Humidity : 55% rH; Temperature: 20°C           |
| Operator:                 | Aho/Tfa                                        |
| EUT Setup:                | 1                                              |
| Verdict:                  | Passed                                         |
| Comment:                  |                                                |

### EUT Information

|          |                            |
|----------|----------------------------|
| Verdict: | 20-1-01275S04_C01          |
| Comment: | ElektronikSystem i Umeå AB |

### Full Spectrum



### Final Result

| Frequency (MHz) | MaxPeak (dBµV/m) | Limit (dBµV/m) | Margin (dB) | Meas. Time (ms) | Bandwidth (kHz) | Pol | Azimuth (deg) | Elevation (deg) | Corr. (dB/m) |
|-----------------|------------------|----------------|-------------|-----------------|-----------------|-----|---------------|-----------------|--------------|
| 1687.260000     | ---              | 54.00          | 12.69       | 100.0           | 1000.000        | V   | 278.0         | 90.0            | 34           |
| 1690.540000     | 54.16            | 74.00          | 19.84       | 100.0           | 1000.000        | V   | 61.0          | 0.0             | 34           |

# End Of Annex 1