

**TÜV Rheinland Rail Certification B.V.**  
**Notified Body Railway Interoperability (NB 1010)**  
**according to Directive (EU) 2016/797**

**NoBo technical dossier**

**EC Conformity Assessment of**  
**V-AMR GPS/GLONASS;**  
**OmPlecs TOP 200 AMR Outdoor; OmPlecs TOP 200 AMR Indoor;**  
**OmPlecs TOP 90 RAIL Indoor**

**Subsystem**  
**'Rolling Stock - Locomotive and Passenger Rolling Stock'**

N.B.: In case of doubt, the original German version shall apply.

Date: 2020-02-27  
Number: TRRC/B 20/138-TD, Rev. 1\_EN  
Author: Dipl.-Ing. Uwe Keller

## Revision history

No.	Date	Description of the change	Author	Reviewer
–	2020-02-27	First edition	Dipl.-Ing. Uwe Keller	Dipl.-Ing. Knut Meierjürgen
Rev. 1	2020-02-27	Comments from the customer. E-mail from 18.02.2020	Dipl.-Ing. Uwe Keller	Dipl.-Ing. Peter Guthörl

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## 1 Actors

### 1.1 Notified Body

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TÜV Rheinland Rail Certification B.V. (TRRC)  
Notified Body Interoperability Rail (NB 1010)  
according to Directive (EU) 2016/797

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### 1.2 Applicant

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Antonics-ICP GmbH  
Ameisenweg 5 (Business Park)  
16727 Velten, Germany

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## 2 Notified Body Certificates

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ISV SB	Intermediate statement of verification - EC type-examination certificate- ID number: 1010/8.1/SB/2020/RST/DEEN/TRRC1383150, Rev. 1, Rolling stock - locomotives and passenger carriages subsystem Validity: 20250226 TÜV Rheinland Rail Certification B.V., 2020-02-27
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## 3 Conditions and limits of use

The restrictions and conditions of operation of the object of assessment are not relevant to the present scope of testing. In addition to this, there are no other special operating conditions and/or restrictions (according to /EN45545-2/ HL3 was achieved).

## 4 Project Scope and restrictions

### 4.1 General Project Description

For the valuation object:

- Amplifier V-AMR GPS/GLONASS;
- Antenna OmPlecs TOP 200 AMR Outdoor;
- Antenna OmPlecs TOP 200 AMR Indoor;
- Antenna OmPlecs TOP 90 RAIL Indoor

are components for the transmission of data in rail vehicles.

## **4.2 Technical Scope and Interfaces**

The range of application and its interfaces is defined by the operating conditions (see chapter 3) and in the drawings listed.

## **4.3 Legal Scope and Project History**

Application for EC-conformity assessment of the Object of valuation	2019-12-16
Type examination	2020-01-06 to 2020-01-18
Completion of the EC conformity assessment	2020-02-27

## **4.4 Exceptions to the EC-scope of testing**

The scope of the assessment of the TSI described in chapter 5.1 is limited to the following chapters:

4.2.10 - Fire protection

4.2.10.2.1 - Material requirements

## **4.5 List of Specific Cases**

This subchapter is not applied.

## **5 Project documentation**

### **5.1 Applied standards / technical specifications / alternative solutions**

#### **Directives, regulations and decisions**

/IOD/ Directive (EU) 2016/797 of the European Parliament and of the Council of 11 May 2016 on the interoperability of the rail system within the European Union

/TSI L&P/ Commission Regulation (EU) No 1302/2014 of 18 November 2014 concerning a technical specification for interoperability relating to the subsystem 'rolling stock - locomotives and passenger rolling stock' of the rail system in the European Union

including the amendment by

Commission Regulation (EU) 2018/868 of 13 June 2018 amending Regulation (EU) No 1301/2014 and Regulation (EU) No 1302/2014 as regards the provisions on energy metering and energy data collection systems

and

Commission Regulation (EU) 2019/776 of 16 May 2019 amending Regulations (EU) No. 321/2013, (EU) No. 1299/2014, (EU) No. 1301/2014, (EU) No. 1302/2014, (EU) No. 1303/2014 and (EU) 2016/919 of the Commission and Commission Decision 2011/665/EU implementing Decision 2011/665/EU with a view to aligning with Directive (EU) 2016/797 of the European Parliament and of the Council and implementing the specific objectives set out in Commission Delegate Decision (EU) 2017/1474

/MODULE/ Commission Decision of 9 November 2010 concerning modules for the procedures for the assessment of conformity, suitability for use and EC verification to be used in the technical specifications for interoperability adopted under Directive 2008/57/EC of the European Parliament and of the Council (2010/713/EU)

/EN 45545-2/      Railway applications - Fire protection in railway vehicles - Part 2: Requirements for the fire performance of materials and components, German version EN 45545-2:2013+A1:2015

### **ERA technical documents and guidelines**

/Guideline      Guide for the application of TSI LOC&PAS  
 L&P/      ERA/GUI/07-2011/INT, Version 2.00, 2015-01-01,  
                 European Railway Agency

/2017/C      Commission communication in the framework of the implementa-  
 435/04/      tion of Directive 2008/57/EC of the European Parliament and of  
                 the Council on the interoperability of the rail system within the  
                 Community (harmonised standards)

### **Standards of the rolling stock - locomotives and passenger rolling stock subsystem**

#### **Evaluation according to /TSI L&P/**

Section of the TSI	Requirements	Mandatory standards or other sets of rules	Other relevant standards or requirements	Evaluation
4.2.10	Fire prevention measures			
4.2.10.2.1	Material requirements	/EN 45545-2/	-	[met]

## 5.2 Project Documentation (provided by the Applicant)

### 5.2.1 Drawings

Se- quence No.	Document No.	Description	Date	Ver.
[001]	100-56-80-04(a)	OmPlecs-TOP 200 AMR MF-05 -4- Indoor	2019-02-12	-
[002]	100-57-61-02.4(a)	OmPlecs-TOP 90 RAIL WiFi 2.4-5.8 MIMO	2017-02-24	-
[003]	100-58-10-04.52(b)	OmPlecs-TOP 200 AMR MF-04 -5- MIMO 4x4	2019-08-22	-
[004]	V-25-100.01(b)	OmPLifi V-AMR GPS Ampli- fier V25	2018-08-01	-

### 5.2.2 Part lists

Se- quence No.	Document No.	Description	Date	Ver.
[005]	100-56-80-04	Part List   OmPlecs-TOP 200 RA MF-05 -4- Indoor	2020-02-11	-
[006]	100-57-61-02.4	Part List   OmPlecs-TOP 90 RAIL WiFi 2.4-5.8 MIMO	2020-02-11	-
[007]	100-58-10-04.52	Part List   OmPlecs-TOP 200 AMR MF-04 -5- MIMO 4x4	2019-12-02	-
[008]	200-10-15-01	Part List   GPS Amplifier V25	2019-12-02	-



### 5.2.3 Test reports

Sequence No.	Document No.	Description	Date	Ver.
[009]	19/0365	Test report for Badamid UL A703 GF20 FR HF ISO 4589-2:2017, tested thickness 4,2 mm Currenta GmbH & Co. OHG ANT-MA fire technology CHEMPARK, Building B 411 D-51368 Leverkusen	2019-03-08	-
[010]	15/0365	Test report for Badamid UL A703 GF20 FR HF IN16 - gaskets for indoor use, EX12 - gaskets for outdoor use, tested thickness 1.0 mm Currenta GmbH & Co. OHG ANT-MA fire technology CHEMPARK, Building B 411 D-51368 Leverkusen	2015-08-31	-

### 5.2.4 Testing Authorities

Laboratory	Address	Accreditation
CURRENTA GmbH & Co. OHG ANT-MA Fire Technology	CHEMPARK, Building B411 51368 Leverkusen	German Accreditation Board D-PL-14097-01-01

### 5.3 Evidence related to Quality Management System

For this purpose, the manufacturer's approval of the quality management system for the production of the assessment item shall be taken into account.

### 5.4 Listing of Manufacturers and main Subcontractors

Manufacturer of that part of the subsystem:

Antonics-ICP GmbH  
 Ameisenweg 5 (Business-Park)  
 16727 Velten , Germany

## **5.5 Provisions for Operation**

The provisions for operation are defined in the overview drawing [001] to [004] (the manufacturer's documentation according to chapter 5.2).

Further provisions to be taken for operation are given in chapter 3.

## **5.6 Provisions for Maintenance**

For maintenance, the documentation in Chapter 5.2 is available for the subsystem.

Maintenance is subject to the ECM.

## **5.7 Interoperability Constituents**

None.

# **6 EC Conformity Assessment Process Information and Results**

## **6.1 Overview of the Assessment by the Notified Body**

For the part of the subsystem V-AMR GPS/GLONASS; OmPlecs TOP 200 AMR Outdoor; OmPlecs TOP 200 AMR Indoor; OmPlecs TOP 90 RAIL Indoor, the TSIs specified in Chapter 5.1 have been evaluated according to the scope of Chapter 4.4. The results are listed in /SB\_Report/.

## **6.2 Process Information, methods and results**

Detailed information on the evaluation process and applied methods can be found in the following report:

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/SB_Report/	EC Inspection Report on V-AMR GPS/GLONASS; OmPlecs TOP 200 AMR Outdoor; OmPlecs TOP 200 AMR Indoor; OmPlecs TOP 90 RAIL Indoor according to module ISV-SB  within the Framework of the EC Conformity Assessment TRRC/B 20/138, Rev. 1_EN, 2020-02-27 TÜV Rheinland Rail Certification B.V.
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