



**Rail Telecommunications (RT);
Future Railway Mobile Communication System (FRMCS);
Building Blocks and Functions;
Part 1: Transport Stratum**

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Foreword

This final draft Technical Specification (TS) has been produced by ETSI Technical Committee Railway Telecommunications (RT), and is now submitted for the Vote phase of the ETSI Standardisation Request deliverable Approval Procedure (SRdAP).

The present document is part 1 of a multi-part deliverable covering Building Blocks and Functions for the Future Railway Mobile Communication System (FRMCS), as identified below:

- Part 1:** "Transport Stratum";
- Part 2: "Service Stratum";
- Part 3: "Train On-Board functions and interfaces";
- Part 4: "Trackside functions and interfaces";
- Part 5: "User Equipment (UE) capabilities".

Modal verbs terminology

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1 Scope

The present document specifies the FRMCS Transport Stratum for the Future Railway Mobile Communications System (FRMCS). In general, the FRMCS Transport Stratum provides data connectivity and the related services.

The present document covers:

- 3GPP terrestrial access.
- Transport stratum interconnection scenarios in all aspects.
- 3GPP access sharing, mobility within transport stratum.
- QoS and policy control.
- Authentication and authorization for the use of the transport stratum.
- Transport stratum common features.

2 References

2.1 Normative references

References are either specific (identified by date of publication and/or edition number or version number) or non-specific. For specific references, only the cited version applies. For non-specific references, the latest version of the referenced document (including any amendments) applies.

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The following referenced documents are necessary for the application of the present document.

- [1] [ETSI TS 123 501 \(V18.9.0\)](#): "5G; System architecture for the 5G System (5GS) (3GPP TS 23.501 version 18.9.0 Release 18)".
- [2] [ETSI TS 127 001 \(V18.0.0\)](#): "Digital cellular telecommunications system (Phase 2+) (GSM); Universal Mobile Telecommunications System (UMTS); General on Terminal Adaptation Functions (TAF) for Mobile Stations (MS) (3GPP TS 27.001 version 18.0.0 Release 18)".
- [3] [ETSI TS 127 007 \(V18.8.0\)](#): "Digital cellular telecommunications system (Phase 2+) (GSM); Universal Mobile Telecommunications System (UMTS); LTE; 5G; AT command set for User Equipment (UE) (3GPP TS 27.007 version 18.8.0 Release 18)".
- [4] [ETSI TS 138 201 \(V18.0.0\)](#): "5G; NR; Physical layer; General description (3GPP TS 38.201 version 18.0.0 Release 18)".
- [5] [ETSI TS 138 300 \(V18.5.0\)](#): "5G; NR; NR and NG-RAN Overall description; Stage-2 (3GPP TS 38.300 version 18.5.0 Release 18)".
- [6] [ETSI TS 103 765-2](#): "Rail Telecommunications (RT); Future Railway Mobile Communication System (FRMCS); Building Blocks and Functions; Part 2: Service Stratum".
- [7] [ETSI TS 103 765-3](#): "Rail Telecommunications (RT); Future Railway Mobile Communication System (FRMCS); Building Blocks and Functions; Part 3: Train On-Board functions and interfaces".
- [8] [FRMCS FFFIS-7950](#): "FRMCS FFFIS - Form Fit Functional Interface Specification", V2.1.0.