

DIN CEN ISO/TS 21184:2021-08 (E)

Cooperative intelligent transport systems (C-ITS) - Global transport data management (GTDM) framework (ISO/TS 21184:2021); English version CEN ISO/TS 21184:2021

Contents

Page

Foreword	v
Introduction	vi
1 Scope	1
2 Normative references	1
3 Terms and definitions	2
4 Abbreviated terms	3
5 Conventions	5
6 Global Transport Data Management (GTDM) framework	5
6.1 General	5
6.2 Applicable use case groups	7
6.2.1 General	7
6.2.2 GTDM framework operation	8
6.2.3 GTDM certificate-based access control	9
6.2.4 Proximity use case applications	10
6.2.5 On-board use case applications	11
6.2.6 Remote use case (ITS, product-related) applications	12
6.2.7 Common configuration data authoring process	13
6.3 GTDM Basic principles	14
7 ITS-S global transport data model	15
7.1 Overview	15
7.2 GT basic data model	15
7.2.1 Overview	15
7.2.2 GT basic configuration	16
7.2.3 GT language package	36
7.2.4 GT runtime data	37
7.2.5 GT condition	44
7.3 GT access control data model	48
7.3.1 <class> GTACProtocolConfig	48
7.3.2 <class> ACProtocol	48
7.3.3 <class> ACProtocolService	49
7.3.4 <class> ACProtocolRole	49
7.3.5 <class> GTACPermissionConfig	49
7.3.6 <class> ACEcuDataParamAccessSet	50
7.3.7 <class> ACEcuDataParamAccess	50
7.3.8 <class> ACAccessDetail	51
7.4 GT function monitor data model	51
7.4.1 <class> GTFMConfig	51
7.4.2 <class> FMBrick	53
7.4.3 <class> FMDataParamCopy	56
7.4.4 <class> FMMessageSequence	56
7.5 SCN data model (optional)	57
7.5.1 <class> SCNDFConfig	57
7.5.2 <class> ProtocolType	60
7.5.3 <class> DlcPin	61

7.5.4	<class> ProtocolAddressing.....	62
7.5.5	<class> EcuAddress.....	62
7.5.6	<class> PhysicalEcuAddress.....	63
7.5.7	<class> ProtocolService.....	63
7.5.8	<class> ProtocolResponseMessage.....	64
7.5.9	<class> PackageScheduler.....	64
7.5.10	<class> PackageSource.....	65
7.5.11	<class> PackageMapping.....	65
7.5.12	<class> DtcScheduler.....	66
7.5.13	<class> CompuMethod.....	67
7.5.14	<class> CompuScale.....	69
7.5.15	<class> CompuLimit.....	69
7.5.16	<class> CompuItem.....	70
7.5.17	<class> CompuRational.....	70
7.5.18	<class> CompuTextToValue.....	70
7.5.19	<class> ExceptionRule.....	71
7.5.20	<class> ExceptionRuleElement.....	71
8	ITS-S global transport data management.....	72
8.1	General.....	72
8.2	ITS-S Management.....	73
8.2.1	Configuration Provider (M1).....	73
8.2.2	Startup sequence.....	74
8.3	ITS-S Security.....	75
8.3.1	General.....	75
8.3.2	ITS application identifier (ITS-AID).....	76
8.3.3	Certificates and keys for use with ISO/TS 21177 secure sessions.....	76
8.3.4	Access control (S1).....	77
8.3.5	Security sub-layer (S2).....	78
8.4	ITS-S Facilities.....	78
8.4.1	Data Provider (F1).....	78
8.4.2	SCN Handler (F2).....	82
8.4.3	GTP Handler (F3).....	84
8.4.4	Function Monitor (F4).....	89
8.5	ITS-S Network layer and Transport layer.....	91
8.5.1	ITS Network Handler (N1).....	91
8.5.2	SC Network Handler (N2).....	92
8.6	ITS-S Applications.....	92
8.6.1	Application (A1).....	92
9	Service Access Points (SAP).....	93
9.1	General.....	93
9.2	SAP – Management to Application.....	93
9.3	SAP – Management to Security.....	93
9.4	SAP – Management to Facilities.....	94
9.5	SAP – Management to Network.....	94
9.6	SAP – Security to Facilities.....	94
9.7	SAP – Security to Network.....	95
9.8	SAP – Network to Facilities.....	95
10	ASN.1 definition.....	96
Annex A (normative) Global Transport ASN.1 definition.....		97
Bibliography.....		115