

ISO/TS 21184:2021-03 (E)

Cooperative intelligent transport systems (C-ITS) - Global transport data management (GTDM) framework

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