

ISO 13185-2:2015-04 (E)

Intelligent transport systems - Vehicle interface for provisioning and support of ITS services - Part 2: Unified gateway protocol (UGP) requirements and specification for vehicle ITS station gateway (V-ITS-SG) interface

Contents		Page
Foreword		vi
Introduction		vii
1	Scope	1
2	Normative references	1
3	Terms, definitions, symbols, and abbreviated terms	1
3.1	Terms and definitions	1
3.2	Abbreviated terms	2
4	Conventions	3
5	Document overview	4
6	UGP application layer services	6
6.1	General	6
6.2	Service primitives	6
6.3	Application layer service primitives -- Confirmed service	7
6.4	Format description of service primitives	8
6.4.1	General definition	8
6.4.2	Service request and service indication primitives	8
6.4.3	Service response and service confirm primitives	9
6.4.4	Service request-confirm and service response-confirm primitives	10
6.5	UGP service call with global reply message handling	10
6.6	UGP service call with scheduled-based reply message handling	11
6.7	UGP service data unit specification	12
6.7.1	Mandatory parameters	12
7	UGP application layer protocol in ASN.1 document interface	13
7.1	General definition	13
7.2	Common message data and structure	13
7.3	ASN.1 model	14
8	Unified gateway protocol (UGP) clusters	15
8.1	Overview	15
8.2	UGP service clusters and associated services	15
9	UGP service cluster 1 -- Global services	16
9.1	GlobalPositiveReply	16
9.2	GlobalNegativeReply	16
9.3	StopService	17
9.3.1	Service description	17
9.3.2	Message `StopServiceCall'	17
9.3.3	Positive reply	17
9.3.4	Error handling	17
9.3.5	Example	17
9.4	Reset	18

9.4.1	Service description	18
9.4.2	Message `ResetCall'	18
9.4.3	Positive reply	18
9.4.4	Error handling	18
9.4.5	Example	18
10	UGP service cluster 2 -- Authentication	19
10.1	Authentication	19
10.1.1	Service description	19
10.1.2	Message `AuthenticationCall'	19
10.1.3	Message `AuthenticationReply'	19
10.1.4	Error handling	20
10.1.5	Example	20
11	UGP service cluster 3 -- Supported data	21
11.1	GetSupportedData	21
11.1.1	Service description	21
11.1.2	Message `GetSupportedDataCall'	21
11.1.3	Message `GetSupportedDataReply'	22
11.1.4	Error handling	23
11.1.5	Example without ECU data	23
11.1.6	Example with ECU data	24
11.1.7	ECU filtered example	25
11.1.8	Negative access type and data parameter property filtered example	26
12	UGP service cluster 4 -- Data parameter access	26
12.1	GetValue	26
12.1.1	Service description	26
12.1.2	Message `GetValueCall'	26
12.1.3	Message `GetValueReply'	27
12.1.4	Error handling	28
12.1.5	Single get data parameter list example	28
12.1.6	Asynchronous conditioned example	29
12.1.7	Monitor example	30
12.1.8	Structure example `vehicle info'	31
12.2	SetValue	32
12.2.1	Service description	32
12.2.2	Message `SetValueCall'	32
12.2.3	Positive reply	33
12.2.4	Error handling	33
12.2.5	Example	33
12.3	ControlValue	34
12.3.1	Service description	34
12.3.2	Message `ControlValueCall'	34
12.3.3	Message `ControlValueReply'	34
12.3.4	Error handling	35
12.3.5	Example 1	35
12.3.6	Example 2	38
13	UGP service cluster 5 -- Diagnostic trouble code information access	39
13.1	GetDtclInfo	39
13.1.1	Service description	39
13.1.2	Message `GetDtclInfoCall'	39
13.1.3	Message `GetDtclInfoReply'	40
13.1.4	Error handling	41
13.1.5	Examples	41
13.2	ClearDtclInfo	42
13.2.1	Service description	42
13.2.2	Message `ClearDtclInfoCall'	42
13.2.3	Positive reply	42
13.2.4	Error handling	42

13.2.5	Example	42
14	UGP service cluster 6 -- In-vehicle network access	43
14.1	EnablePassThru	43
14.1.1	Service description	43
14.1.2	Message `EnablePassThruCall'	43
14.1.3	Positive reply	44
14.1.4	Error handling	44
14.1.5	Example	44
15	UGP service cluster 7 -- Maintenance	45
15.1	ListFile	45
15.1.1	Service description	45
15.1.2	Message `ListFileCall'	45
15.1.3	Message `ListFileReply'	46
15.1.4	Error handling	46
15.1.5	Example	46
15.2	ManageFile	47
15.2.1	Service description	47
15.2.2	Message `ManageFileCall'	47
15.2.3	Message `ManageFileReply'	48
15.2.4	Error handling	48
15.2.5	Example download	48
15.2.6	Example upload	49
15.2.7	Example delete	50
Annex A (normative) Vehicle Interface Data Format definition (VIDF)		51
Annex B (normative) Unified gateway protocol ASN.1 definition		70
Bibliography		78