

ISO 15784-2:2015-11 (E)

Intelligent transport systems (ITS) - Data exchange involving roadside modules communication - Part 2: Centre to field device communications using SNMP

Contents		Page
Foreword		v
Introduction		vi
1	Scope	1
1.1	General	1
1.2	Overview	1
2	Conformance	2
3	Normative references	2
4	Terms and definitions	3
5	Symbols and abbreviated terms	5
6	Overview	6
6.1	Conventions	6
6.1.1	ASN.1	6
6.1.2	SNMP terminology	6
6.1.3	Format	6
6.2	ASN.1 modules and MIBs	6
6.3	Logical architecture	7
6.4	Relationship to the OSI model	7
7	Requirements	8
7.1	Overview	8
7.2	Terminology and architecture	8
7.3	Message processing and dispatching	8
7.3.1	General	8
7.3.2	Version 1 Message Processing Model	9
7.3.3	Version 2 Message Processing Model	9
7.3.4	Version 3 Message Processing Model	9
7.3.5	STMP Message Processing Model	9
7.4	Applications	10
7.4.1	Entity type	10
7.4.2	Command generator	10
7.4.3	Command responder	10
7.4.4	Notification originator	10
7.4.5	Notification receiver	10
7.4.6	Proxy forwarder	10
7.5	Security models	10
7.5.1	User-based Security Model for SNMP version 2	10
7.5.2	User-based Security Model for SNMP version 3	10
7.5.3	Transport Security Model	11
7.6	View-based Access Control	11
7.7	Protocol operations	11
7.7.1	SNMPv1	11
7.7.2	SNMPv2	12
7.7.3	SNMPv3	12
7.7.4	STMP	12

7.7.5	Request ID variation	12
7.8	Transport mappings	12
7.8.1	UDP over IPv4	12
7.8.2	UDP over IPv6	12
7.8.3	TCP over IPv4	13
7.8.4	TCP over IPv6	13
7.8.5	Secure Transport Model	13
7.9	Management Information Base (MIB)	13
7.9.1	Agent MIBs	13
7.9.2	Notification originator MIBs	13
7.9.3	Proxy forwarder MIBs	14
7.9.4	STMP MIB	14
7.9.5	Transport Security Model MIB	14
7.9.6	Other supported data	14
7.10	Interoperability	14
8	Simple Transportation Management Protocol (STMP)	14
8.1	General	14
8.2	Message dispatch, process, and protocol operations	15
8.2.1	Dispatcher	15
8.2.2	Message elements of procedure	15
8.2.3	STMP message field definitions	17
8.2.4	PDU elements of procedure	18
8.3	Transport mappings	21
8.3.1	General	21
8.3.2	UDP over IPv4	21
8.3.3	UDP over IPv6	22
8.3.4	TCP over IPv4	22
8.3.5	TCP over IPv6	23
9	Performance	23
9.1	Overview	23
9.2	Default response time	23
Annex A (normative) Profile requirements list		25
Annex B (normative) STMP ASN.1 module		29
Annex C (normative) STMP management information base		32
Annex D (informative) Primer for protocol		37
Annex E (informative) Encoding examples		45
Bibliography		48