

ISO/TS 20684-2:2021-05 (E)

Intelligent transport systems - Roadside modules SNMP data interface - Part 2: Generalized field device basic management

| Contents | Page |
|---|------|
| Foreword | v |
| Introduction | vi |
| 1 Scope | 1 |
| 2 Normative references | 1 |
| 3 Terms and definitions | 1 |
| 4 Symbols and abbreviated terms | 2 |
| 5 Conformance | 2 |
| 6 Architecture | 6 |
| 6.1 General | 6 |
| 6.2 Architecture reference | 7 |
| 6.3 Functional view of interface | 7 |
| 6.4 Physical view of interface | 7 |
| 6.5 Communications view of interface | 7 |
| 6.5.1 Overview | 7 |
| 6.5.2 Security and data protection | 8 |
| 7 User needs | 8 |
| 7.1 Monitor the field device | 8 |
| 7.2 Monitor and control single-value inputs and outputs | 8 |
| 7.3 Monitor cabinet | 9 |
| 7.3.1 Monitor cabinet doors | 9 |
| 7.3.2 Monitor and control cabinet fans | 9 |
| 7.3.3 Monitor and control cabinet heaters | 9 |
| 7.3.4 Monitor cabinet humidity | 9 |
| 7.3.5 Monitor cabinet temperature | 9 |
| 7.3.6 Monitor cabinet mains power | 9 |
| 7.3.7 Monitor cabinet battery power | 9 |
| 7.3.8 Monitor cabinet generator power | 9 |
| 7.3.9 Monitor cabinet solar power | 9 |
| 7.3.10 Monitor cabinet wind power | 9 |
| 8 Requirements | 10 |
| 8.1 Field device requirements | 10 |
| 8.1.1 Field device definition | 10 |
| 8.1.2 Field device data exchange requirements | 10 |
| 8.1.3 Field device capabilities | 11 |
| 8.1.4 Field device design constraints | 11 |
| 8.2 General-purpose I/O | 12 |
| 8.2.1 General-purpose I/O definition | 12 |
| 8.2.2 General-purpose I/O data exchange requirements | 12 |
| 8.2.3 General-purpose I/O capabilities | 13 |
| 8.3 Cabinet | 13 |
| 8.3.1 Cabinet definition | 13 |
| 8.3.2 Cabinet data exchange requirements | 13 |

| | | |
|--------|---|-----------|
| 8.3.3 | Cabinet power capability requirements | 13 |
| 8.4 | Cabinet doors | 14 |
| 8.4.1 | Cabinet door definition | 14 |
| 8.4.2 | Cabinet door data exchange requirements | 14 |
| 8.4.3 | Cabinet door capability requirements | 14 |
| 8.4.4 | Cabinet door design constraints | 14 |
| 8.5 | Cabinet fans | 14 |
| 8.5.1 | Cabinet fan definition | 14 |
| 8.5.2 | Cabinet fan data exchange requirements | 14 |
| 8.5.3 | Cabinet fan capability requirements | 14 |
| 8.5.4 | Cabinet fan design constraints | 15 |
| 8.6 | Cabinet heaters | 15 |
| 8.6.1 | Cabinet heater definition | 15 |
| 8.6.2 | Cabinet heater data exchange requirements | 15 |
| 8.6.3 | Cabinet heater capability requirements | 15 |
| 8.6.4 | Cabinet heater design constraints | 15 |
| 8.7 | Cabinet humidity | 15 |
| 8.7.1 | Cabinet humidity definition | 15 |
| 8.7.2 | Cabinet humidity data exchange requirements | 15 |
| 8.7.3 | Cabinet humidity capability requirements | 15 |
| 8.7.4 | Cabinet humidity design constraints | 16 |
| 8.8 | Cabinet temperature | 16 |
| 8.8.1 | Cabinet temperature definition | 16 |
| 8.8.2 | Cabinet temperature data exchange requirements | 16 |
| 8.8.3 | Cabinet temperature capability requirements | 16 |
| 8.8.4 | Cabinet temperature design constraints | 16 |
| 8.9 | Cabinet mains power | 16 |
| 8.9.1 | Cabinet mains power definition | 16 |
| 8.9.2 | Cabinet mains power data exchange requirements | 16 |
| 8.9.3 | Cabinet mains power capability requirements | 16 |
| 8.9.4 | Cabinet mains power design constraints | 17 |
| 8.10 | Cabinet battery | 17 |
| 8.10.1 | Cabinet battery definition | 17 |
| 8.10.2 | Cabinet battery data exchange requirements | 17 |
| 8.10.3 | Cabinet battery capability requirements | 17 |
| 8.10.4 | Cabinet battery design constraints | 17 |
| 8.11 | Cabinet generator | 18 |
| 8.11.1 | Cabinet generator definition | 18 |
| 8.11.2 | Cabinet generator data exchange requirements | 18 |
| 8.11.3 | Cabinet generator capability requirements | 18 |
| 8.11.4 | Cabinet generator design constraints | 18 |
| 8.12 | Cabinet solar power | 19 |
| 8.12.1 | Cabinet solar power definition | 19 |
| 8.12.2 | Cabinet solar power data exchange requirements | 19 |
| 8.12.3 | Cabinet solar power capability requirements | 19 |
| 8.12.4 | Cabinet solar power design constraints | 19 |
| 8.13 | Cabinet wind power | 19 |
| 8.13.1 | Cabinet wind power feature | 19 |
| 8.13.2 | Cabinet wind power data exchange requirements | 19 |
| 8.13.3 | Cabinet wind power capability requirements | 20 |
| 8.13.4 | Cabinet wind power design constraints | 20 |
| 9 | Security vulnerabilities | 20 |
| | Annex A (normative) Management information base (MIB) | 21 |
| | Annex B (normative) Requirements traceability matrix (RTM) | 34 |
| | Annex C (normative) Standard general-purpose I/O types | 38 |
| | Annex D (informative) User needs, features and requirements not included | 39 |
| | Bibliography | 40 |