

ISO/IEC 15045-4-1:2024-12 (E)

Information technology - Home Electronic System (HES) gateway - Part 4-1: Structure - Structural class and module requirements

Contents	Page
FOREWORD.....	4
INTRODUCTION.....	6
0.1 Overview.....	6
0.2 Relation to existing work.....	7
1 Scope.....	8
2 Normative references.....	8
3 Terms, definitions and abbreviated terms.....	9
3.1 Terms and definitions.....	9
3.2 Abbreviated terms.....	10
4 Conformance.....	10
5 HES gateway system structural classes.....	11
5.1 Summary of HES gateway system.....	11
5.2 HES gateway system baseline requirements.....	12
5.2.1 Rationale for baseline requirements.....	12
5.2.2 HES gateway system baseline requirements.....	12
5.2.3 HES gateway module baseline requirements.....	12
5.2.4 HAN interface module requirements.....	12
5.2.5 WAN interface module requirements.....	12
5.2.6 Binding map requirements.....	12
5.2.7 Service module requirements.....	12
5.2.8 Identification service requirements.....	13
5.3 HES gateway system structural implementation configurations.....	13
5.3.1 Rationale for HES gateway system configuration.....	13
5.3.2 Simple gateway configuration.....	13
5.3.3 Complex integral gateway configuration.....	14
5.3.4 Complex modular gateway system configuration.....	15
5.3.5 Interconnected gateway system configuration.....	15
Annex A (normative) Requirements of interfaces and services.....	16
A.1 HAN interface module requirements.....	16
A.2 WAN interface module requirements.....	17
A.2.1 General.....	17
A.2.2 WAN interface objects and actions.....	18
A.3 Binding map service requirements.....	18
A.4 Service module requirements.....	20
A.5 Identification service requirements.....	21
Bibliography.....	22
Figure 1 – ISO/IEC 15045-4-1 within the core interoperability and HES gateway standards.....	7
Figure 2 – HES gateway documents and HES gateway system.....	11
Figure 3 – Two HANs.....	13

Figure 4 – One WAN and one HAN	13
Figure 5 – Two or more WANs, one HAN	14
Figure 6 – One WAN, two or more HANs.....	14
Figure 7 – Three or more HANs	14
Figure 8 – Two or more WANs, two or more HANs.....	14
Figure 9 – Complex modular HES gateway system	15
Figure 10 – Interconnected HES gateway system	15
Figure A.1 – HAN interface module block diagram	16
Figure A.2 – HAN interface module handling of data exchange	17
Figure A.3 – WAN interface module block diagram.....	17
Figure A.4 – WAN interface module handling of data exchange	18
Figure A.5 – Binding map service block diagram.....	19
Figure A.6 – Binding map handling of data exchange.....	20
Figure A.7 – Service module block diagram	20
Figure A.8 – Service module handling of data exchange	21
Table A.1 – WAN interface module objects	18
Table A.2 – WAN interface module channel objects	18