ISO/IEC/IEEE 8802-1BA:2023-03 (E)

Information technology - Telecommunications and information exchange between systems - Local and metropolitan area networks - Specific requirements - Part 1BA: Audio video bridging (AVB) systems

Contents

Page

1. Overview ... 13

1.1 Scope ... 13
1.2 Purpose ... 13
1.3 Word usage ... 13
1.4 Introduction ... 14
1.5 Objectives ... 14

2. Normative references ... 15

3. Definitions ... 16

4. Acronyms and abbreviations ... 17

5. Architecture of AVB networks ... 18

6. AVB functions ... 22

6.1 Energy Efficient Ethernet ... 22
6.2 Flow control ... 22
6.3 Frame sizes ... 23
6.4 Detection of AVB domains ... 23
6.5 Credit based shaper combined with timed gate operation ... 24
6.6 Meeting latency targets for SR classes A and B ... 25
6.7 Variable data rate LANs ... 28
6.8 Basic support for streams ... 28
6.9 Minimum Bridge requirements ... 30
6.10 IEEE 802.1AS time-synchronization event message transmission interval ... 31
6.11 Effect of hop count on IEEE 802.1AS accuracy ... 31

7. AVB profiles ... 32

7.1 Introduction to PCS proformas ... 32
7.2 Abbreviations and special symbols ... 33
7.3 Instructions for completing the PCS proforma ... 33
7.4 Common requirements ... 35

Annex A (informative) Bibliography ... 43

List of figures

Figure 5-1 An AVB network ... 18
Figure 5-2 AVB domain boundaries created by non-AVB systems ... 19
Figure 5-3 AVB domain boundaries created by different SR class A priorities ... 20
Figure 5-4 AVB domain boundaries created by different SR class B priorities ... 21

List of tables

Table 6-1 AVB support in LAN technologies ... 24
Table 6-2 Latency targets for SR classes A and B ... 25