ISO 20207:2015-08 (E)

Space data and information transfer systems - CCSDS Space Link Protocols over ETSI DVB-S2 Standard

Contents

Page

1 INTRODUCTION 1-1

1.1 BACKGROUND 1-1
1.2 PURPOSE 1-1
1.3 SCOPE 1-1
1.4 APPLICABILITY 1-2
1.5 DOCUMENT STRUCTURE 1-2
1.6 NOMENCLATURE 1-3
1.7 DEFINITIONS AND CONVENTIONS 1-3
1.8 PATENTED TECHNOLOGIES 1-5
1.9 REFERENCE DOCUMENTS 1-5

2 OVERVIEW 2-1

2.1 ARCHITECTURE 2-1
2.2 SUMMARY OF FUNCTIONS 2-1
2.3 INTERNAL ORGANIZATION 2-2

3 CADU STREAM GENERATION 3-1

3.1 OVERVIEW 3-1
3.2 INPUT CCSDS TRANSFER FRAMES 3-1
3.3 CHANNEL ACCESS DATA UNIT 3-1

4 DVB-S2 TRANSMISSION 4-1

4.1 OVERVIEW 4-1
4.2 DVB-S2 MODE ADAPTATION FORMAT 4-1
4.3 AVERAGE SIGNAL ENERGY 4-1
4.4 SHAPING FILTERING 4-2

5 MANAGED PARAMETERS 5-1

5.1 OVERVIEW 5-1
5.2 PERMANENT MANAGED PARAMETERS 5-1
5.3 VARIABLE MANAGED PARAMETERS 5-3

ANNEX A SERVICE DEFINITION (NORMATIVE) A-1
ANNEX B SECURITY, SANA, AND PATENT CONSIDERATIONS (INFORMATIVE) B-1

Section Page

ANNEX C ACRONYMS AND TERMS (INFORMATIVE) **C-1**
ANNEX D DVB-S2 SPECTRAL EFFICIENCIES (INFORMATIVE) **D-1**

Figure

1-1 Bit Numbering Convention 1-5
2-1 Relationship with OSI Layers 2-1
2-2 Stream Format While Transmitting CCSDS Transfer Frames Using DVB-S2 2-3

Table

5-1 Permanent Managed Parameters for Transfer Frame Synchronization 5-2
5-2 Permanent Managed Parameters for DVB-S2 Transmission 5-2
5-3 Variable Managed Parameters 5-3