OpenCable™ Specifications

Host 2.0 Multi-FAT Receiver Extension

OC-SP-HOST2-MFATEXT-I01-050502

ISSUED

Document Status Sheet

Document Control Number:	OC-SP-HOST2-MFATEXT-I01-050502			
Document Title:	Host 2.0 Multi-FAT Receiver Extension			
Revision History:	D01 – Released 4/15/05 I01—Issued 5/2/05			
Date:	May 2, 2005			
Status:	~~Work in Progress~~	~~Draft~~	Issued	~~Closed~~
Distribution Restrictions:	~~Author Only~~	~~CL/Member~~	~~CL/ Member/ Vendor~~	Public

Key to Document Status Codes:

Work in Progress	An incomplete document, designed to guide discussion and generate feedback, that may include several alternative requirements for consideration.
Draft	A document in specification format considered largely complete, but lacking review by Members and vendors. Drafts are susceptible to substantial change during the review process.
Issued	A stable document, which has undergone rigorous member and vendor review and is suitable for product design and development, cross-vendor interoperability, and for certification testing.
Closed	A static document, reviewed, tested, validated, and closed to further engineering change requests to the specification through CableLabs.

Trademarks:

Contents

Figures

This page left blank intentionally.

1 SCOPE

1.1 Introduction and Overview (Informative)

The OpenCable Host 2.0 specification defines bidirectional digital set-top boxes (OCS2) and bidirectional integrated terminal devices (OCT2). This specification defines the requirements for either OCS2 or OCT2 devices to be extended to include multiple cable tuners with Multi-stream CableCARD interface support. Figure 1 is one example of a possible Multi-stream Host (M-Host) that also includes optional PIP support and Digital Video Recording (DVR) capability.

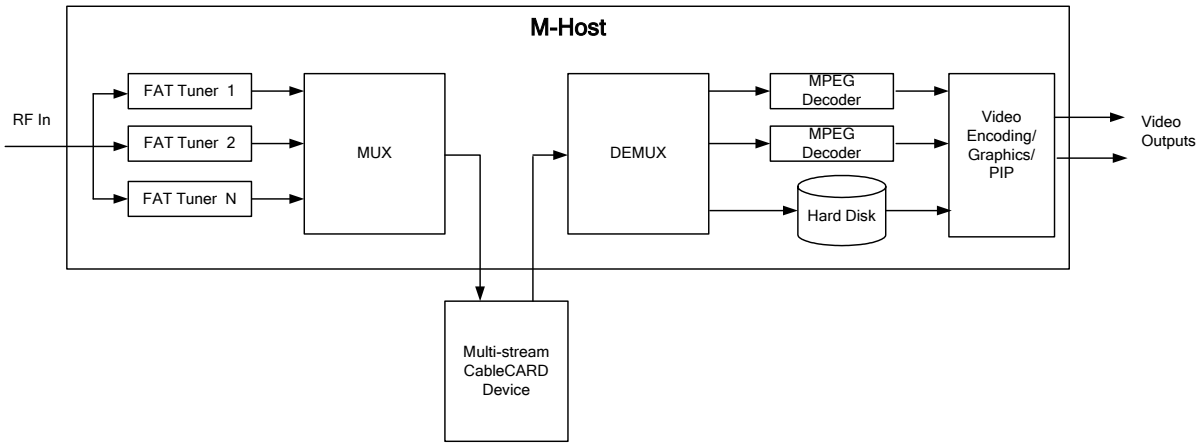

Figure 1 - Block Diagram of the OpenCable Multi-FAT Set-top (Informative)

1.1 Purpose of document

This specification defines minimum technical requirements and additional features that must be added to an OpenCable Host 2.0 device to support multiple FAT tuners.

1.2 Organization of document

The remainder of this document is organized as follows:

Section 2 – Provides normative references used in this specification.

Section 3 – Provides definitions of terms used in this specification.

Section 4 – Provides definitions of abbreviations and acronyms used in this specification.

Section 5 – Provides the detailed specification of technical requirements for the M-Host device.

1.3 Requirements

Throughout this document, the words that are used to define the significance of particular requirements are capitalized. These words are:

"SHALL"	This word or the adjective "REQUIRED" means that the item is an absolute requirement of this specification.
"SHALL NOT"	This phrase means that the item is an absolute prohibition of this specification.
"SHOULD"	This word or the adjective "RECOMMENDED" means that there may exist valid reasons in particular circumstances to ignore this item, but the full implications should be understood and the case carefully weighed before choosing a different course.
"SHOULD NOT"	This phrase means that there may exist valid reasons in particular circumstances when the listed behavior is acceptable or even useful, but the full implications should be understood and the case carefully weighed before implementing any behavior described with this label.
"MAY"	This word or the adjective "OPTIONAL" means that this item is truly optional. One vendor may choose to include the item because a particular marketplace requires it or because it enhances the product, for example; another vendor may omit the same item.

2 REFERENCES

2.1 Normative References

In order to claim compliance with this specification, it is necessary to conform to the following standards and other works as indicated, in addition to the other requirements of this specification. Notwithstanding, intellectual property rights may be required to use or implement such normative references.

[HOST2.0] OC-SP-HOST2.0-CFR-I04-050415: OpenCable™ Host Device 2.0 Core Functional Requirements, April 15, 2005, Cable Television Laboratories, Inc.

[OCAP] OC-SP-OCAP1.0-I15-050415: OpenCable Application Platform Specification (OCAP) 1.0, April 15, 2005, Cable Television Laboratories, Inc.

[CHILA] CableLabs CableCARD-Host Interface License Agreement

[CCCP] OC-SP-CCCP2.0-I01-050331: OpenCable CableCARD™ Copy Protection 2.0 Specification, March 31, 2005, Cable Television Laboratories, Inc.

[CCIF] OC-SP-CCIF2.0-I01-050331: OpenCable™ CableCARD™ Interface 2.0 Specification, March 31, 2005, Cable Television Laboratories, Inc.

2.2 Reference Acquisition

CableLabs Specifications and License Agreement:

Cable Television Laboratories, Inc., 858 Coal Creek Circle, Louisville, CO 80027;
Phone 303-661-9100; Fax 303-661-9199; Internet: http://www.opencable.com/

3 TERMS AND DEFINITIONS

This specification uses the following terms:

M-HOST An OpenCable Host 2.0 device containing multiple FAT tuners.

M-CARD A CableCARD device that implements the multi-stream interface defined in [CCIF].

S-CARD A CableCARD device that implements the single-stream interface defined in [CCIF].

4 ABBREVIATIONS AND ACRONYMS

This specification uses the following abbreviations:

FAT Forward Application Transport

5 TECHNICAL REQUIREMENTS

5.1 General Requirements

5.1.1 OpenCable HOST 2.0 Compliance

MHOST-1:	The M-HOST SHALL comply with all normative requirements in [HOST2.0].

5.1.2 Middleware

MHOST-2:	The M-HOST SHALL comply with all normative requirements of [OCAP].

5.1.3 CableCard Interface Support

MHOST-3:	The M-HOST SHALL provide an implementation of the M-CARD interface as specified in [CCIF]. Note: For compatibility with existing CableCARDs, the M-HOST MAY also support the S-Card interface as specified in [CCIF]; however, the M-HOST would then operate only in single-tuner mode.

5.1.4 Copy Protection

MHOST-4:	The M-HOST SHALL implement M-Mode Copy Protection as defined in [CCCP].

5.2 Tuner Requirements

MHOST-5:	The M-HOST SHALL support the simultaneous reception of at least two independent FAT channels anywhere in the Host 2.0 FAT channel RF frequency range and deliver the demodulated streams to the CableCARD using the multi-stream mode defined in [CCIF].
MHOST-6:	All FAT tuners SHOULD meet the same performance requirements as specified in [HOST2.0].
MHOST-7:	The M-HOST SHALL support reception of all FAT channels and interface to all cable signals through a single RF input connector. NOTE: Splitter/combiners attached to the chassis are permitted. Separately cabled or connected equipment is not permitted.