



Multi-Stream CableCARD 1.5.2.1401 Software Release Notes

Overview

Introduction

Cisco introduces software release 1.5.2.1401 for the Multi-Stream CableCARD™ (M-Card™) module. The M-Card module complies with CableLabs® tru2way™ (formerly OCAP™) requirements and also meets Federal Communications Commission (FCC) separable security requirements.

These release notes contain the following information:

- Site requirements
- Software download information
- A description of fixed Change Requests (CRs)

Note: There are no new features or known issues in this release.

Audience

These release notes are written for system operators, sales and program managers, Cisco® Services engineers, and field technicians.

Document Version

This is the fourth formal release of this document. In addition to minor text and graphic changes, the following table provides the technical changes to this document.

Description	See Topic
The software file name has changed	<i>Software Download from the FTP Server</i> (on page 3)
CRs found in M-Card releases 1.5.2.1201 and 1.5.2.1301 have been fixed in this release	<i>What's Fixed</i> (on page 4)

Site Requirements

System Requirements

M-Card software release 1.5.2.1401 is compatible with all available system releases, though some M-Card features may not be supported in all instances. To learn which features are supported for your release, contact Cisco Services.

Important: To upgrade this product, settop.res version 112 or later is required.

Software Download from the FTP Server

If you are downloading this application from the FTP server maintained by Cisco Services, you will need the following information:

FTP site address:	ftp.sciatl.com
User Name:	anonymous
Password:	email address of user logging in
FTP Directory Path:	/pub/scicare/RELEASED/MCard_1.5
File Name:	Mcard_Pkey_1.5.2_1401.tar.gz

Note: If you are accessing the FTP server from a connection that is behind the Cisco Services network firewall, the FTP directory path is:
/external_pub/scicare/RELEASED/MCard_1.5.

Important: The M-Card package must be extracted from the TAR file. Instructions for performing this task, as well as instructions for installing the package are found in **Chapter 2** of *Downloading New Client Application Platform Installation Instructions* (part number 4003052).

Tips:

- When installing the PowerKEY® M-Card software on the DNCS, look for the M-Card package instead of the SARA ResApp package as indicated in **Chapter 2** of *Downloading New Client Application Platform Installation Instructions* (part number 4003052).
- The file you will add is located in the /dvs/cablecard/ directory. Please install the latest ROM image from your customer-specific FTP site.

What's Fixed

Introduction

This section provides a description of the CRs implemented since M-Card version 1.5.2.1201 was released.

86477-01: M-Card Boxes Not Handling Copy Protection Correctly - NGP and non-NGP

ECM (Entitlement Control Messages) that unlock encrypted services were timing out, causing MOD (Music on Demand) video to stop.

91549: OOB State Operation and HID-CID-related Fixes

M-Card hosts that have booted up in DSG mode, jump to QPSK mode when a DCD (Downstream Channel Descriptor) is missing. This is incorrect behavior; the host should remain in DSG mode.

92986-01: Card Ser. No and MAC Should Be Part of app_info_cnf() APDU as per CCIF spec I16

The M-Card module must be able to display the M-Card MAC address and serial number according to Cable Labs CCIF specification I16.

94595: M-Card Should Handle Unexpected Profile_Changed APDU

Some Motorola hosts send Profile_Changed() APDUs (Application Protocol Data Units) repeatedly, which violates Cable Labs CCIF specification OC-SP-CCIF2.0-I16-081114. However, it is easier to change the M-Card module so that it handles the unexpected APDU rather than change Motorola implementations.

95782: M-Card Does Not Forward CDL CVT to Host When the CVT Version is Changed

This is incorrect behavior that affects host software upgrades.

95879: M-Card Does Not Forward All the Matching CVT Records in the cvt_v2xxxxxx.tblo

This is incorrect behavior. The host needs all CVT records in the cvt_v2xxxxxx.tblo in order to have successful host software upgrades.

96209-02: Memory Leak in CP Thread Due to cp_valid_req() APDU Not Being Freed

Panasonic hosts send APDUs every five seconds, which hastened the memory leak. When a diagnostic page was allowed to run overnight, the M-Card module was eventually unable to update diagnostic information. A TV reboot was required.

96890: IP Address Field in the New_flow_cnf apu Is Not Coded as per Ext Chan T1V6

The APDU implementation must support IPv6 in order to support extended channel resource T1V6 on a host. This is applicable only in QPSK OOB mode.

96893: Manual Reset Mechanism of Last Known OOB Mode

In some scenarios, a manual reset mechanism is needed to set ADSGs (Advanced DOCSIS Set-Top Gateways) to QPSK OOB mode. The mechanism must apply to both Cisco and third-party platforms, including Cisco OCAP and legacy platforms.

Known Issues

Known Issues

There are no known issues at the time of this release.

Glossary

Advanced DSG

Advanced DOCSIS Set-top Gateway. Operates with the DCD message. Address assignment is dynamic. The DSG tunnel address is determined by the DSG agent and learned by the DSG client through the DSG address table in the DCD message.

APDU

Application Protocol Data Unit. A common structure to send application data between the M-Card module and the host.

Bootloader

A factory program installed into the DHCTs to ensure reliable upgrades.

CableCARD

A device that plugs into a digital cable-ready TV or DHCT and allows the receipt of encrypted services.

CCCM

CPE Controlled Cable Modem.

CCI (Copy Control Information)

Copy Control Information defines a program's level of copy protection. There are currently three copy protection levels defined: *copy freely*, *copy once*, and *copy never* (*copy once* and *copy never* are known as *high-value copy protection*). The CCI is set for the program by the program originator.

The DNCS/ISDS sends the CCI information to the DHCT or CableCARD module in an Entitlement Control Message (ECM) that lets the DHCT or CableCARD module know whether the program is high-value or not.

CDL

Common Download.

CID

Client ID. A unique value that identifies a client.

Copy protection

A system for preventing the unauthorized reproduction of copyrighted media through setting the copy protection levels for a program or service. There are three types of copy protection settings:

- Copy freely
- Copy once (high-value)
- Copy never (high-value)

Copy-protected content

Video and/or audio content that is coded to prevent it from being copied by recording devices, such as digital video recorders or personal computers.

CPE Controlled Cable Modem

A cable modem in which a portion of the higher-layer processing is performed by an external device, in particular, by a PC.

CVT

Code Version Table. A method for staging DHCTs. The CVT is a table that contains information about download channels and information to map client release software versions to specific DHCT types. The Broadcast File Server (BFS) broadcasts this information once per second on every quadrature amplitude modulation (QAM) frequency and on the quadrature phase shift keying (QPSK) frequency. If a DHCT does not have valid client release software installed (such as new DHCTs), the DHCT searches QAM frequencies for software download information. When the DHCT finds this information, it can begin to download valid client release software.

DAVIC

Digital Audio Visual Council. DAVIC is becoming the industry standard for end-to-end interoperability of broadcast and interactive digital audio-visual information and of multimedia communication.

DCD

downstream channel descriptor. A DSG address table used within the DOCSIS MAC Management Message to manage the DSG tunnel.

DCM

digital content manager. An MPEG processing device that is capable of supporting extremely high numbers of video stream processing.

DCT

Display Channel Table.

DOCSIS®

Data over cable service interface specification. This specification defines interface requirements for cable modems involved in high-speed data distribution over cable television system networks. This standard was developed by CableLabs in North America and approved by the International Telecommunication Union (ITU).

DSG

DOCSIS set-top gateway.

ECM

Entitlement Control Message. System-wide information that “unlocks” an encrypted service by transmitting control words. Each ECM is unique for each service. An ECM enables cryptographic partitioning so that different Entitlement Agents (EAs) can selectively grant access to their own services.

EID

Entitlement ID. A 32-bit number that identifies a pay-per-view (PPV) event to the secure micro. Each package has an EID.

HID

Hub ID. A unique value that identifies individual hubs in a stack of hubs.

LUG

Line Up Group. A set of hubs that is assigned to the same display channel table (DCT).

M-Card Module

Multi-Stream CableCARD Module. The next generation CableCARD module that supports decryption of up to six programs and also provides two-way network access in both DAVIC and DOCSIS systems.

NVM

non-volatile memory. Memory that holds its content when the device it is associated with is turned off.

OCAP

OpenCable Application Platform. The US cable industry's middleware standard specified by CableLabs.

PAT

program association table. A second table in the transport stream which contains a list of all MPEG programs on the transport stream along with their associated program numbers.

PowerKEY® Conditional Access system

Our registered trademark name for the hardware and software encryption and decryption of digital signal. Uses secret key, public key, and private key data to secure the digital signal.

VCT

Virtual Channel Table. A data structure consisting of up to 4096 channel definition records in which the table associates a virtual channel record with a service defined in the Program Association Table (PAT) and transport stream program map.

WKMA

Well Known MAC Address.

For Information

If You Have Questions

If you have technical questions, call Cisco Services for assistance. Follow the menu options to speak with a service engineer.



Cisco Systems, Inc.
5030 Sugarloaf Parkway, Box 465447
Lawrenceville, GA 30042

678 277-1120
800 722-2009
www.cisco.com

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