



Multi-Stream CableCARD 1.5.2.2101 Software Release Notes

Overview

Introduction

This is a release of Cisco® Multi-Stream CableCARD™ (M-Card™) software version 1.5.2.2101. These release notes contain the following information:

- Site requirements
- Software download information
- A description of fixed Change Requests (CRs)
- General information on contacting Cisco Systems

New Features

There are no new features in this release.

Known Issues

There are no known issues in this release.

Purpose

The purpose of this release is to distribute software fixes for issues found in the previous M-Card software release.

Scope

These release notes provide an executive overview of the M-Card 1.5.2.2101. If you have questions about this release or require more detailed information, contact Cisco Services.

Audience

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

Document Version

This is the second formal release of this document.

Site Requirements

System Requirements

M-Card software release 1.5.2.2101 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_2101.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 software version 1.5.2.1401 was released. CRs from seven internal releases (1.5.2.1501-1.5.2.2001) are represented as well as CRs from 1.5.2.2101.

1.5.2.2101

ID	Title	User Impact	Description
107507/ AT2316	M-Card module should reset if there is an OOB mode change when M-Card module is 2-way	FEATURE	ODN can not handle OOB mode changes when the M-Card module is operating in 2-way mode.
107508	M-Card module takes a lot of time determining OOB mode of operation first time When app_id = 1, 2 or 5 is used, M-Card module constructs the DSG filters incorrectly	PERFORMANCE	When the NVM override flag is not set, the M-Card module waits for gdl.tblo before deciding on the mode of operation. Currently the gdl.tblo is read after reading all other BFS files resulting in much delay. The M-Card module can read the gdl.tblo ahead of all the other files
107611	In ADSG socket mode, the M-Card module does not get Host IP during a recombine	INCORRECT BEHAVIOR	The M-Card module does not take the new host IP during a recombine.

1.5.2.2001

ID	Title	User Impact	Description
104121	During recombine testing, DOCSIS set-top 8kg6 M-Card module has no IP without reboot	INCORRECT BEHAVIOR	The M-Card module does not obtain an IP address when moved to a different CMTS downstream/upstream/IP domain.
106389-01	The CableCARD module replies wrongly for ROOT_OID request from host	INCORRECT BEHAVIOR	The root OID response from the M-Card module is not encoded in ASCII format as expected by the host. Therefore, the host cannot obtain the M-Card diagnostic information through SNMP.

1.5.2.1901

ID	Title	User Impact	Description
104296	When app_id = 1, 2 or 5 is used, M-Card module constructs the DSG filters incorrectly	BLACK SCREEN	The application will not load.
104465	Enhance Copy Protection MMI screen to show CP-CA and key refresh info	INTERNAL ENHANCEMENT	Two new fields were added to the Copy Protection Information diagnostic screen on the M-Card module. The first field displays the value of the global variable "gCP_CaDisable" which CP uses to enable/disable CA decryption. The second field indicates when the M-Card module is performing CP key refresh with the host.
104973	M-Card module stops communicating to the host	INCORRECT BEHAVIOR	The M-Card module eventually stops communicating with the host under the following conditions: 1) Repeated channel changes where the ca_pmt() has CA descriptors other than the ones with a PowerKEY CA System ID. 2) Staying too long in the PPV OSD screen. In both cases the M-Card module stops decrypting content and the M-Card module diagnostics screen goes blank.

1.5.2.1801

ID	Title	User Impact	Description
104056	M-Card module has to get the vendor ID properly from the host having GenDiagResource V2	INCORRECT BEHAVIOR	The host upgrade capability using Common Download is affected.

What's Fixed

1.5.2.1701

ID	Title	User Impact	Description
82582	M-Card module autobind retry does not check for changes in CP definition for display MMI	INCORRECT BEHAVIOR	A DNCS Administration Console currently cannot turn off/on autobind for M-Card modules using the Configure MMI Screen Data UI, Display MMI for Bi-Directional Device setting in the M-Card UI.
91971	CP Fail message is not sent to headend in DSG mode	INCORRECT BEHAVIOR	In DSG mode, the CP Fail message is not being sent if the failure occurs during mutual authentication as is the condition that is checked for 2-way availability.
95274	Hyperlink at bottom of MAC Address Report diagnostic screen overlaps the text	GRAPHICS QUALITY	The hyperlink and text at the bottom of the M-Card diagnostic screens should not overlap.
97198	Indicate "waiting for open_homing" state in M-Card diag page	FEATURE	When waiting for open_homing, there is no indication that the M-Card module has triggered on a download in the M-Card download diagnostic page.
98960	noCP on reboot	INCORRECT BEHAVIOR	After upgrading the M-Card module with new firmware or after a reboot, the host displays "noCP" on the front panel. The host cannot complete the boot up process and is struck at this point.
101276	M-Card module has to support ECR 1408: Addition of Vendor ID to generic diagnostics	CUSTOMER ENHANCEMENT	There are currently systems in the field that support only CDL1.0 for certain vendor_ids. A mechanism is required for the M-Card module to find out the system CDL support for a particular vendor_id prior to opening the System Control resource. This will be accomplished by adding the vendor_id to the host_information_report() in the Generic Diagnostic resource.

ID	Title	User Impact	Description
102029 RM 2504	M-Card module should not display information of the path of "podchan.tblo" in Direct mode	CUSTOMER ENHANCEMENT	Users could be confused by the M-Card podchan.tblo information since the host does not need it in AD SG Direct mode.

1.5.2.1601

ID	Title	User Impact	Description
85837	Resend a UNCR on DAVIC reconnect	INTERNAL ENHANCEMENT	Users may lose 2-way connectivity.
92236	M-Card module doesn't support Broadcast tunnels in Indirect AD SG mode	Third Party Apps	Applications will not be loaded.
92830	Preview video not shown following a purchased PPV	LOSS SCV/VIDEO	Video will appear frozen after a purchased PPV, even if a free preview for the next event is active.
97115-01	Integrating CISCO name change in the user viewable pages	FEATURE	The M-Card module should use the "CISCO" name on pages generated for various applications.
98478	OOB mode change without resetting M-Card module and send correct mode details to Host	PERFORMANCE	The host application behavior at boot-up time will improve if an OOB mode switch is added soon after the need to boot-up.
98524	M-Card module should parse the option bytes from the new_flow_cnf to get the subnet mask	INCORRECT BEHAVIOR	The diagnostic field for the subnet mask would show the correct value instead of "0.0.0.0".
98654	Application Information page for CANH	FEATURE	The M-Card module has to support the 'Conditional Access Network Handler' application_type in the application_info_cnf() APDU. It should have two diagnostic pages similar to the 'POD Handler Diagnostics' and the 'POD Handler Sync Timeouts' pages.

What's Fixed

ID	Title	User Impact	Description
98656	M-Card MIB resource Support as per CCIF I17	FEATURE	The M-Card diagnostic field would be accessible through SNMP.
98657	SNMP Framework code -- support for basic SNMP operations as per CCIF I17	FEATURE	The M-Card diagnostics would be available in SNMP as per CCIF I17.
98658	General MIB support	FEATURE	M-Card diagnostics would be available through SNMP.
98659	PowerKEY MIB implementation	FEATURE	PowerKEY-related diagnostic info would be available through SNMP.
98661	DSG MIB support	FEATURE	DSG-related diagnostic info would be available through SNMP.

1.5.2.1503

ID	Title	User Impact	Description
99271	Lug_id should be ignored in DSG Direct mode	CUSTOMER ENHANCEMENT	If the M-Card module is assigned an enhanced channel map using lug_id rules in ADSG Direct mode, the host won't get the correct channel map.

1.5.2.1501

ID	Title	User Impact	Description
97604	CDL 2.0 parameters for diagnostics purpose	INTERNAL ENHANCEMENT	CDL2.0-related fields would be included on the diagnostic pages.
97847	M-Card module should parse entire gdl.tblo file in case of multiple EID assignments	INCORRECT BEHAVIOR	Currently the M-Card module will stop parsing the gdl.tblo file as soon as it has found a matching EID for both a CCCM and a group_ID assignment. It will miss additional assignments if they exist in the file once the quota of at least one CCCM and one group_ID assignment has been reached.

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.

Glossary

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



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