CCM Version 7.5.04 Release Notes

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Overview

This document describes the changes in the CCM firmware since version 7.4.58, which provided support for newer PIV cards that use the updated FIPS201 data layout (as specified in the NIST Special Publication 800-73-3), PIV-I cards with a UUID (128-bit GUID), and facilities using multiple variations of PIV and PIV-I cards. (For information about those features, see the "Using PIV and PIV-I Cards" section of the Velocity 3.1 KB640 Release Notes or the Velocity 3.5 SP1 Release Notes.)

CCM 7.5.04 provides support for the new Mx controllers (which also require Velocity 3.5 SP1 or later), and fixes a bug. For more information, see the New Features and Defects Fixed sections of this document. This document also summarizes the Known Limitations in this release.

CCM 7.5.04 works on the traditional CCM7 used in controllers such as the M2 and the M8, and on the new CCMx-2, CCMx-4, and CCMx-8 used in the Mx controller.

New Features

Support the new Mx Controller

We now have four kinds of CCM: the traditional CCM7 (used in controllers such as the M2 and the M8), and the new CCMx-2, CCMx-4, and CCMx-8 (used in the Mx controller). A CCM7 will not work in an Mx controller. In Velocity 3.5 SP1, the Model drop-down list on the General page of the Controller Properties dialog now provides the choices of M1, M2, M8, M16, MSP, Mx2, Mx4, or Mx8.

For basic access control applications that only need an entry reader on a door (with wire runs no greater than 500 feet), the 6-pin Wiegand terminal of an Mx controller's door enables you to directly connect an industry-standard Wiegand card reader, without a separate MATCH2 board. For the onboard Wiegand terminals, the functionality of a MATCH2 board is provided by the STM microprocessor. Configuration of these entry readers is done in Velocity, using the Entry Reader > Card Reader Setup page of the Door Properties dialog:
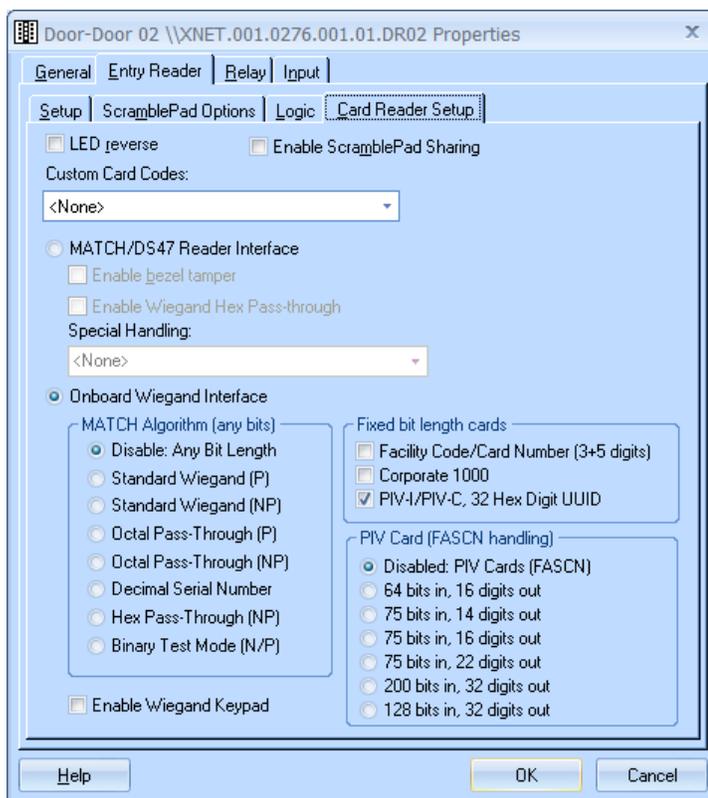
Some of the supported Wiegand card readers include a keypad for entering PIN codes. When you configure those readers in Velocity, be sure to check the "Enable Wiegand Keypad" option.

The Mx controller is designed to operate in a networked environment, so it has an integrated Ethernet connection and integrated SNIB2 capability. The glass fuses for the reader circuits have been replaced by resettable fuses which automatically restore circuit integrity after the overcurrent has been removed. (Only two 5 Amp glass fuses remain, which are located by the power supply connector and the standby battery connector.)

The Mx controller's main board has a 32-bit ARM Cortex microprocessor from SGS-Thomson Microelectronics (STM) that:

- includes Real Time Clock functionality (which was previously provided by a separate chip on controllers such as the M2 and M8),

- manages card readers directly wired to the 6-pin Wiegand terminals of an Mx controller's doors (instead of being wired through a MATCH2 reader interface board), and

- provides an interface to an encryption chip (which will provide additional functionality in a future release).

The STM microprocessor has upgradeable firmware, which is identified by a version number. This "STM-RTC Version number" is now included in the results of an 88*12 command in Diagnostic Mode, only for an Mx controller managed by Velocity 3.5 SP1. For example, CCM version 7.5.04 has STM-RTC version 2.5.

For more information, see the **Mx Controller** chapter in the *DIGI*TRAC Systems Design & Installation Guide*.

Defects Fixed

Input State Processing Lag and Opening Doors [DT-110]

A "Forced Entry" alarm could occur if a door was physically opened and quickly secured before its input state was properly updated in the controller. This issue has been fixed by creating an optional feature to mask the door contact for 5 extra ticks after the relay drops.

To turn on this option, enter the following command: 98*41*3*8*1*0#

Known Limitations (since CCM 7.4.0)

Timed Anti-Passback

- As mentioned in the CCM 7.4.12 Release Notes, if you're using the Timed Anti-Passback feature for all users, your user capacity will be cut in half. Therefore if you have 2048 or more credentials and you haven't already installed a memory expansion board, you'll need to add one. Users with the MEB/CB128 might need to special order an MEB/CE64 to augment their capacity.

- If your site has more than 2000 credentials and will need Timed Anti-Passback, the **CMD 98*41*9*8*1*0** command should be added to a command set and put into the "Additional command sets to download" feature (on the General page of the Controller Properties dialog in Velocity).

- **Special notice for upgrades where a site has already had credentials downloaded to the controller:** If the controller has ever had more than 50% of its user capacity used since its last cold-start (regardless of whether the credentials were deleted later), it may be necessary to cold-start the controller's user database. Cold-starting the user's database can be done via **CMD 98*27*0*0*0*0#**, or by pressing the controller's blue Reset button for 30 seconds. A cold-start may be necessary because the new CMD 98*41*9*8*1*0# feature changes how that database is allocated, but only to the extent that space has not already been allocated.

Digi*Trac Annunciator (DTA) and Digi*Trac Annunciator with 2-line LCD (DTA2)

- As of CCM version 7.4.37, the output format for the DTA has been changed to show shorter messages, such as showing **14:20** instead of **08 Oct 2:20 pm**.

- Until Velocity has native support for the new embedded 2-line LCD display, it is necessary to add a **403*READER*65*72#** command for each reader that has an LCD unit. We recommend using the "Additional command sets to download" feature on the General page of the Controller Properties dialog in Velocity.