



Release Notes

VeriAdmin™
v7.51

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LIST OF ACRONYMS

These acronyms and abbreviations are used in this document:

AFD	Auto Finger Detect
ANSI	American National Standards Institute
AUX	Auxiliary
CM	Communication Manager
CMD	Command
COMM	Communications
CSV	Comma Separated Value
DLL	Dynamic Link Library
DST	Daylight Saving Time
ESI	External Storage Interface
FPP	Finger Placement Feedback
GPIO	General Purpose Input/Output
GUI	Graphical User Interface
I/O	Input/Output
ID	Identification
LCD	Liquid Crystal Display
LED	Light Emitting Diode
MTM	Searching Template
OEM	Original Equipment Manufacturer
PC	Personal Computer
RAM	Random Access Memory
RMA	Return Material Authorization
SCM	Smart Card Manager
SDK	Software Development Kit
TCP	Transmission Control Protocol
TEM	Template
TTL	Transistor-Transistor Logic
TWIC	Transportation Worker Identification Credential
UAC	User Account Control
USB	Universal Serial Bus
UT	Universal Time
UR	User Record
VUR	User Record (1:1 Verify)

1. INTRODUCTION

This document provides a history of the various changes that have occurred to the VeriAdmin software throughout its development.

For each revision, the document provides information such as what has changed, user enhancements, bug fixes, known issues and their workarounds (if available), etc.

In this document, the terms "unit" and "reader" are often used interchangeably as a generic term to refer to a Bioscrypt fingerprint reader.

2. CHANGES IN VERSION 7.51

VeriAdmin version 7.51 is compatible with V-Station Optical and MV1610 VeriSeries and V-Station units with firmware 11.00, 9.xx, 7.xx, and 6.xx. It is not intended for use with products with firmware versions 8.xx or 10.xx.

2.1. CHANGES IN VERSION 7.51 FROM VERSION 7.50

- Compiled HTML help file support has been added. Press F1 within VeriAdmin to activate the help system
- Extended ID Wiegand formats can now be used in combination with User Records and Password Verification.
- An error message is displayed in the Firmware Update Wizard if an attempt is made to update a unit with a version of firmware that is incompatible with it.
- Ademco 34-bit RCM code is now supported in VeriAdmin and can be selected via the Wiegand tab in the Unit Parameters dialog box.
- The Update Firmware status bar now indicates the actual update progress more accurately.
- You can now edit the option for "Security Level NONE Options" for MV1200 V-Pass units that are using firmware version 7.xx. This option is located on the Biometrics tab in the Unit Parameters dialog box.
- The Installation CD now installs the USB drivers.
- You can now switch between the Aux (RS-232) USB port and the RS-485 port on V-Smart MIFARE units without having to modify the VeriSeries Port Mode setting on the Communications tab of the Unit Parameters dialog box.

2.2. KNOWN ISSUES

- When using the Sensor Settings menu item under the Configure menu, a finger must be placed on the sensor prior to clicking the Capture button.
- The 1K User Record Smart Card layout (*.s1) cannot be used in 1:1 Template mode and vice versa. Uploading an incompatible smart card layout does not generate any warnings. Bioscrypt recommends verifying that a compatible template mode is being used prior to uploading the smart card layout.
- Attempting to store a second User Record template to a custom user-defined smart card layout that does not have sufficient contiguous space produces the error -752 "ESI - Invalid Smart Card Layout". Subsequent attempts to read the card produce an "error reading card" message. The smart card will have to be reset and secured.
- Broadcasting a Host Baud Rate parameter of 115,200 to 7.xx and 6.xx units, which do not support this baud rate, shows a blank entry for Host 232 in the Unit Parameters dialog box.

3. CHANGES IN VERSION 7.50

VeriAdmin version 7.50 is certified for use with V-Station and VeriSeries products with firmware 11.00, 9.xx, 7.xx, and 6.xx. It is not intended for use with products with firmware versions 8.xx or 10.xx.

3.1. CHANGES IN VERSION 7.50 FROM VERSION 7.40

- 4K MIFARE card support on V-Smart MIFARE (firmware 9.60) and V-Station MIFARE (firmware 9.60 and 11.00). Users may choose to write templates to any one kilobyte of the four kilobytes of memory. The reader is capable of reading only the enrolled template from the selected 1K location. Please see the *Operator's Manual* for further details.
- 1:1 User Record (VUR) mode for V-Station Base/Prox/MIFARE (firmware version 9.60 and 11.00): User records can be enrolled and verified using products compatible with firmware version 9.60 and 11.00. The template mode of the product can be selected via the Unit Parameters dialog box, under the Biometrics Tab in the Unit Mode area. User record mode can be specified by selecting "1:1 User Record" in the "Enrollment Type" drop-down list. Be aware that changing the template mode deletes all previously existing templates on the device. Bioscrypt recommends using the same template mode throughout an installation.
- Optional custom LCD logos: Custom LCD logos are supported for V-Stations that support firmware versions 9.60 and 11.00. A custom logo file (*.byt) can be uploaded to the V-Station by means of the V-Station Manager and the Menus tab. The logo resolution is limited to 122 x 16 pixels. Please see the *Operator's Manual* for complete details.
- Ethernet subnet mask and gateway support: Ethernet Subnet mask and gateway can be defined by means of the V-Station Manager and the Ethernet tab. Alternatively, the Subnet mask and Gateway can be set via the keypad (with administrative rights). Subnet mask and gateway support is only available for V-Station products that support firmware versions 9.60 and 11.00. Setting only the IP address sets the subnet mask to 255.255.255.0 automatically. Please see the *Operator's Manual* for more details.
- Finger Placement Feedback support for User Record mode: FPF can be enabled during installation for products that support User Record mode. Please see the *Operator's Manual* for more details.
- Template conversion from 1:1 Template mode to 1:1 User Record mode has been deprecated.
- A secure logon system for VeriAdmin has been implemented. VeriAdmin can be configured to require a user to log in every time the application is launched.

3.2. KNOWN ISSUES

- When using the Sensor Settings menu item under the Configure menu, a finger must be placed on the sensor prior to clicking the Capture button.
- The 1K User Record Smart Card layout (*.s1) cannot be used in 1:1 Template mode and vice versa. Uploading an incompatible smart card layout does not generate any warnings. Bioscrypt recommends verifying that a compatible template mode is being used prior to uploading the smart card layout.
- Attempting to store a second User Record template to a custom user-defined smart card layout that does not have sufficient contiguous space produces the error -752 "ESI - Invalid Smart Card Layout". Subsequent attempts to read the card produce an "error reading card" message. The smart card will have to be reset and secured.
- Broadcasting a Host Baud Rate parameter of 115,200 to 7.xx and 6.xx units, which do not support this baud rate, shows a blank entry for Host 232 in the Unit Parameters dialog box.

4. CHANGES IN VERSION 7.40

VeriAdmin version 7.40 is certified for use with MV1610 V-Station MIFARE. It is also compatible with V-Station 1200-series products with firmware version 7.XX and VeriSeries products with firmware version 6.XX and 7.XX.

4.1. CHANGES/REMOVALS FROM VERSION 7.30

Bioscrypt recommends using VeriAdmin 7.40 and MV1610 V-Station MIFARE when enrolling new users using a network of various V-Station MIFARE models 1200/1610. VeriAdmin 7.40 incorporates added compatibility of V-Station 1200 and 1610 series.

- User Record Mode is no longer supported. The V-Station MIFARE with firmware 9.50 does not support User Record Mode.
- Added support for Finger Placement Feedback (FPF). FPF provides accurate visual finger positioning on the scanning field of the sensor. Finger positioning is represented by cross-hairs in the scanning field. Administrators will now be able to better identify proper finger positioning and decide whether or not to accept enrollment based on Quality and Content scores. To preserve biometric security, this option can only be turned on or off at the time of software installation.
- An **Uncheck All** button has been added to the Reset to Factory Defaults dialog box. Users are provided the option to uncheck all selections in the Reset to Factory Defaults window by clicking the **Uncheck All** button.
- Quality/Content Visual Representation shows red stars when the score is below three stars. In the Quick Enroll and Advanced Enroll dialog box, Quality is represented by two or less red stars when the Quality score of a captured image is less than three stars. Similarly, the Content score is represented by two or less red stars when the content of the captured image is less than three stars. When the scores are at or above three stars, the Quality and Content scores are represented by three or more yellow stars.
- Security Level 6 "Password Only" is not available. The Security Level 6 option is not available for firmware versions earlier than 8.XX. This option is only supported for 8.XX or later versions.

4.2. KNOWN ISSUES

- Broadcasting 1:Many templates with Verify Broadcast disabled results in no templates transferred.
- The V-Station does not detect iClass cards after performing a template transfer from a V-Station to an iClass card. The V-Station must be power cycled before resuming normal operation.

5. CHANGES IN VERSION 7.30

5.1. CHANGES/REMOVALS FROM VERSION 7.20

- User Record Mode is no longer supported. As of firmware version v9.40, V-Station Base and V-Station Prox no longer support User Record (UR) mode. Since the v9.40 release is only applicable for these units, older products that were released prior to v9.40 are not affected and continue to support UR mode
- Added support for Daylight Saving Time (DST) for V-Station. The Daylight Saving Time feature, available via the V-Station Manager GUI, automatically updates the time upon a specified day. The time will automatically be updated for all units online at the time of the change.
- The start date and an end date are set. At the Start Date, the time shifts one hour ahead and at the End Date, the time shifts one hour back.
- For countries using Universal Time, the UT box should be selected. For unsupported products, this option is not available.
- Auto Finger Detect (AFD) is restored after template transfer. AFD is restored ON after a unit-to-unit or PC-to-unit template transfer.
- The last known state of the Check Version option in the Network Status dialog box is now saved. Previously, the Network Status dialog box showed the Check Version option in its default state as "Disabled". Currently, the Check Version option saves its last known state instead of defaulting to "Disabled".
- Unit-to-unit template transfer Retry Attempts — the values in this drop-down list are used for the number of attempts to connect a unit to another unit and also attempts to retry a read/write if it is unsuccessful. Previously, it was only used for the number of tries to connect a unit to another unit.

5.2. KNOWN ISSUES

- Ethernet Broadcasts of 1:Many templates might produce an error. If the Verify Broadcast check box is selected, the VeriAdmin software checks and re-sends any failed templates to each individual unit.
- Broadcasting 1:Many templates with Verify disabled results in no templates being transferred.
- The Verify PC Templates button in the Template Manager window shows up twice
- The V-Station does not detect iClass cards after performing a template transfer from a V-Station to an iClass card. The V-Station must be power cycled before resuming normal operation.

6. CHANGES IN VERSION 7.20

6.1. CHANGES/REMOVALS FROM VERSION 7.10

- New reader support — this version of VeriAdmin supports the MV1610 combo board-based V-Smart MIFARE™. The Smart Card Manager and all applicable functions are available when connected to a V-Smart MIFARE reader.
- 1:N Identification mode for the V-Smart has been disallowed. Since the V-Smart MIFARE is a 1:1 Verification reader, the options to convert it to 1:500 or 1:200 searching modes have been disabled.
- "Rx Templates Timeout" and "ESI Verification Timeout" options — for backwards compatibility with MV1200 combo board-based V-Smart readers, the options "Rx Templates Timeout" and "ESI Verification Timeout" have been made editable for those readers. For the MV1610 combo board-based V-Smart, these options are not available.

6.2. KNOWN ISSUES

As with all removable USB hardware, care must be taken to properly stop the device before unplugging to avoid hanging the software. Bioscrypt recommends the following sequence of steps when using the USB Aux port to communicate with a VeriSeries reader:

1. Physically connect the reader to the PC via the USB Aux Port.
2. Open VeriAdmin.
3. Perform the necessary operations.
4. Close VeriAdmin.
5. Disconnect the reader.

7. CHANGES IN VERSION 7.10

Please also note some features described in the notes for version 7.10 have also been described in the notes for previous releases to better highlight differences from versions 5.xx and 6.xx for MV1610 combo board VeriSeries customers.

7.1. CHANGES/REMOVALS

- New reader support — in addition to the MV1610 OEM module, VeriAdmin now supports two new MV1610 combo board-based VeriSeries readers: V-Pass FX™ and V-Prox™.
- Multiple template format support — added support for all Bioscrypt template formats: 348-byte templates, 1:500 searching templates, 1:200 searching templates and User Records. The preferred 1:1 template format is the 348-byte template. If there is a need to use User Records, please contact Bioscrypt Technical Support for more information.
- "Unit Mode" option — there is now a "Unit Mode" option in the Biometrics Tab of the Unit Parameters window, which allows the unit to be converted from supporting one template format to another.
- Quality change — to ensure that high-quality images are used for enrolling searching templates, scanned images must now obtain quality scores in the range of 41-60 in order to obtain a 3-star quality rating. Previously, a 3-star rating indicated a quality range of 21-60.
- Auto Finger Detect and LED behavior on 1:N Identification units — some changes have been made to the LED behavior based on the unit state.
- A blinking Amber LED was introduced to emphasize the Auto Finger Detect (AFD) being turned OFF by VeriAdmin. Now, when maintenance operations are being performed on a 1:N Identification unit with AFD ON, AFD is turned off and the Amber LED blinks until the maintenance operation is complete. Maintenance includes operations such as template or parameter broadcasting, template transfers, or changing of unit parameters, performing enrollments, or 1:1 Verifications. The LED and AFD return to the previous settings at the end of the maintenance.
- The top LED behaves differently for 1:N Identification modes vs. 1:1 Verification modes. If "Unit Mode" conversion between 1:1 and 1:N mode is performed using VeriAdmin or the Bioscrypt OEM Demo, the user is given the option of applying either the default LED behavior or leaving the behavior in its current state.
- Please see the *MVXX Release Notes* for changes affecting this feature which are implemented in the firmware.

7.2. KNOWN ISSUES

As with all removable USB hardware, care must be taken to properly stop the device before unplugging to avoid hanging the software. Bioscrypt recommends the following sequence of steps when using the USB Aux port to communicate with a VeriSeries reader:

1. Physically connect the reader to the PC via the USB Aux Port.
2. Open VeriAdmin.
3. Perform the necessary operations.
4. Close VeriAdmin.
5. Disconnect the reader.

8. CHANGES FROM VERSION 7.01 TO 7.02

8.1. CHANGES/REMOVALS

- The Firmware Upgrade Wizard did not recognize the MV1510 product, and would show an "unknown unit" icon. This has been resolved.

8.2. KNOWN ISSUES

- The Aux and Host port baud rate settings in the Broadcast Parameters window have 4800 Baud listed as an option. This baud rate is not supported and when selected, it appears to have been applied. MV1210 and MV1510 units stay at their previous baud rate setting.
- The default source and destination folders in the Template Converter are not valid paths. The paths have historically been there from the earlier installations, and ideally, should reflect the present installation folders.

9. CHANGES FROM VERSION 6.01 TO 7.01

9.1. NEW FUNCTIONALITY

- VeriAdmin supports all functionality for 348-byte Templates, User Records, and 1:500 Searching templates.
- There is a new option in the Unit Parameters, under the Biometrics tab, to change the finger-scan data format between 348-byte Template, User Record, and Searching templates.

9.2. USER ENHANCEMENTS/CHANGES

- Enabling/Disabling the Wiegand controls when in Enroll dialogs depending on whether or not they are supported.
- Removed redundant calls to disable Auto Finger Detect when performing enrollments.
- The Unit Parameters dialog now updates the main interface and cached MV1210/MV1510 unit information more cleanly when changes are made.
- Auto Finger Detect is temporarily disabled when a template transfer is done using the "Broadcast PC Templates" option in the Template Manager.

9.3. BUG FIXES

- Addressed an issue with the "No to All" option when overwriting templates during a "PC-to-unit" transfer.
- VeriAdmin will not report the status of an MV1210 or MV1510 unit in Network Configuration Manager if all ports are disabled and no units are communicating with the PC.
- The user now cannot select multiple PC template/User Records for verification, as it would not be clear which ones to verify against.
- An error message is now displayed if a user attempts to assign a Network ID greater than 65534 or leaves the field blank in Unit Parameters.
- If a user presents a finger at the time of enrollment, but removes it prematurely while the "Hold Finger" message is still up, VeriAdmin now correctly reports "Timed out waiting for user" or "No finger detected", rather than "Command acknowledged, but answer not sent".
- Template Security of "Password Only" was available for Small User Records (those with only ID/Index and finger position in addition to the enrollment data) even though the small UR does not contain that value. This option is no longer available for those user records.

9.4. KNOWN ISSUES

The default source and destination folders in the Template Converter are not valid paths. The paths have historically been there from the earlier installations, and should reflect the present installation folders.

10. CHANGES FROM VERSION 6.00 TO 6.01

10.1. NEW FUNCTIONALITY

- Support to configure the Application ID, and File ID and File Size has been added for DES-Fire Smart Card configuration in the Smart Card Manager.
- Support has been added to configure a Time Override Mode.

10.2. USER ENHANCEMENTS/CHANGES

- VeriAdmin now recognizes the DESFire V-Station product.
- VeriAdmin now recognizes the iCLASS/DESFire ESI type.
- VeriAdmin now supports the embedded stepper that is required to reconfigure memory for the new firmware.
- Modified the template security section to allow for any level to be selected. Previous version only enabled PASSWORD ONLY if connected to a V-Station.
- Support for 1:500 searching templates has been added.
- The new Security Level 6 biometric option allows User Records with Template Security Level 6 to verify against Global Threshold. If the option is not set, then no biometric is required for templates with Security Level 6.
- Miscellaneous GUI cleanup.

10.3. BUG FIXES

- MIFARE Card Layout manager fixed to allow flexible block selection
- Fixed the TEM to VUR conversion problem to have the correct format.
- Fixed the merge between a UR converted from a TEM and an original UR.
- Fixed the Aux port password security problem.

10.4. KNOWN ISSUES

To write ANSI 377 templates to an iCLASS or DESFire card, the SCM window must remain open with the Write ANSI option selected.

Please refer to the *MV1200 V8.20 Release Notes* for information about firmware changes.

11. CHANGES FROM VERSION 6.00 TO 6.00_P1

11.1. NEW FUNCTIONALITY

A new biometric option allows users to specify whether a biometric authentication is required for User Records/templates with a "Password Only (level 6)" template security threshold. If this option is selected, templates with this security level will be asked for a biometric to be authenticated at the Global Security Threshold setting. If this option is not selected, templates with a "Password Only" security threshold are not required to provide a biometric authentication.

11.2. BUG FIXES

The MIFARE Smart Card Layout Manager did not take into account the new User Record layout when setting new layouts for ESI E3.00. This version of VeriAdmin allows for flexible block selection; individual blocks can now be selected to support smaller User Records that allow for external application storage.

11.3. KNOWN ISSUES

Refer to "v5.50 to v6.00 Known Issues".

12. CHANGES FROM VERSION 5.50 TO 6.00

12.1. NEW FUNCTIONALITY

- Supports the new User Record format utilized by firmware version 8.10 and above (but is still backwards compatible with older versions).
- The Template Converter dialog box has been redesigned and now allows conversion of templates to the new User Record format.
- User records can now be enrolled using a smaller sized ID-only User Record.
- Because User Records are generally smaller and of variable size, the record storage capacity is variable but usually greater than prior versions of firmware.
- Support for the "Ignore Schedule for Duress Finger" option has been added to the Access Schedules tab in the V-Station Manager dialog box.
- Support for "Custom Verification Entry Mode" has been added to the Menus tab in the V-Station Manager dialog box.
- The Firmware Wizard is more intelligent and restores templates to a reader if they are required to be removed prior to an upgrade.

12.2. ENHANCEMENTS/CHANGES

- Expanded the Unit Parameters dialog box.
- Redesigned the Template Viewer dialog box (note that the image of the finger-scan enrolled using firmware v8.10 or higher is more rectangular, with gray bars on one or both sides of the image — this is normal). Also, the employee ID field can now be edited.
- The "Verification Response" tab in the Unit Parameters dialog box was moved to the last tab and renamed to "Misc."
- The LED Table dialog box is now a part of the Unit Parameters dialog box.
- The Wiegand options shown under "Send Verification Result" were redundant to the options under the Wiegand tab and have been removed.
- The Primary and Secondary site key fields under the Smart Card Manager now require the user to confirm the keys by typing them twice to avoid accidental mistyping or forgetting the password
- Re-organized the About Box to show the User Record parser version.
- The Help menu now has options to go to Bioscrypt's home page (online help will be coming in a future version).
- Pressing the F5 button refreshes communication with the current reader.
- Slight changes to the MIFARE Smart Card Layout Manager to utilize User Records in addition to templates.
- VeriAdmin now recognizes the MV-Lite OEM product.
- VeriAdmin now keeps track of the smart card serial number to recognize if the same card is presented again and warns the user if a different card is presented.
- The Smart Card Manager better handles editing of a User Record or Template (note that Smart Cards written to by older firmware versions will verify but cannot be read).
- The User Record Viewer dialog can display User Records with multiple enrollments, and allows for adding or removing particular enrollments (right click on the enrollment tab or press DEL).
- When switching to a Broadcast channel, any non-broadcast dialog boxes will now close.
- VeriAdmin displays better (and consistent) messages for placing, holding, and removing a smart card from the reader.
- Miscellaneous GUI cleanup.

12.3. BUG FIXES

- The Template Viewer allowed a password of zero (no password) without a warning
- The LED Table did not check for out of range values when entered
- After uploading a custom Wiegand format, the pulse values were set back to default
- The GPIO ID value did not check for out-of-range values and it displayed a negative number for large values
- When updating a template's ID or index, VeriAdmin sometimes simply added the new template without first removing the old one
- VeriAdmin contained a resource leak during enrollment which could cause the system to lock up after many enrollments
- Closing the enrollment dialogs by clicking the "X" button did not restore finger detection back to the original state
- The "From Reader" button in the Enroll dialogs failed for MV1100-based readers
- The "Auto" button in Network Configuration Manager did not work if the baud rates did not match
- Performing a PC Template Broadcast of more than 500 templates caused VeriAdmin to crash
- VeriAdmin sometimes crashed if certain message boxes popped up that were not immediately dismissed before using another dialog
- The Extended ID of a Template on the reader could not be changed and saved back
- The Wiegand string was not always being saved to a smart card in some situations when it should have
- The Reset to Factory Defaults option set the "Store Wiegand" option to ON when it should be OFF
- The Verify Template command in the Template Manager sometimes timed out if there were many templates with the same ID but different index

12.4. KNOWN ISSUES

- When updating a VeriSeries reader's firmware from 6.x and below to the new 7.x package firmware, you cannot revert back. It is a one-way only operation. Also, although it is possible to revert from 8.x back to 7.x, any records on the reader will be deleted (this should not be done, but if necessary, the records should be moved to the PC first)
- After updating firmware, if the user switches to another application's window, the "firmware update complete" dialog box might go behind the main window — simply press ALT+TAB to bring up this window.
- When updating anything on the V-Station Manager Menu tab via Ethernet, a "No Response" error message is sometimes shown; however the settings do take effect.
- Various communication irregularities exist when Auto Finger Detect is enabled on 1:N Identification readers. This feature should be turned off before updating readers to new firmware.
- Deleting several thousand templates at once (but not all templates) from a reader can result in a "No Response" error, especially over Ethernet.
- Due to a Windows operating system limitation, a user cannot select more than a few thousand records at a time for upload or broadcast (depending on the particular version of Windows). To get around this, select a smaller number of records and repeat the operation as often as needed.

13. CHANGES FROM VERSION 5.40 TO 5.50

13.1. NEW FUNCTIONALITY

- Support has been added for new (1:500) searching templates. This version is backwards compatible with the older 1:200 searching templates.

13.2. BUG FIXES

- Auto Finger Detect (AFD) turned on without notice, causing identifications to take place every time a finger was presented, even if the user was in the middle of enrollment.
- Auto Finger Detect state was reported back to user incorrectly, if the state was changed as described above.
- Persisting "Place Finger" message — during a verification, the "Place Finger" message was displayed as expected, but sometimes the verification did not take place, and instead of switching back to the Idle screen, the message persisted for a long period of time. This was also dependent on the hardware in the particular model of the device.
- Some LED behavior did not conform to the settings from VeriAdmin — this has been fixed
- Fix for the inability to unlock the Aux port — setting the Aux Port security while changing other Unit Parameters through the Host Port created a state in which you could not re-enable the port through the Aux Port, but only through the Host Port.

13.3. KNOWN ISSUES

- During an enrollment, if the enrollee prematurely removes their finger after the "finger-scan image" is displayed and before the "template data" is displayed, the template is not created accurately and the user will have to repeat the enrollment process.
- If a reader contains templates with ID: index of 1:0 and 2:0, editing 1:0 to change its ID to 2:0 causes both 1:0 and 2:0 to be overwritten. If 1:0 and 2:0 originally had values of X and Y for a certain parameter, and during the editing of 1:0, the parameter was changed to Z, at the end of the operation, only 2:0 will remain with the value of Z. The user is warned that 1:0 will be overwritten at the time of editing, but not that 2:0 will be overwritten as well.
- The "Reset Unit to Factory Defaults" window does not have an OK button, which causes confusion as to whether the reset operation has been completed or not. The user has to select "Cancel" after the operation to get out of the window.
- The Unit Type for a searching OEM module is incorrect in the Network Configuration Manager. It is shown as a 1:1 OEM module, although if Advanced is clicked, the "Template Type" is shown correctly as Searching.

14. CHANGES FROM VERSION 5.30 TO 5.40

14.1. NEW FUNCTIONALITY

- The Serial Number can now be extracted from the smart card and used as the template ID by clicking the "Smart Card SN" button in the Quick Enroll or Advanced Enroll windows.
- Support for the "Custom Verification Entry Mode" was added to the Menu tab of the V-Station Manager dialog box. This simply allows enabling or disabling of the feature.
- Support for the Fail Site Code feature has been added to the Wiegand tab of the Unit Parameters.
- "Stop Transfer" button added to Template Manager to work with unit-to-PC or PC-to-unit template transfers over Ethernet.
- V-Pass readers can now edit the template security level and User Type for searching templates.

14.2. BUG FIXES

- "Verify Broadcast" option is now the default for broadcasting PC templates.
- The security threshold of V-Pass and V-Station searching templates can now be modified for 1:1 usage. In addition, the User Type for these templates can now be modified.
- To mitigate a Windows file transfer problem, VeriAdmin now puts a limit of 2000 templates for PC-to-unit transfers or for Broadcasting PC templates.

14.3. KNOWN ISSUES

- Saving a template with a large but valid template ID to a smart card caused the index to be a very large and invalid value.
- During a Verify operation from the Template Manager, only the template ID would be used as an identifier instead of the actual template. This caused any finger with the same ID to successfully verify against the template.
- When upgrading the ESI firmware, the "Upgrade Complete" message did not display in the foreground.
- Proper handling of TCP sockets has been implemented to compliment firmware changes that address the Ethernet reader lockup problem.

15. CHANGES FROM VERSION 5.20 TO 5.30

15.1. NEW FUNCTIONALITY

- Multi-finger Mode
- Password Mode
- Duress Finger Mode
- Verification Polling Mode
- Full Featured General Purpose I/O Options
- User Access Schedules and Holiday Schedules (V-Station Only)
- Extended ID Mode (for Wiegand formats which use > 32 bits for ID)
- When using an Extended ID mode, VeriAdmin fills in an auto-generated template ID when a prox card is read in.

15.2. USER ENHANCEMENTS

- New Firmware Update Wizard helps guide users through update process
- New Template Viewer dialog box allows for easier template viewing/editing
- Expanded Unit Parameters dialog box
- Expanded V-Station Manager dialog box
- Speedier initial popup of various dialog boxes
- Expanded Network Status dialog box shows reader versions
- Verification Action Response now a part of Unit Parameters dialog box
- The V-Station LCD Contrast can now be set from the V-Station Manager "Menu" tab
- The Transaction Log now shows additional actions and channels
- The Smart Card Manager, Quick Enroll, and Advanced Enroll dialog boxes are now non-modal dialog boxes, allowing the user to switch between them. The behavior of each has been improved.
- Reset Unit to Factory defaults has been updated to reflect all current parameters and takes into account the reader's version and product type
- Better handling of keystrokes within dialog boxes, such as pressing ESC or TAB.

15.3. BUG FIXES

- Selecting large numbers of templates from the Template Manager and deleting them resulted in a "No Response" error.
- When changing the template ID and saving back to the reader, VeriAdmin did not replace the original template but instead created a new one.
- The Advanced Enroll dialog box did not reset its "best choice" decision after completing the last enrollment.
- The Template Manager window "cascaded" down the screen each time it was opened; it now opens always at the top.
- The Apply button did not enable when some items in the Unit Parameters dialog box were changed.
- In some cases, some template IDs were shown incorrectly as negative values.
- When saving a template from the reader to a smart card, the template index would always be zero.
- The Apply button became enabled after a few minutes of having the V-Station Manager open, even if the user did not update anything.
- VeriAdmin crashed if the user clicked on the "Exit" button within either of the Enroll dialogs while VeriAdmin was waiting for the user to place a finger.

- The old Reset to Factory Defaults dialog did not truly reset the reader to factory defaults and left out many parameters.
- It was possible to crash VeriAdmin if more than twenty Comm ports were assigned.

15.4. KNOWN ISSUES

- When updating a VeriSeries' firmware from 6.x and below to the new 7.x package firmware, you cannot revert back. It is a one-way only operation.
- When updating anything on the V-Station Manager Menu tab via Ethernet, a "No Response" error message is shown; however the settings do take effect.
- Various communication irregularities exist when Auto Finger Detect is enabled on searching readers. This feature should be turned off before updating readers to new firmware.
- Deleting several thousand templates at once (but not all templates) from a reader can result in a "No Response" error, especially over Ethernet.

16. CHANGES FROM VERSION 5.10 TO 5.20

16.1. NEW FUNCTIONALITY

- Full support of all V-Station models
- Support for Biometric Access Scheduling
- Support for uploadable menus on V-Station, including Spanish language
- Support for template security threshold of "None" (no finger required) option
- Support for reprogramming V-Stations via the Aux and Ethernet ports (readers with versions below 7.20 must first upgrade via the HOST port).

16.2. USER ENHANCEMENTS

- Simplified Unit Parameters dialog now shows all parameters in organized tabs
- Wiegand Pulse Width and Interval values now show the default values
- The "From Reader" button in Quick/Advanced Enroll dialogs is made unavailable if the reader has Wiegand input disabled
- The Smartcard transfer buttons in the Template Manager now become unavailable if not talking with a Smartcard-enabled product.

16.3. BUG FIXES

- The LED Settings dialog box did not accurately reflect the current state of the reader after resetting the LED table
- The Reset button within the LED Settings dialog no longer closes the dialog box
- When changing Wiegand formats without one of the Wiegand output options selected, VeriAdmin incorrectly rejected the change
- In the Verification Action Response dialog box, the line trigger field was sometimes made unavailable inappropriately
- Changing the reader's name in the Network Configuration Manager dialog and then clicking elsewhere on the tree caused the name to not be updated
- The "From Reader" button in Quick/Advanced Enroll dialog boxes failed for older MV1100-based readers
- The Transaction Log listed times from 12:00AM – 12:59AM as "0:00AM" – "0:59AM".

17. CHANGES FROM VERSION 5.00 TO 5.10

17.1. NEW FUNCTIONALITY

- Support for Ethernet communication
- Seamless integration of RS-232, RS-485, and Ethernet networks
- Support added for assigning an IP address.

17.2. BUG FIXES

- Entering a blank name for a reader caused VeriAdmin to crash when entering the Network Configuration Manager
- Adding a reader to the Network Configuration Manager tree sometimes highlighted the incorrect reader instead of the newly added reader
- Broadcasting of Wiegand settings was not performed asynchronously
- Upgrading V-Station firmware with an Aux Port baud rate other than 57600 could fail in some cases
- Better warning is now provided when changing the properties (such as baud rate) of the channel with which VeriAdmin is currently communicating on
- When verifying a template on the PC with a non-zero index, VeriAdmin indicated an error incorrectly when the verify actually passed
- The DLL command BII_VS_Show_LCD_Text timed out when displaying text for more than a few seconds.

18. CHANGES FROM VERSION 4.50 TO 5.00

18.1. NEW FUNCTIONALITY

- Support for Bioscrypt's newest product, the V-Station
- New V-Station Manager, allows for setting of V-Station date and time settings and retrieval of the V-Station Transaction Log (will have more options in future releases)
- The new Network Configuration Manager helps users manage multiple readers over multiple ports, configure settings for each reader, status each reader on the network, and easily recognize the type of reader and details like template type, firmware versions, etc.
- The new Network Setup dialog box (lightning bolt icon) allows the user to easily pick up to 20 available COMM ports for use, decide on the baud rate (optional auto-baud rate detection), and in the future, set up Ethernet settings
- MV1200 firmware versions at or above 7.00 can be programmed using .V12 "Packaged" firmware files, which contain firmware components for all sub-components of a product (MV1200, ESI, CM, Kit, etc.).

18.2. USER ENHANCEMENTS

- Vastly simplified communication with devices, especially to a network of readers
- Options which do not apply to the current reader or are unavailable will now be grayed out
- VeriAdmin now handles all network configuration internally using XML, thus a user does no longer needs to edit the unitids.dat file manually (this file is no longer used)
- If upgrading from an older version, VeriAdmin imports the old unitids.dat file automatically
- All readers on a network can now be given a 30-character name for easy identification in VeriAdmin (e.g., "V-Station at main entrance")
- Enhanced Template Manager now shows user ID, Index, and optionally, Name in sortable columns; also this list can be exported to a .CSV file
- The broadcast parameters option within the Template Manager allows for optional overwriting (before overwriting was forced)
- The lightning bolt icon no longer takes the user to the old communications dialog; this dialog is still available within the Network Configuration Manager, but only as an aid to communications testing
- VeriAdmin now remembers its window size and location.

18.3. BUG FIXES

- In the Unit Parameters dialog box, VeriAdmin failed to set the proper settings when switching from a custom pre-defined Wiegand format to pass-thru,
- Numerous minor GUI bug fixes.

19. CHANGES FROM VERSION 4.40 TO 4.50

19.1. NEW FUNCTIONALITY

- Verification actions can now optionally output the user ID over the host and aux ports, in addition to the index and score
- Custom downloadable Wiegand format support: VeriSeries readers can now download special Wiegand format files over the host or aux port (available from Bioscrypt upon request), allowing more Wiegand support without necessitating firmware upgrades
- Support for a Verification Queue, which keeps the last 8 enrolls, verifies, and identifies in RAM. This is ideal for voting applications or similar which need to poll readers continuously for new actions performed (DLL only)
- Ability to change the default smart card keys, should the card manufacturer change them after release (DLL only)
- More robust communications: the MV1200 can now better handle communications over the host or aux ports while simultaneously receiving data from the sensor (during an enroll, for example)
- More robust error handling by the ESI, especially for cards placed just at the edge of detection.

19.2. BUG FIXES

- Swiping a prox card quickly after another card queued up verifies and could cause user inconvenience or failure.
- Auto Site Key Update did not work properly when the ESI was using Key A.
- The DLL function `BII_ESI_Get_Template_List` always returned -302.

20. CHANGES FROM VERSION 4.30 TO 4.40

20.1. NEW FUNCTIONALITY

- Support for V-Smart, A, H, based on the HID iCLASS™ Smart Card reader
- Support for both 2- and 16-application area 16k-bit HID iCLASS Smart Cards
- Support for flexible layouts of Bioscrypt data on the iCLASS Smart Card (in order to share space with other applications)
- Ability to explicitly turn on and off automatic site key updating (this can also be accomplished by using a secondary site key of "-1")
- Ability to place the ESI into a read-only mode to ensure that data will not be changed on a smart card
- Ability to save and load MIFARE®-based V-Smart card layouts to and from disk

20.2. BUG FIXES

- The Reset Smart Card function in the Smart Card Manager did not erase Wiegand/User data from the card.
- When the Read/Write Wiegand String option was enabled, the Wiegand string was not read in during an Enrollment, it was possible that the previously written Wiegand string would be stored. The memory is now zeroed after each enrollment and the Wiegand string will NOT be written if one was not read in, regardless of whether the option is turned on or off.
- When enrolling a second template onto a Smart Card with the Read/Write Wiegand string option selected, the Wiegand string was incorrectly written to the slot for the first template. This resulted in the Wiegand string for the first template being overwritten and the Wiegand string for the second template remaining all zeroes.
- The DLL function BII_ESI_Update_Smartcard_Password_Mode4 did not work properly
- Several DLL functions may have improperly returned true even in the case of an error under certain conditions
- All software components install into **C:\Program Files\Bioscrypt** by default instead of **C:\Program Files\Bifid**.

21. CHANGES FROM VERSION 4.20 TO 4.30

21.1. NEW FUNCTIONALITY

- Support for user-defined smart card layouts
- Support for resetting smart cards back to manufacturer's unsecured default keys (Gem+ Flow A/B layout, HID Flow B layout)
- Ability to secure a Smart Card by updating the site key only (no data written)
- Ability to delete stored Wiegand strings on a smart card
- Support for different site key security options, including hashed and unhashed modes
- Ability to set the maximum number of templates per smart card
- Ability to set the ESI authentication timeout
- Ability to turn Biometrics on/off for Wiegand-enabled devices

21.2. BUG FIXES

- Added ability to broadcast "On Fail Send Inverse Parity" option
- The About box now shows the ESI version (if available)
- Various minor user interface adjustments and bug fixes
- Some buttons will now be grayed out if not available
- Bug fixed: In a "Quick Enroll", the third enrollment was using the template from the second enrollment.

22. CHANGES FROM VERSION 4.10 TO 4.20

22.1. NEW FUNCTIONALITY

- Ability to read and save a Wiegand string to and from a smart card (V-Smart)
- Support for HID 37 bit Wiegand strings
- Support for sending inverse parity of Wiegand string on failed verification.

22.2. BUG FIXES

- Various minor user interface adjustments and bug fixes
- Hyperlink added to www.bioscrypt.com in the About dialog box for software/firmware upgrades.

23. CHANGES FROM VERSION 4.00 TO 4.10

23.1. NEW FUNCTIONALITY

- Reader Settings will no longer show an error dialog boxes when used with older MV1100-Based VeriSeries products.
- In Quick Enroll, the site key is requested before requesting the smart card to be presented.
- Added a check box to enable/disable the one-way hash function when entering the current site key.

24. CHANGES FROM VERSION 3.20 TO 4.00

24.1. NEW FUNCTIONALITY

- Ability to Enroll Templates onto a smart card
- Ability to Read Template from a smart card
- Ability to Inquire Smart Card reader status
- Ability to set Administrator site key to encrypt smart card data.

25. CHANGES FROM VERSION 3.00 TO 3.20

25.1. NEW FUNCTIONALITY

- Added Wiegand Utilities menu
- Added Support for HID 35-bit Corporate Format proximity cards
- Added Support for Kantech-XSF 39-bit proximity cards in PASS-THRU mode
- Expanded Error messages
- Fixed V-Pass issues where LED and Finger Detect modes did not reset properly after using VeriAdmin for Enrollment and Sensor Calibration.

26. CHANGES FROM VERSION 2.50 TO 3.00

26.1. NEW FUNCTIONALITY

- Updated 1:Many Template Support
- Several important changes were incorporated into the searching code that will decrease the false rejection rate of the searching algorithm. Customers using V2.5 should upgrade to V3.0.
- V-PASS and Auto Finger Detect support now built into VeriAdmin.
- Error Checking has been incorporated for "Mixed Network" support for V-Pass inclusion in a V-Prox/V-Flex network.
- New template naming convention:
 - * ".tem" default extension for V-Flex / V-Prox templates
 - * ".mtm" extension for V-PASS templates.
- Updated UnitIDs.DAT file adds ":M" to Unit ID # to identify V-Pass units in a network
- Improved Authentec Sensor Support and Sensor Calibration capability
- Ability to read a Wiegand Input Device during Enrollment
- Added ability to customize the LED response.
- Added ability to enable advanced Verify Action Responses
- New Template Conversion to convert V-Pass templates to V-Prox/V-Flex templates
- New Network Status dialog graphically depicts VeriSeries network setup and status.

27. CHANGES FROM VERSION 2.00 TO 2.50

27.1. NEW FUNCTIONALITY

- Variable "Pass-Thru" Wiegand Formats supported
- 1:Many Template Support
- Version 2.50 of the MV1100 OEM SDK supports a larger 1:Many "searching" template structure. When connected to an MV1100 that is set up as 1:Many, V2.50 of the VeriAdmin supports all template functions for this larger template structure.
- Authentec and Polaroid sensors are supported for the MV1100
- Password Protected AUX Port
- Communication on the AUX port can now be password protected
- More responsive enrollments
- Enrollments are more interactive because the "Remove Finger" step is much quicker.

28. CHANGES FROM VERSION 1.23 TO 2.00

Version 2.00 incorporates an updated user interface called VeriAdmin Management Software. This application is built from the V.123 V-Prox Administrative software and it is oriented towards all MV1100-based products, not just the V-Prox. Because of this, many references to V-Prox have been changed to either BII_Unit to BII reader. Other significant changes are:

- Main Window
- New Communication Status display to show current COMM Port and Network ID
- Template Manager
- Added ability to edit templates stored on PC
- Added ability to broadcast templates from the PC
- Removed ability to broadcast templates from a individual reader
- Changed ENROLL to QUICK ENROLL
- Parameter Settings
- Added a Quick COMM test button
- Added ability to chose Wiegand Formats other then 26-bit Standard
- Broadcast Parameters
- Added ability to broadcast Wiegand Formats other then 26-bit Standard
- Network Status
- Displays the COMM port associated with each BII reader
- New Advanced Enrollment Process
- New Sensor Configuration option in the Configuration Menu
- New Firmware Update option in the Configuration Menu
- New Restore Factory Defaults option in the Configuration Menu.

VeriAdmin Management Software Version 2.0 is designed for optimal performance when used with MV1100 firmware version 2.0, but it will also work with older firmware versions. The BII_V1100.DLL that is included with the VeriAdmin Management Software (version 2.0VP) is a customized version of the DLL (version 2.0) that allows some functions to be performed quicker in Broadcast mode.

Please refer to the included *OEM MV1100 Release Notes* and *MV1100 Application - Release Notification V2.0* documents for a further description of the changes associated with the new firmware version 2.00.

29. CHANGES FROM VERSION 1.22 TO 1.23

Version 1.23 of the VeriProx Administrative software now links with version 1.52 of the BII_V1100.DLL. The 1.52 version of the BII_V1100 DLL was released to address a potential problem with the MV1100 boards (used within the V-Prox) that were shipped after 05/15/2000. These boards were shipped with firmware version 1.51 and PIC version 1.35. Although the reader works correctly, the time to erase non-volatile memory can fluctuate more than anticipated due to varying temperature and other environmental aspects. These fluctuations can cause the expected timeouts associated with certain commands to "time-out", resulting in an error being returned inaccurately. The correction for this situation is to adjust the expected time-out interval for these commands used by the BII_V1100.DLL library.

Version 1.23 of the V-Prox Administrative software is compatible with readers using firmware versions 1.23, 1.45, 1.50, 1.51, or 1.52.

30. CHANGES FROM VERSION 1.21 TO 1.22

- Version 1.22 of the V-Prox Administrative software now links with version 1.50 of the BII_V1100.DLL. This allows version 1.22 of the V-Prox Administrative software to be compatible with readers using firmware versions 1.23, 1.45, or 1.50.
- Data entry error checking has been improved throughout the application.
- When editing the template in the Template Viewer dialog box, previous versions of the program allowed the "Enrollee Name" field to exceed 15 characters. Using a string longer than 15 characters sometimes corrupts the template structure. This field is now limited to 15 characters.
- Previous versions of the program did not allow the full range of template IDs to be utilized. The template ID is an unsigned integer in the range 1 to $2^{32}-2$ (4294967294). Early versions of the program display IDs greater than 2147483647 as negative numbers.
- The "Modify Communications Settings" dialog box now allows the user to type in a COM port designation as well as select it from the drop-down list. Previous versions of the application ignored what was typed into the combo box. It was not possible to indicate a COM port designator greater than "9". The program now accepts any value between 1 and 99. Naturally, a valid COM port must be configured using this designation for the communications setting to function properly.

31. CHANGES FROM VERSION 1.20 TO 1.21

- In the V-Prox memory, the broadcast ID is an unsigned 16-bit integer consisting of all ones (FFFF in hex). When this 16-bit unsigned integer is read into a 32-bit signed integer on the PC, the decimal value is 65535. To simplify the user interface, the broadcast ID is represented as a decimal -1 in the Administrative software. There were places in the code where the proper casting had been omitted and the value of 65535 was displayed. This had been corrected. This was a display issue only and had no effect on performance of the Administrative Software or the V-Prox.
- The reader ID being displayed in the title bar of the Template Viewer window was the transmit ID instead of the ID assigned to the V-Prox. This has been corrected. The only occasion where these two values would differ is if you were using a transmit of -1 (the broadcast ID) and used the Edit Template function. A value of -1 (or 65535) was shown in the Title bar. This was a display issue only and had no effect on performance of the Administrative Software or the V-Prox.
- When the V-Prox Parameters window was opened and a transmit ID of zero (0) was being used, "No Response" would be displayed in the lower right corner as the "Current Transmit ID". This has been corrected. This was a display issue only and had no effect on performance of the Administrative Software or the V-Prox.

32. BIOSCRYPT CONTACT INFORMATION

Bioscrypt, Inc. is available to provide information and assistance. Before contacting Technical Support, please copy down the following version information about your reader:

- Product name and model number
- Software
- DLL
- Algorithm
- Kernel
- ESI (if applicable)
- Communication Manager (CM) (if applicable)
- Kit (if applicable)
- FPGA.

32.1. TECHNICAL SUPPORT CONTACT INFORMATION

Phone: 905.940.7477
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 Fax: 905.940.7484
 Business Hours: Monday to Friday, 8:00 a.m. to 8:00 p.m. (-5 GMT)
 E-mail: support@bioscrypt.com
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