

Release Note

MorphoAccess® SIGMA Lite and Lite+ Series terminal

Online updates (latest firmware): <http://www.biometric-terminals.com>

Support: support.bioterminals@idemia.com

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Current Software revision: 4.6.0

New features

Encoding all types of memory cards with state-of-the-art encryption

MorphoAccess® SIGMA Lite and Lite+ Series terminal in MA5G native mode is now able to encode card with a high secure encryption process, independently from the card technology.

Please refer to the **MorphoAccess® terminals Contactless Card Specification** document.

Webserver localization

MorphoAccess® SIGMA Lite and Lite+ Series terminal in MA5G native mode is now able to show webserver pages based on language localization.

Please refer to **MorphoAccess® SIGMA - Application note - Messages Translation** document.

Hardware reset to factory settings

MorphoAccess® SIGMA Lite and Lite+ Series terminal in MA5G native mode is now able to perform a complete reset to factory settings when specific GPIO & WIEGAND lines are connected and detected high at boot up time.

Please refer to **MorphoAccess® SIGMA Family – MorphoWave® Compact - Administration Guide** document.

Different threshold for authentication and identification

MorphoAccess® SIGMA Lite and Lite+ Series terminal in MA5G native mode has now different thresholds for biometric authentication (1/1) and identification (1/N).

Please refer to key `bio_security_settings.authentication_matching_threshold`, in the **MorphoAccess® terminals MorphoAccess SIGMA Family Series Parameters Guide** for the terminal configuration.

Possibility to close the retrofit port

MorphoAccess® SIGMA Lite and Lite+ Series terminal in MA5G native mode allow now to close the retrofit port.

Please refer to key `comm_channels_state.upgrade_firmware`, in the **MorphoAccess® terminals MorphoAccess SIGMA Family Series Parameters Guide** for the terminal configuration.

Thrift over RS485

MorphoAccess® SIGMA Lite and Lite+ Series terminal in MA5G native mode is now able to communicate with a controller in Thrift over RS485.

Please refer to **MA5G - Remote Message Specification** document.

User Access Schedules

MorphoAccess® SIGMA Lite and Lite+ Series terminal in MA5G native mode offers the possibility to load an access schedule per user, as it is possible for J Series legacy mode.

Please refer to the field `legacy_timemask` of the structure `User_DB_record` in the **MorphoAccess SIGMA Family and MorphoWave Compact - Distant Commands Guide** document.

User-specific message for a "Access Denied"

MorphoAccess® SIGMA Lite and Lite+ Series terminal in MA5G native mode is now able to display a User-specific message for a "Access Denied".

Please refer to key `dynamic_message.mode`, in the **MorphoAccess® terminals MorphoAccess SIGMA Family Series Parameters Guide** for the terminal configuration.

L1 Card encoded with "Use Wiegand String" option

MorphoAccess® SIGMA Lite and Lite+ Series terminal in MA5G native mode is now able to read a BiosCrypt card, encoded using SecureAdmin, with the "Use Wiegand String" option.

Please refer to key `sc.support_l1_cards`, in the **MorphoAccess® terminals MorphoAccess SIGMA Family Series Parameters Guide** for the terminal configuration.

Improvement

Improve usability of the text and GUI displayed to a user:

Improve readability of the messages displayed and expand the possibilities to use this display:

- New distant command `display_text_advanced` to customize display text, by changing font, color and background color
- New distant command `MMI_play_advanced`, same than `MMI_PLAY` command, but with the possibility to customize font size, sound configuration, text, and display activation and duration
- New distant command `distant_session_set_state_advanced` to add the possibility to remove the message displayed when a distant session is ongoing

- New configuration key font.size to adapt character size to the text to be displayed (for dynamic messages, and access granted/denied messages)

Please refer to **MorphoAccess SIGMA Family and MorphoWave Compact - Distant Commands Guide** for new distant commands, and to **MorphoAccess® terminals MorphoAccess SIGMA Family Series Parameters Guide** for the new key font.size.

Improve multi-users management:

When multi-user feature and controller feedback are activated, MorphoAccess® SIGMA Series terminal is now sending one event to the controller and waiting its feedback for each user.

Secure communication in TCP client mode:

Add SSL security when the MorphoAccess® SIGMA Series terminal is configured in TCP client mode.

Please refer to **MASIGMA – ApplicationNotes-DistantCommandUsingTCPclient** document.

SmartMX card technology selection:

Add the possibility to encode, read or erase either in Mifare® or DESFire®.

Please refer to the **MorphoAccess® terminals Contactless Card Specification** document.

Improve iClass and Mifare card reading:

iClass and Mifare card data parsing is now stopped as soon as invalid data is found.

Please refer to the **MorphoAccess® terminals Contactless Card Specification** document.

Improve relay management:

Add the possibility to set the relay duration to 1s.

Support of "Card Mode":

Added the support of "Card Mode" for cards encoded with a Bioscrypt device.

Fixed issues

Fixed issue : When communicating in TLS, MorphoAccess® SIGMA Lite and Lite+ Series terminal now supports the reuse of the session ID.

Fixed issue : MorphoAccess® SIGMA Lite and Lite+ Series terminal doesn't freeze anymore when two OSDP commands are received simultaneously.

Fixed issue : OSDP does not start anymore on MorphoAccess® SIGMA Lite and Lite+ Series terminal, when serial connection is disabled.

Fixed issue: OSDP communication does not randomly abort anymore.

Fixed issue: When communicating in OSDP, MorphoAccess® SIGMA Lite and Lite+ Series terminal do not process infinitely any more the last response (in some instances, this issue previously may lead to the terminal not responding).

Fixed issue : Capability reported for Reader Text Output on MorphoAccess® SIGMA Lite and Lite+ Series terminal is now corrected, in case of OSDP command.

Fixed issue: Using an HID iClass card, the Facility code (as read from the card) is now always properly propagated onto the Wiegand output.

Fixed issue: In Multi-User authentication flow, MorphoAccess® SIGMA Lite and Lite+ Series terminal does not get into an infinite loop if both user Authentication does not complete within default configured duration.

Fixed issue: MorphoAccess® SIGMA Lite and Lite+ Series terminal is now fully supporting ANSI 378 template format.

Fixed issue: it is possible to disable the key diversification for erase and encode distant commands on DESFIRE smartcard, by setting the parameter.

Known issues

MorphoAccess® SIGMA Lite and Lite+ Series terminal doesn't correctly manage the BIOPIN and PIN substitution when user rules are activated.

MorphoAccess® SIGMA Lite and Lite+ Series terminals do not display explicit message or LED during upgrade (from 1 to 2 minutes including reboots).

MorphoAccess® SIGMA Lite and Lite+ Series terminals doesn't support USB devices with more than one partition.

Limitations

For iOS version 8 and later, the MorphoAccess® SIGMA Lite and Lite+ Series terminal requires an approved certificate for user enrollment using the webserver.

Software revision: 4.5

Installation and compatibility

The software revision 4.5.0 is a software release for MA5G (native) mode ONLY.

The Bioscript Legacy and MA 500 modes are no more supported.

Warning: Upgrading this software release on a Legacy product has the same effect as a mode change (back to default factory settings, databases loss, transaction logs loss,...)

For a stable and robust transition from 2.Y.Y software version, the upgrade process of MorphoAccess® SIGMA Lite and Lite+ Series terminals has been splitted in 2 steps:

- 2.Y.Y to 3.X.X
- 3.X.X to 4.X.X

New features

Support of new contactless cards

- Add SmartMX card support (as a DESFire® card)
- Add DESFire® EV2 card support
- Add HID® DESFire® SE card support
- Bug fix for Mifare® Plus card

Please refer to the **MorphoAccess® terminals Contactless Card Specification** document.

Support of Open Supervised Device Protocol - Version 2.1.7

MorphoAccess® SIGMA Lite and Lite+ Series terminal now supports the Secured Serial Channel over OSDP.

Access Schedule Improvement

The MorphoAccess® SIGMA Lite and Lite+ Series terminal proposes a new access schedules feature:

- The number of possible Access Slots is increased from 14 to 672 slots per week, allowing a greater scalability

- The feature can be set using:
 - Distant commands
 - WebServer, through an improved User Interface

Support of a new transaction log format : Identified Mode

The MorphoAccess® SIGMA Lite and Lite+ Series terminal proposes a new format for the transaction logs. The current format is named Basic format and the new format is named Identified format.

The Identified format:

- has a field to associate a unique_id at each log
- has a reading status to tag the log as read or as not read.

Using Identified transaction logs, the MorphoAccess® SIGMA Lite and Lite+ Series terminal proposes the possibility to retrieve and erase logs by IDs range or by reading status.

Improvement

Transaction logs storage: The transaction logs are now stored in an encrypted partition.

After a FW upgrade, all stored transaction logs will move on the encrypted partition.

After a FW downgrade, all stored transaction logs will be lost.

Remote message:

The MorphoAccess® SIGMA Lite and Lite+ Series terminal proposes a new remote message format (extended format) including date&time and terminal Serial number. In case of network disconnection, the terminal proposes a mechanism to buffer events and send them again.

Please refer to the **MA5G - Remote Message Specification** document.

Fixed issues

Fixed issue : MorphoAccess® SIGMA Lite and Lite+ Series terminal in MA5G native mode is now able to read reverse Wiegand string input for all types of supported cards (limited to iClass cards in previous versions).

Fixed issue : MorphoAccess® SIGMA Lite and Lite+ Series terminal doesn't freeze anymore when an ethernet disconnection occurs during a log file downloading.

Fixed issue : MorphoAccess® SIGMA Lite and Lite+ Series terminal sends successfully IP remote messages to the second host in SSL mode.

Fixed issue : MorphoAccess® SIGMA Lite+ Series terminal doesn't freeze anymore for several secondes after specific user actions.

For exemple:

- when the user presses quickly on successive back buttons
- when the user touches on terminal LCD during a biometric authentication.

Software revision: 4.3.2

Installation and compatibility

The software revision 4.3.x is not backward compatible. Once a MorphoAccess® SIGMA Lite and Lite+ Series terminal has been upgraded, it cannot be downgraded to a previous version (from 3.Y.Y).

The terminal upgrade with the software revision 4.3.x is possible if and even if the current Software release in terminal is a 3.X.X Software release.

Please refer to the section dedicated to the Software revision 3.2.5 (below) for details about installation procedure from version 1.X.X.

The reason is an optimization of the user database structure. During a Software update, the database is automatically migrated to the new structure. This operation requires 2 minutes maximum for 10k users. “Applying Optimizations... XX% Please wait, Do not power off terminal” is displayed in the meantime.

New features

Enhanced Language Support

The MorphoAccess® SIGMA Lite+ Series terminal provides the possibility to load a custom fonts file into the terminal, to display characters not supported by the default terminal's fonts package (“DejaVu” font). The custom fonts file is applicable to the user information.

The custom fonts file can be uploaded and removed via the MorphoBioToolBox or a distant command.

The “language reset” option removes the custom language file and the custom fonts file.

Extended ID Support

The MorphoAccess® SIGMA Lite and Lite+ Series terminal allows to read the Extended ID encoded by a Bioscrypt device, and to send it to Wiegand string if configured. To enable this feature, use the parameter “sc.support_l1_cards” with the value “2”.

Improvements

Improved timing

- users database loading time
- log retrieving time

Improvement of the graphical user interface (for MorphoAccess® SIGMA Lite+ Series)

- Company Branding switch to IDEMIA.

Fixed issues

Fixed issue: MorphoAccess® SIGMA Lite+ Series terminal displays a green LCD screen and reboots continuously after the upload of a corrupted custom language file.

Fixed issue: MorphoAccess® SIGMA Lite & Lite+ Series terminal hangs on performing authentication when Remote Message over IP is configured but the server is not connected and "Idle mode Timeout" is less than Controller "Timeout".

Fixed issue: MorphoAccess® SIGMA Lite & Lite+ iClass terminal hangs in verification workflow when an iClass card has Bioscrypt & Non-Bioscrypt templates.

Fixed issue: MorphoAccess® SIGMA Lite & Lite+ Series terminal hangs when the user changes the date/time via MorphoBioToolBox during an identification operation.

Fixed issue: MorphoAccess® SIGMA Lite & Lite+ Series terminal reboots on performing Identification while SecureAdmin deletes a User (Bioscrypt Legacy mode).

Fixed issue: MorphoAccess® SIGMA Lite & Lite+ Series terminal reboots on performing continuous Identification while User Database is being loaded to the terminal (Legacy mode).

Fixed issue: MorphoAccess® SIGMA Lite & Lite+ Prox terminal does not read Prox card in Bioscrypt Legacy mode (regression introduced by Software version 3.5.0).

Fixed issue: MorphoAccess® SIGMA Lite & Lite+ Series terminal remains connected over secure SSL channel when SSL certificates are deleted using MorphoBioToolBox (the disconnection happens only after a terminal reboot)

Fixed issue: MorphoAccess® SIGMA Lite & Lite+ Series terminal does not properly remove the SSL certificate using MorphoBioToolBox.

Webserver:

- Improvements:
 - First name and Last name are limited with the maximum number of allowed characters in User Enrollment option (rather than raising a warning)
 - Log-out icon

- Fixed issue: administrator is logged out from the webserver after changing the date and time
- Fixed issue: the transaction log upload timing when idle video is playing

Distant command improvements fix :

- `cls_write_user_card` encodes no expiry date by default
- `cls_get_info` returns a valid CSN in binary field

Software revision: 3.5.1

New features

Contactless Card

MorphoAccess® SIGMA Lite and Lite+ Series terminal supports the ISO 15693 standard (required for the new generation of HID iClass cards).

Software revision: 3.5

Installation and Compatibility

Once a terminal has been upgraded in Software revision 3.5.0, it cannot be downgraded to revision prior to 3.3.1.

Please refer to the section dedicated to the Software revision 3.2.5 (below) for details about installation procedure and compatibility.

New features

OSDP improvements

MorphoAccess® SIGMA Lite and Lite+ Series terminal supports in OSDP mode:

- In the BIOMATCH command, all values of “biometric reader number” are allowed
- the "*" and "#" characters in the "Identifier Enter" screen

Security enhancements

MorphoAccess® SIGMA Lite and Lite+ Series terminal reinforces its security. Particularly, the external USB port can be disabled with a dedicated setting. Please liaise your support contact for further details.

Additionally, for security purposes, the characters displayed on the screen (MorphoAccess® SIGMA Lite+ Series) when entering the user ID can be masked, using the **“LCD_configuration.ID_keypad_type”** configuration key.

Software revision: 3.4.0

New features

HID SEOS card support

MorphoAccess® SIGMA Lite and Lite+ Series terminal can read and process SEOS cards (HID Biometric profile). In this case, the Biometric template must be in PKCompv2 format (up to 3 Fingers). Please note that the encoding of Biometric templates is not supported.

Duress event on WIEGAND

In case a duress finger is detected, MorphoAccess® SIGMA Lite and Lite+ Series terminal ONLY sends the “Duress event” on WIEGAND link to the controller. “Access Granted” or “Access Denied” user feedback is generated but not sent to the controller.

Partial support of Open Supervised Device Protocol - Version 2.1.7

MorphoAccess® SIGMA Lite and Lite+ Series terminal can be configured to communicate with an external Control Panel using OSDP. OSDP is a communication protocol that allows Peripheral Devices, such as MorphoAccess® SIGMA Lite and Lite+ Series terminals, to interface with Control Panels or other security management systems. Security Industry Association has developed this protocol to foster interoperability among security devices. For more details about the covered use cases and supported OSDP commands, please contact your sales representative.

L1 Card encoded with Wiegand string option

MorphoAccess® SIGMA Lite and Lite+ Series Series terminal in MA5G native mode is now able to read a BiosCrypt card, encoded using SecureAdmin, with the Wiegand string option. Refer

to 2016_0000022621_v4 - MorphoAccess 5G Series Parameters Guide.chm for the terminal configuration.

This option is to be configured using MorphoBioToolBox only (not the WebServer).

MMI_Play : New distant Command in MA5G native mode

The MMI_PLAY command allows :

- For MaLitePlus, to display a “Access Granted” or “Access Denied” message during a given lapse of time without additional display (no user id, name, time,...).

The associated buzzer sound will be played if its key configuration is enabled.

- For MALite, to play LED Access granted/ denied during a given lapse of time without additional display (no user id, name, time,...).

The associated buzzer sound will be played if its key configuration is enabled.

Fixed issues / Improvements

Fixed issue: MorphoAccess® SIGMA Lite and Lite+ Series terminal reads a card even if configured not to do so.

Fixed issue: For the management of Mifare contactless cards, terminals in MA 500 or J Series legacy mode do not authorize a start block less than 4.

Fixed issue : MorphoAccess® SIGMA Lite and Lite+ Series terminal reboots during an authentication workflow involving an Iclass card with Bioscrypt & Non-Bioscrypt templates.

Fixed issue : MorphoAccess® SIGMA Lite and Lite+ Series terminal reboots when it is not able to select Book & Page number of iClass cards during execution of Bioscrypt command '0x06A1'.

Fixed issue : If distant commands are used (from an external host), the first cancel command is not effective when executing a biometric operation with retry option enabled. IDEMIA recommends to send twice cancel commands.

Fixed issue : No more limitation on Clock and Data message reception for *left edge* and *right edge* parameters.

Improvement about the reading of HID iclass PACS DATA: MorphoAccess® SIGMA Lite and Lite+ Series terminal is able to read reverse HID iClass PACS DATA.

Improvement about the configuration key *misc.multifinger_timeout* :
Timeout values are fixed in the range: [1,30] in MA5G (native) mode and Bioscrypt Legacy mode.

Software revision: 3.3.1

Installation and compatibility

Software revision 3.3.1 is not backward compatible.

Once a MorphoAccess® SIGMA Lite and Lite+ Series terminal has been upgraded, it cannot be downgraded to a 1.X.X or earlier 3.Y.Y version.

Please refer to the section dedicated to the Software revision 3.2.5 (below) for details about installation procedure and compatibility.

New features

New default Ethernet configuration (static IP)

By default, the Ethernet configuration of MorphoAccess® SIGMA Lite and Lite+ Series terminal is Static IP. This default Ethernet configuration must be changed before deploying the terminal on site (refer to 2014_0000000606_v7 - MA SIGMA - Installation Guide). Please note that the default Ethernet configuration is not applicable if the terminal has been configured and then upgraded to Software version 3.3.

Reinforced protection against possible hacking attacks

IDEMIA highly recommends to update terminals with security software revisions.

Fixed issues

Button Icon to enter the user ID now shows a keyboard (the icon in previous releases showed a fingerprint, which might be confusing).

Fixed issue: MorphoAccess® SIGMA Lite and Lite+ Series terminal do not support the DESFire cards that contain a file, the ID of which is different from 0.

Fixed issue: if a distant command requests the terminal to encode a contactless card, and if a card is not physically presented for encoding, the terminal does not respond any more.

Fixed issue: random blocking state (blank screen) of the MorphoAccess® SIGMA Lite Series terminal during booting up phase.

Fixed issue: for the MorphoAccess® SIGMA Lite Series terminal, the LED stays amber when executing the Set LED command 0x424.

Software revision: 3.2.5

Installation and compatibility

Software revision 3.X.X is not backward compatible: once a MorphoAccess® SIGMA Lite and Lite+ Series terminal has been upgraded, it cannot be downgraded to a 2.Y.Y version.

Upgrade has to be done with either:

- MorphoBioToolBox v3.4.5
- Or Update the Upgrade-Firmware-Tool (refer to 2016_2000021771_v2 - MA5G - ApplicationNotes-UpgradeProcessEnhancement.pdf document).

New features

Support of frame encapsulation over RS485:

- Manage multipoint and data integrity check
- Available in both MA 500 or J Series legacy mode and MA5G (native) mode

Refer to RemoteMessageSpecification for further details.

MorphoAccess® SIGMA Lite and Lite+ Series terminal support HID iCLASS® Elite contactless cards. Please contact the support team for further details about the HID iCLASS® Elite program.

MorphoAccess® SIGMA Lite and Lite+ Series terminal read HID iCLASS® Seos™ contactless cards (without biometric templates).

New GUI for “access granted”, “access denied” and Time and Attendance messages are available (as an option) on MorphoAccess® SIGMA Lite+ Series terminals.

New feature is added to enhance MMI feedback on IP when terminal is connected to a controller (please refer to RemoteMessageSpecification).

MorphoAccess® SIGMA Lite and Lite+ Series terminals acquisition, with only one capture by finger, is now supported in MA5G (native) mode. For Morpho Integrator's Kit integrations, MACI release 6.1.10 is required.

MorphoAccess® SIGMA Lite and Lite+ Series terminals now support the one finger database management in Morpho Legacy mode.

To ease their configuration, MorphoAccess® SIGMA Lite and Lite+ Series terminals are able of automating some operations related to the Wiegand frames. For HID contactless cards

(including Prox cards), the HID card number can be used to:

- Detect Wiegand Frame Size
- Duplicate Input Frame to Output Frame
- Duplicate Input Site Code to Output

Refer to the dedicated application note for further details.

Fixed issues

Multiple MAC Addresses at boot:

Correction of switch disconnection with MorphoAccess® SIGMA Lite and Lite+ Series terminals due to dual MAC address at boot.

SSL and TCP channels

MorphoAccess® SIGMA Lite and Lite+ Series terminals in Bioscrypt Mode reboots continuously on enabling SSL channel state

MorphoAccess® SIGMA Lite+ terminal LCD in MA5G and Morpho legacy modes hangs on enabling of TCP channel.

Serial link

MorphoAccess® SIGMA Lite and Lite+ Series terminal support of RS link encapsulation in MA2G and MA5G modes.

Correction of random communication issues (timing adaptation) between MorphoAccess® SIGMA Lite and Lite+ Series terminals and control panel using a RS-485 serial link.

Correction of the PIN management by distant command with MorphoAccess® SIGMA Lite and Lite+ Series terminals.

Software revision: 2.2.1

The release 2.2.1 is the last software firmware release before the merge of SIGMA and MALITE/MALITE+