

This document provides a brief overview of the most significant features added with each update of GAMMA Dental Software since version 7.0.0.0. For detailed information regarding the numerous minor improvements and fixed issues in a particular update, please refer to the respective update manual.

Version 7.0.0.0

★ Feature Update

📅 Released 2011-03-18

General

- Introduction of a new licensing system with support for time licenses.

GAMMA Document Browser

- New software module for managing patient cases with focus on documentation and presentation.

CADIAX

- CADIAX Analyzer now allows changing the intercondylar distance.
- CADIAX Analyzer now allows creating a therapeutic position CPM from a selected point on a curve.
- Calculation of ideal incisal table settings for each individual patient case, based on the X/Y/Z coordinates of cusp tips measured on the dental model.
- Calculation of settings for new articulators: Artex CN, Artex CT, Artex CP, Artex CR, Denar Mark 320, Denar Mark 330.

Version 7.7.14

★ Feature Update

📅 Released 2012-05-23

General

- Improved support for Unicode-based operating system languages such as Japanese and Russian.
- License codes can now be changed without requiring the software to be re-installed.

GAMMA Document Browser

- Images can now be assigned user-defined image types during the import.
- Improved conversion of GDSW classic data.
- Data saved to patient files is additionally verified upon saving to ensure data integrity.
- An opened patient file can now be saved under a new name.
- The application is now available in Italian language.

CADIAX

- CADIAX Analyzer now provides a Hinge Axis Correction feature for virtually correcting an incorrectly determined hinge axis location.
- The condylography recorder applications now support the individual reference point indicator, which can be precisely adjusted to the patient's individual orbital point

CADIAS

- The digitizer application now automatically loads the appropriate x-ray image and patient photo when started from GAMMA Document Browser.
- The digitizer application now allows the digitizing of multiple anatomical landmarks in a single step via predefined tooth shape templates.

Version 7.8.0

★ Feature Update

📅 Released 2012-12-19

General

- Added support for the Windows 8 operating system.
- Simplified software installation routine.
- The directory of temporary recovery files is now customizable.

GAMMA Document Browser

- Display settings for CADIAS analyses can now be configured right in the Workspace.

CADIAX

- Added support for the CADIAX 4 condylography device.

CADIAS

- Improved support for image files of different formats.
- Added Asian norm values for the Slavicek cephalometric analysis.

Version 7.9.3

★ Feature Update

📅 Released 2014-03-19

General

- The sample patient files installed with the software have been updated.

GAMMA Document Browser

- Improved managing and opening of patient files.
- Significantly improved performance by switching the database engine from Microsoft Access to SQLite.

GDSW classic

- Improved database management using modern Windows-style dialogs.

CADIAX

- The selection of curves for articulator calculation can now be changed for multiple curves at once.
- Curve titles can now be changed for multiple curves at once.
- The recording software now automatically detects the type of connected device.

CADIAS

- The color of the digitizing cursor is now customizable.
- The Sato analysis now provides values for the upper anterior and posterior occlusal planes.

Version 7.9.12

🔧 Maintenance Update

📅 Released 2014-12-11

General

- Simplified the installation when updating from an older version of the software.

GAMMA Document Browser

- Patient case presentations can now be exported to PowerPoint.
- Selecting the cells to be shown during presentation has been simplified.
- Layout items and data items now provide easy access to their respective properties.

CADIAX

- The 3D Animation has been improved to use a modern display engine and also allows selecting a point on the 3D mandible for which the movement curve should be displayed.

CADIAS

- The length of the reference line specified during digitizing can now be changed at a later time.
- The Sato analysis now also includes the upper occlusal plane inclinations relative to the Frankfurt Horizontal plane.
- The handling of recovery files has been improved.

Version 8.0.4

★ Feature Update

📅 Released 2015-12-17

General

- Added native support for 64-bit operating systems.
- Added support for the Windows 10 operating system.
- Improvements to the VDDS-media interface that is used to exchange patient information with third-party software.
- Improved support for high screen resolutions.

GAMMA Document Browser

- The image assistant now accepts images inserted via drag-and-drop.
- Miscellaneous usability improvements in the Workspace.

CADIAX

- The numerical analysis now includes the Kobs curve coefficient, which describes the straightness of the curve.
- The CADIAX Recorder application now provides additional predefined curve types for functional movements (bruxing, chewing, free movement, etc.).
- Displayed graphics can now be copied using a customizable shortcut key combination.

CADIAS

- The upper occlusal plane inclinations in the Sato analysis now provide norm values.
- The lower facial height values in the Incisal Pin Table now match those in the numerical analysis.

- The Angle class input in CADIAS Digitizer has been adjusted to use the dentist's point of view.
- Displayed graphics can now be copied using a customizable shortcut key combination.

CADIAS 3D

- Now software module for virtual functional analysis based on 3D dental models.
- Exact positioning of 3D dental models in the virtual, fully-adjustable Reference SL articulator.
- Animation of the lower jaw according to the patient's actual movements recorded with CADIAX condylography devices.
- Measurement of 3D coordinates on the surface of 3D models.
- Visualization and evaluation of anatomical relations based on the measured coordinates.
- Automatic determination of the tooth contact sequence between upper and lower jaw.
- Fully automated calculation of a condylar repositioning (CPM) based on two versions of the lower jaw model in RCP and ICP position.

Version 8.1.0

★ Feature Update

📅 Released 2017-03-07

General

- The user interface has further been improved to support systems with high screen resolutions.
- Printouts made by the software can now include the practice and user information.
- Support for systems with multiple user accounts has been improved.
- Improved compatibility of the software activation method with virtualization programs such as Parallels Desktop.

GDSW classic

- The software now provides a menu entry for quickly opening the database directory.

GAMMA Document Browser

- Images can now be imported directly into the Workspace via drag-and-drop.
- Moving the mouse cursor over data areas or data items will show a tooltip for easily identifying the displayed information.

CADIAX

- Support for the Reference LF articulator.
- The appearance of the 3D Animation has been improved.

CADIAS

- CADIAS Digitizer now allows importing images from files even if the application has been started from GAMMA Document Browser.
- The value input for Condylar Position Measurements (CPMs) has been improved.
- The selection of active items in the Contents list has been simplified.

CADIAS 3D

- Introduction of the dynamic occlusal protocol, which visualizes dynamic guidance patterns on the occlusal surface of the upper jaw model.
- The static occlusal protocol now highlights intersections in a distinct color.
- The display of 3D objects has been reworked to provide a more realistic appearance and a better representation of the model's surface features.
- The incisal pin height of the articulator is now adjustable.

Version 8.1.2

🔧 Maintenance Update

📅 Released 2017-08-23

General

- Fixed an issue where the software would fail to install due to an error with the licensing tool.
- Fixed an issue where certain software modules could not be started when the software was activated with a time license.

CADIAX

- Fixed an issue with the display of the 3D Animation on systems with Intel graphics chips.
- Fixed an issue where the CADIAX Recorder application would appear in the background of other windows when started.

Version 8.2.3

★ Feature Update

📅 Released 2018-02-26

General

- Activation of the software no longer requires administrator privileges.
- Compatibility with third-party applications communicating via the VDDS-media interface has been improved.

GAMMA Document Browser

- The application now natively supports formatted text documents for treatment plans, diagnostic protocols, and the like.
- The type of articulator for which articulator settings are displayed can now be adjusted in the Workspace.
- The default schema design template is now indicated in the list of available templates.
- Text design elements and cells now provide additional properties for their default appearance.
- Cells in the Workspace can now be selected by holding down the Alt key while clicking a contained data area.

CADIAX

- The zero-point correction can now be applied for multiple curves at once.
- The new 3D Animation now provides a compatibility mode for systems with older graphics cards.
- A spherical marker now highlights the current position of a tooth kinetics movement or condylography curve in the 3D environment.

CADIAS

- CADIAS now provides a tracing and numerical analysis of the cervical spine.
- When CADIAS Digitizer has been opened from GAMMA Document Browser, it now allows any type of image to be loaded from the database.

CADIAS 3D

- A new Analysis pane combines the functionalities for measuring points on the 3D dental models and the visualizations and evaluations thereof.
- The numerical analysis now provides an explanatory description of the currently selected value and the possibility to copy displayed information to third-party applications.
- Digitized points can now be dragged in the 3D environment, which will update the corresponding analyses in real-time.
- Side panels in the user interface can now expand and collapse as needed to provide more real estate to the 3D environment.
- Performance of the application has been improved by delegating computationally intensive tasks to the graphics card.
- The virtual camera's center of rotation can now be specified with a simple press of the mouse wheel.
- The display of tooth contacts in the static occlusal protocol has been improved.

Version 8.3.4

★ Feature Update

📅 Released 2019-01-31

General

- The diagnostic sheet now provides an input box for entering notes below each section.
- The application is now available in Japanese and Russian language.
- Completely reworked the software manual for German and English language.

GAMMA Document Browser

- The application will now show a warning message when attempting to insert data in an old analysis collection.
- Fixed the incorrect display of certain cell design elements during presentation.

GDSW classic

- Fixed an issue where the application could not be opened from third-party practice management software via the VDDS-media interface.
- Fixed the export of patient data to e-mail on Windows 10.

CADIAS

- Analysis values can now easily be copied to clipboard for transferring the data to external applications.
- Fixed the inversion of image colors when CADIAS Digitizer has been started from GAMMA Document Browser.

CADIAX

- Easier editing of recording macros in the macro editor of CADIAX Recorder.
- The order of curves in the curve selection combo box of CADIAX Analyzer is now kept in sync with that of the Contents list.

CADIAS 3D

- Virtual VTO allows manually repositioning individual teeth and jaw models while recalculating static and dynamic analyses in real-time.
- 3D objects can now be exported to third-party applications, e.g., for transferring a new model situation to CAD/CAM software.
- Support for colored 3D models and the PLY file format.
- Functional guidance paths can now be displayed on each pane of the application.
- Improved visualization of contacts found during the static occlusal protocol.
- Calculation and visualization of the curve of Spee based on digitized points.

Version 8.4.1

★ Feature Update

📅 Released 2020-02-14

General

- Most application icons will now scale correctly on systems with high screen resolution.
- Access to the text and drawing modes in the diagnostic sheet has been simplified.

GAMMA Document Browser

- The application now provides a proper user interface for managing user-defined image types.
- When creating a text document, the application will provide suggestions for its title as appropriate for the active schema design template.
- Analysis collections are now sorted by date in chronological order.

CADIAS

- Applying a VTO according to functional values will no longer reset the anchor point of the adjustment (e.g., incisor/molar when adjusting occlusal plane).

CADIAX

- Automatic zero-point correction can now be used to move a selected point on a curve to zero, which allows compensating for the condylar shift during a splint treatment.
- Condylography recordings can now be exported for the Jaw Motion Import module of the Exocad CAD/CAM software.
- The macro recording dialog now uses a more compact layout and allows starting individual recordings via a simple double-click.
- The display setting to use different colors for the excursive and incursive parts of condylography movements is now available on all panes of the application.

CADIAS 3D

- The application now includes a virtual Condylar-Position-Variator (CPV) that can be used to remount jaw models to a therapeutic position as part of a VTO, and export that model situation to external CAD/CAM applications for splint manufacturing.
- Added numerical and graphical analyses for the sphere of Monson, the curves of Wilson, the upper conventional occlusal planes as well as the upper and lower planes of symmetry.
- Added numerical analyses for various dental arch measurements (width, depth, length, Bolton analysis).
- Tooltips for more immediate feedback when repositioning of models and teeth for manual VTO.
- 3D data export can now include axis-orbital reference triangles for preserving the relation to the axis-orbital coordinate system.

Version 8.5.2

★ Feature Update

📅 Released 2021-02-19

General

- Further improvements to support display scaling on high-resolution screens throughout all applications.
- Setup now relies on PnPUtil rather than DPInst for driver installations.

GAMMA Document Browser

- The active schema template is now indicated when creating or opening a patient file.
- CADIAX data areas can now be configured to display tooth kinetics curves.

CADIAS

- The incisal pin table has been extended to show offset measurements of the lower canine and now also provides explanatory tooltips when clicking the displayed values.
- Images can now be loaded in CADIAS Digitizer via drag-and-drop.
- The application now correctly handles images that specify a non-standard orientation in their Exif tag.



CADIAX

- Condylography curve diagrams now show head pictograms to indicate the viewing aspect.
- CADIAX Analyzer now allows creating therapeutic position CPMs also when started from GAMMA Document Browser.
- The numeric display of CPM items has been extended to show additional values and has been unified with the corresponding display in CADIAS 3D.
- CADIAX Recorder now reliably shows a warning icon when the double-styli should be rotated for dynamic hinge axis localization.
- CADIAX Analyzer now allows measuring the length of tooth kinetics movements, such as the incisal path.

CADIAS 3D

- The numeric display of a calculated CPM result has been extended to show additional values and has been unified with the corresponding display in CADIAX Analyzer.
- The static occlusal protocol can now alternatively display contact areas using a discrete color map.
- The 3D Data Assistant now displays the loaded model's local coordinate system and allows directly exporting the model to a file.
- Coordinates of nominal points in the manual articulation of the 3D Data Assistant can now easily be copied and pasted to/from external applications.

Version 8.5.3

 Maintenance Update
 Released 2021-07-23

General

- Updated company address to "Wasserzeile 35".

GAMMA Document Browser

- Fixed an issue where image files could not be dropped in an empty section workspace.
- Fixed an issue where head pictograms of CADIAX diagrams did not appear correctly on the printout.



CADIAX

- Fixed an issue where the condylography curve recording was extremely slow on some systems.

CADIAS

- Fixed an issue where activating a frontal tracing would display an error message if certain point landmarks have not been digitized.

Version 8.5.5

 Feature Update
 Released 2022-02-15

General

- Added support for the Windows 11 operating system.
- Improved webpage for offline activation.

GAMMA Document Browser

- Data item properties now also show the item's creation date.
- Added support for JFIF image format.
- Image Assistant and 3D Data Assistant now restore their previous window position and size.
- Simplified insertion of new sections in the Workspace.

CADIAX

- Added point grid to Axis Movement, Tooth Kinetics, and Translations-Rotations views.
- Increased maximum zoom level from 250% to 500% for closer inspection of CPM and centric movements.



CADIAS

- Tracing and Superimposition views now provide an adjustable zoom value.

CADIAS 3D

- Added a tool for custom measurements on the displayed 3D objects, including points, lines, angles, planes, and object size.
- The static and dynamic occlusal protocol now highlight contacting teeth in red color.
- Graphical and numerical analyses now include an analysis of the Bonwill triangle and the axis-orbital reference triangle.
- The numerical analysis now shows values with and without considering VTO modifications.
- Added a VTO adjustment based on numeric values for condylar offset and incisal pin height.
- Coordinates of digitized points will now be recalculated for VTO and condylography animation.

Version 8.5.6

 Maintenance Update
 Released 2022-11-15

General

- Disabled installation of the 64-bit software version on systems with unsupported ARM-based processors.
- Fixed an issue introduced by a specific version of the Microsoft Visual C++ redistributable package.

GAMMA Document Browser

- Improved support for system-wide display scaling in the main views and the Image Assistant.
- Fixed an issue where patient files could not be saved on a network path.



CADIAX

- Fixed an issue where no immediate side shift settings were calculated for the Artex CR articulator.
- Fixed an “Out of memory” error when saving a CADIAX analysis on some systems.
- Fixed real-time cursor intermittently jumping to zero when starting a CADIAX measurement.

CADIAS 3D

- Updated CADstar transformation template to support files created using the “Export for GAMMA” feature.

Version 8.6.4

 Feature Update
 Released 2023-03-02

General

- Improved support for display scaling of the user interface on high-resolution screens.

GAMMA Document Browser

- Importing 3D models in the 3D Data Assistant is now possible via copy/paste from the file explorer.
- Images and 3D models are now stored with additional properties such as file name and import transformation for future reference.
- Properties of CADIAX analysis now allow adjusting the Immediate Side Shift (ISS) threshold value for articulator calculation.

CADIAX

- The Translations-Rotations view now provides a switch for showing absolute (in degrees) or relative rotation (as percent of maximum) in the side panel.
- Data import in the ASCII/CSV format is now also possible when started from GAMMA Document Browser.



CADIAS

- Copying a tracing or superimposition as an image to the clipboard now takes the current zoom level into account.
- Calculated points are now immediately updated when saving a digitizing.

CADIAS 3D

- Added Occlusion Design feature to generate the movements required for creating a sequential wax-up in conjunction with the Jaw Motion Import module of Exocad.
- Added an image overlay tool to superimpose images, such as photos of Brux Checker or occlusogram, onto the upper or lower jaw model in 3D.
- The virtual CPV for mandibular repositioning now allows simultaneously adjusting ΔX , ΔZ , and SCI.
- The static occlusal protocol can now also be calculated with unsegmented models.
- The virtual articulator can now be used with either the flat or the individually adjustable incisal table.
- Added an undo/redo function for manual repositioning of models and teeth during VTO.
- Import of 3D models now supports more PLY formats and the format can also be used for export.

Version 8.6.5

 Maintenance Update
 Released 2023-05-26

General

- The About box now displays the Unique Device Identifier (UDI) as per Regulation (EU) 2017/745.

GAMMA Document Browser

- Fixed an issue where the 32-bit version of the application could not be started.
- Fixed an issue where patient files could not be opened with specific regional settings in Windows.
- Fixed an issue where certain patient files created by an older software version could not be opened.

CADIAX

- The CADIAX device drivers have been updated to improve compatibility and stability.
- Fixed an issue when inserting incomplete cusp tips coordinates from CADIAS 3D.

CADIAS

- Fixed the incorrect visualization of the lower first molar's tooth axis in the Sato tracing.

CADIAS 3D

- Fixed an issue where Jaw Motion files exported from Occlusion Design to exocad could not be imported with specific regional settings in Windows.
- Fixed an issue where the ideal Sequence table settings calculated in Occlusion Design would not match those in the CADIAX articulator settings.
- The order of lower jaw movements exported from Occlusion Design to exocad now matches the display order in the user interface.
- Fixed an issue where the digitized point coordinates copied to the clipboard would not consider VTO.
- Fixed an issue where a 3D model exported from the 3D Data Assistant would not use the selected transformation.