

Vision Software Suite - Release Notes

Version V2023.11.1 - November 15, 2023

Enhancements and fixes

- AM/FM demod for MS27201A
- TDOA support for MX2090A/MS27201A
- Updated Vision Acquire/Monitor to support Frequency ranges > 20 GHz.
- Various bug fixes.
 - Fixed issue with the mask editor.
 - Fixed bug causing application settings to become corrupt.
 - Increase the number of RSM that can be displayed in Locate screen.
 - Select the desired 3 RSM that are chosen when Locate opens.
 - Added support for all RBW values, with limits based on capture bandwidth.
 - Fixed bug for frequency stability at low center frequencies.
 - Fixed bug where High Speed Port Scanner failed to save segmented limit lines.
 - Fixed bug creating limit lines in High Speed Port Scanner.
 - Fixed bug that caused a misalignment between the trace display and spectrogram in Vision Monitor.
 - Fixed bug that caused an Unhandled Exception under certain circumstances in Occupancy Reports.
 - Fixed bug that caused issue between HSPS and the Probe Simulator under certain circumstances.

Version V2022.9.1 - September 30, 2022

Enhancements and fixes

- New user experience. Simplified the user interface by putting all Vision applications under a single executable.
- Updated the Vision user interface to align with Anritsu common look and feel.
- Added Cross Polarization measurement
- Removed support for Google Maps.
- Various bug fixes.
 - HSPS does not accept 9 kHz start frequency
 - HSPS cannot be stopped when one of the RSMs is not optioned
 - File Viewer records wrong trace time for Raptor traces
 - Source Locator Live View does not display correct traces from simulator
 - Lower Limit Line Segment Mask not working
 - File Viewer local measurement folder does not refresh on selection
 - Vision crash on mask selection from sweep parameters
 - TDOA capture BW incorrect setting problem

- File Viewer crash on RSM file delete attempt
- Vision Acquire issues a UE error during verification of busy RSM disregard

Version V2021.6.1 - June 22, 2021

Enhancements and fixes

- Extended frequency range to 54 GHz
- Extended MS2090A support to include the Vision API
- Added ability to control the size of the POA search rectangle in Vision Locate.
- Fixed bugs in High-Speed Port Scanner causing incorrect number of data points in trace sweeps.
- Updated the .NET library to 4.7.2. This updates the email support library to work with latest versions of MS Office 365.
- Various bug fixes.

Version V2020.1.1 - January 15, 2020

Enhancements and fixes

- Added option 400 and 407 support for MS2090A
- Enhancements to HSPS and File Viewer.
- Various bug fixes.
 - **Vision API**
 - No Changes.
 - **Vision Acquire**
 - Bug Fix: Copy commands in Log Viewer did not function as expected.
 - **Vision Monitor**
 - Support for MS2090A - Options 400 only. Does not support Vision Locate.
 - Bug Fix: KML Export in Vision Locate failed for some regional settings.
 - Bug Fix: Option to copy a sweep trace to clipboard failed to get frequencies correct.
 - Bug Fix: Last RSM in TDOA did not always get setup correctly due to command timing error.
 - **Database Creator**
 - Added MS2090A to list of discoverable instruments in Quick Database menu
 - Bug Fix: When opening an existing database as a template, always opened the most recent database created.
 - **Simulator**
 - No Changes.
 - **File Viewer**
 - Added function to create .CPM (HSPS) file from a set of downloaded RSM files.

- Added Max Hold, Min Hold and Average Trace to CPM file mode as static settings - shown behind a selected trace.
- **High-Speed Port Scanner**
 - Added RSSI (Channel power of Peak Power) as display option.
 - Added auto-save of RSSI plots. Supports JPEG, PNG, GIF, BMP formats
 - Added option to start a new file on a schedule, rather than at set size. Supports 1 hr, 2 hr, 4 hr, 6 hr, 8 hr, 12 hr, 24 hr saving intervals.
 - Added trace mode support (Normal sweep, Max Hold, Min hold, and Average)
 - Added trace count for use in trace modes (Normal sweep, Max Hold, Min hold, and Average)
 - Increased the number of expanded plots from 1 to 3. User can select 1, 2 or 3 plots to show in large format.
 - Added Print feature. User can print channel table, trace sweeps, or RSSI plots. Inverts colors to save toner.
 - Bug Fix: If Start/Stop pressed quickly in succession, could get caught in an indeterminate state without exit..
- **DB Utilities**
 - Bug Fix: Crashed when attempting to erase data from a database on a write-protected folder or drive.
- **Occupancy Reports**
 - No Changes.
- **TDOA API example application**
 - No Changes.

Version V2019.6.1 - July 10, 2019

Enhancements and fixes

- All applications now compiled as 64-bit applications
- Changed database engine from MS Access to SQLite - Affecting all programs with database access.
- New database conversion utility to convert user databases from MS Access to SQLite.
- Changed Offline mapping from OpenStreet Maps control to new Image File mapping control.
- **Vision API**
 - Drone tracking removed. Will be available in a soon to be released separate software package.
- **Vision Acquire**
 - Changed database engine to SQLite.
 - Added Save and Load configuration options to system tray control menu.
- **Vision Monitor**
 - Drone tracking moved to standalone product to be released soon.
 - Changed database engine to SQLite
 - Support for new offline mapping solution

- Added scaling of frequency axis when number of trace points is larger then the graph pixel width.
- Added a separate help button on the trace window giving tips on setting markers and zooming.
- Locator
 - Added new offline mapping solution.
 - Removed TDOA control panel as separate window - Previous contents now shown in main window.
- **Database Creator**
 - Changed underlying database engine from Access to SQLite.
- **Simulator**
 - Expanded to 24 RSMS.
 - Ability to turn off probes
 - Added second set of interferer tracks
 - Added signal shape selection (guassian or square)
 - Added Duty Cycle selection for IQ signals.
 - Added context menu on interferer tracks.
 - Double pointe
 - Half points
 - Smooth track
 - Reorder track
 - Reverse track
 - Added IQ download time settting
 - Added signal editor
 - Added new offline map option
- **File Viewer**
 - No Changes.
- **High-Speed Port Scanner**
 - Updated the table display for better look and performance.
- **DB Utilities**
 - No Changes.
- **Occupancy Reports**
 - No Changes.
- **TDOA API example application**
 - Added new offline maping control.
 - Numerous bug fixes.

Version V2018.9.1 - September 27, 2018

Enhancements and fixes

- **Vision API**
 - No Changes.
- **Vision Acquire**

- Added menu option on the system tray icon to set the Archive destination folder.
- Decreased the minimum time between sweeps. Previously Acquire waited at least 1 second after a sweep through all channels completed before a new set of sweeps would start. Decreased that time to 100 ms, so in ideal cases, we can collect at a higher rate.
- Added probe status indicators at the bottom-left corner of the Acquire window. First green circle turns red if any probes are off-line. 2nd green circle turns yellow if any probes are 'In Use' by another user.
- **Vision Monitor**
 - Reorganized RSM context menu
 - Added frequency to column headers in the RSM list (if 3 or fewer channels.)
 - Add RSM status indication to the RSM map. Offline probes are shown with red markers. Busy probes are shown with yellow markers.
 - Added the ability to collapse the parameter entry panel. This provides more room to view the RSM list, or for the Measurements panel.
 - Added several new options to the Side-bar panel under a measurements tab
 - New Channel Info panel
 - Automatically display marker frequency, bandwidth, and channel power of peak at marker.
 - Automatically does AM modulation or FM deviation measurement on that peak using historical data (from database).
 - Can do AM modulation and FM deviation measurements live by pressing the measurement labels.
 - Can do POA and TDOA with simple button press – results shown on Monitor Map screen - no need to open Vision Locate. Automatically selects probes and measurement parameters. Vision Locate still available with advanced functionality.
 - Channel List panel
 - Displays all found channels, along with bandwidth and channel power in the current spectrum, or for all traces in the selected channel.
 - I/Q capture panel
 - Simple interface to do an IQ capture, to look at the IQ data points in a plot, and to save the captured data.
 - Drone Tracking panel
 - This page allows functions for doing drone tracking. This is where you create masks for all drone tracking probes, monitor for found signals, see tracking progress, and see a list of tracking events. Reports are available from this screen for each tracked event.
 - Audio Streaming panel
 - Interface for streaming audio to file (or just to listen). This replaces the FM Audio streaming stand-alone application.
 - Locator

- The Locate status bar has new icons to indicate settings and control parameters.
- Added side panel with all of the controls, including TDOA, so there is no longer a reason to open and manage a separate control window for TDOA
 - Select PoA or TDOA just be selecting functions in the control panel – no separate drop-down.
 - Source Tracking controls for tracking moving sources.
 - Settings panel can slide open or closed to maximize screen space for map and graphs.
 - There is still a separate TDOA window that can be opened to show the graphs and results, but all controls have been moved to the Settings and Control panel.
- **Database Creator**
 - Added the ability to setup different channel definitions for each probe in the database.
 - Channel definitions shown in the table are for selected probe only. Editing only affects the selected probe.
 - This change meant that the database Definition file format (.def) had to substantially change to support separate channel definitions. User may not be aware of the change, but old .def files may not be supported.
 - Added a Quick Database dropdown menu. This allows for some common things to be done quite easily. Started this for a quick way to add Wi-Fi channels to a database for drone tracking.
- **Simulator**
 - Added a GUI to the probes simulator. This really extends the use of the simulator but will require a lot of new documentation. Earlier we added a SimControl program that provided control of up to 9 simulators. Now this SimControl program includes the simulators as a single application. So when it runs, you get the GUI with the map and 9 active simulators.
- **File Viewer**
 - No Changes.
- **High-Speed Port Scanner**
 - No Changes.
- **DB Utilities**
 - Added the ability to convert a set of .RSM files downloaded from an RSM into a .cpm file, as though captured using the High-Speed Port Scanner.
- **Occupancy Reports**
 - No Changes.

Version V2018.1.1 - January 17, 2018

Enhancements and fixes

- **Vision API**

- AM/FM audio demodulation and storage options.
 - AM modulation measurement.
 - FM deviation measurement.
- **Vision Acquire**
 - Added Max Hold and Min Hold to supported trace modes. (Previously just supported rolling versions of these modes.)
 - Added Network Health report option. Shows current connectivity status for all probes.
 - Added new options to control email notifications:
 - Maximum email rate
 - only reporting channels that fail above a user settable threshold.
 - Fixed bug that caused Trim operation to fail in some circumstances.
- **Vision Monitor**
 - New Live View
 - Added playback feature to review traces stored for a selected channel.
 - New Known Transmitter feature. Load and display location (frequency and space) for known transmitter signals.
 - Two new functions for unresponsive probes:
 - Clear Active Status
 - Reset SCPI port
 - Mask Editor
 - Added Support for segmented mask with upto 1000 segments.
 - Added 'Fill' button to fill gaps between segments with segments.
 - Added save mask progress bar so the user is more aware when a mask has been saved to the database.
 - Added Import from file for mask definitions.
 - Locator
 - Added rectangle to show search area for POA
 - Extended sector lines to edge of search area
 - Added option to limit POA to overlapping sectors in search area
 - Added Heat map option for viewing POA results.
 - Added option to limit traces available to those failing mask.
 - Added Peak Tracking feature for locating signals that vary in frequency.
 - Live Mode traces are now stored in memory while Locator window is open so user can review live traces.
- **Database Creator**
 - No Changes.
- **Simulator**
 - No Changes.
- **File Viewer**
 - Added 3-D spectrogram
 - Added Coverage mapping
 - Added Power vs Time chart
- **High-Speed Port Scanner**
 - Added expanding trace view
 - Added second marker/delta marker for each channel

- Bug Fixes
 - Fixed bug that caused program crash when canceling a segmented trace mask.
- **DB Utilities**
 - No Changes.
- **Occupancy Reports**
 - No Changes.
- **Radio Capture:** New program for capturing AM/FM audio to disk file.

Version V2017.5.1 - May 2, 2017

New Features

- Vision API
 - This is the main purpose of this release. An API has been developed to control all of the Vision software suite applications and features programmatically through a set of .NET class libraries.
 - Class Libraries included:
 - RSM - Maps SCPI command set of the Remote Spectrum Monitor to properties and methods of a .NET class.
 - Acquire - Encapsulates the functionality of Vision Acquire.
 - Database - Contains functions for creating and modifying Vision databases.
 - Scanner - Encapsulates the functionality of the High-Speed Port Scanner.
 - Occupancy - Encapsulates the functionality of the Occupancy Report Generator.
 - PowerOnArrival - Allows full control of POA measurements.
 - AngleOfArrival - Allows full control of AOA measurements.
 - TDOA (User control - Provides a complete UI for integrating Anritsu TDOA into 3rd party software.)
 - FileViewer (User control - Provides a complete UI for viewing RSM and Scanner files.)
 - RadioMonitor (User control - A new feature in Vision for capturing and monitoring AM/FM radio broadcasts.)
 - MaskEditor (User control - Provides a complete UI for creating and editing Vision trace masks in 3rd party software.)

Enhancements and fixes

- Vision Acquire
 - No Changes.
- Vision Monitor
 - Mask Editor
 - Added 'Save' button to button bar.

- Bug Fixes
 - Fixed several issues relating to regional settings.
 - Fixed bug causing empty masks to be created but not saved.
 - Fixed bug where new masks were not applied to active channel.
 - Locator
 - Removed Interpolation option in TDOA. This option did not help with spatial resolution and caused memory problems.
 - Removed option to automatically set TDOA capture length. No longer needed due to firmware changes.
 - Bug Fixes
 - Fixed numeric entry bug in Sweep Config panel for European regional settings.
 - Added another significant digit to center frequency position in TDOA.
- Database Creator
 - No Changes.
- Simulator
 - Added support for IQ capture commands - Supports 16 bit only.
- File Viewer
 - Bug Fixes
 - Fixed sorting of local files when path is selected.
- High-Speed Port Scanner
 - Added mouse marker display over trace graphs
 - Added ability turn markers on with the mouse over the trace graphs
 - Bug Fixes
 - Fixed bug that showed delta marker power with wrong sign in channel table.
 - Fixed bug that showed delta marker frequency always in Hz on trace graphs.
 - Fixed that that did not store previous value for Time-until-Scanning with autostart feature.
- DB Utilities
 - Added option to add external application to the Vision Monitor menu bar.
- Occupancy Reports
 - Disabled Generate Report menu if there is no database selected
 - Disabled Export Report menus if no report has been generated
 - Bug Fixes
 - Fixed bug several numeric entry problems with European regional settings.

Version V1.20 - November 11, 2016

New Features

- High-Speed Port Scanner
- Remote File Viewer

Enhancements and fixes

- Vision Acquire:
 - Now allow for periods of inactivity with the Advanced Database Scheduler
- Vision Monitor
- Bug fixes
 - Cannot add segments without a mask defined.
 - Better icons for file operations.
 - Cursor tracking on the trace plot
 - Single marker/delta marker support on the trace plot
 - Check box for displaying failed traces only in trace plot and spectrogram.
 - y-axis labels on trace plot
 - Spectrogram color legend
 - Spectrogram time marker displayed
 - Locator Window
 - TDOA location lines are now thicker
 - TDOA location lines can be longer/cover more distance on the map
 - TDOA 'Remove Dead-time' feature added.
- Vision Occupancy Reports
 - Updated appearance of graphs
 - Graphs can now be included in reports
 - Added probe description and location to report header
 - Added Save function AM/FM IQ demodulation
 - Pass/Fail criteria now selectable between minimum, maximum, or mean power.

Version V1.10 - August 19, 2016

Enhancements and fixes

- Vision Acquire:
 - Sweep Once Button/Menu
 - Trim old traces Button/Menu
 - Menu item to disable Ping on each sweep
 - View Log button on main window/Enhancements to log viewer
 - Advanced Database Scheduling.
 - Various bug fixes
- Vision Monitor
 - Use High contrast colors
 - Copy (text to clipboard) and Export (to .spa format, compatible with MST) Trace data
 - Sweep parameter entry. New entry points for:
 - FFT, Sweep Time, Trace Points, Trace Count

- Time Chart enhancement:
 - Scroll smoothly through traces back through all times.
 - Mask Editor
 - Added Lower Limit segments
 - Bug fixes
 - Cannot add segments without a mask defined.
 - Better icons for file operations.
 - Locator Window
 - Added Entry box for center frequency
 - Help Button
 - Added TDOA measurement
- Vision Database Creator
 - Bug Fixes
 - Catches duplicate probe names
- Vision Probe Simulator
 - Various bug fixes.
- I/Q File Converter
 - All new with Release 1.10
 - Convert I/Q data files
 - Reads: Anritsu IQ Capture, Anritsu VSG, Anritsu other, Text files, Binary files.
 - Writes: Anritsu VSG, Text, Binary
 - Can capture directly from remote probe
 - Can demodulate AM and FM signals and play audio output.
 - Can resample data to change effective sample rate.
- Vision Occupancy Reports
 - All new with Release 1.10
 - Reads from a set of databases
 - For specified probe/channel, divides up traces into user defined sub-channels and shows Max, Mean, and Min power for each sub-channel, plus bar chart
- Vision DB Utility
 - All new with Release 1.10
 - Clear traces (all/before date)
 - Reset trace counters
 - Show trace counts
 - Show Version numbers
 - Show/Reset application registry settings.

Version V1.00 - November 25, 2015

Initial Release.