

Whitepaper

For Windows®

The world's most popular data collection software!

The Remark Team at Gravic, Inc.

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Remark Classic OMR Overview

Thank you for your interest in Remark Classic OMR!

Since 1991, the Remark Team at Gravic, Inc. has been continually developing and enhancing our popular Remark software. *Remark Classic OMR*[®] is one of the products in our suite of OMR data collection software. So, what is OMR? Optical Mark Recognition (OMR) is a technology for reading data from "fill in the bubble" types of forms. This technology has been used for many years in schools, universities, businesses, government, and other institutions. *Remark Classic OMR*[®] is a powerful software package for collecting data from these forms, such as tests, surveys, assessments, evaluations, and other form types. Once collected, the tests or surveys can be quickly analyzed using the included *Remark Quick Stats*[®] reporting tool. With a few button clicks you can scan and recognize data from your forms and grade a test or analyze a survey... all in one cost-effective application! The sophisticated test analysis includes the ability to report progress on learning objectives, grade multiple versions of a test, and much more.

Remark Classic OMR works with OMR scanners and forms from companies such as Scantron[®], Apperson[™], Chatsworth, Sekonic[®], DATAWIN, and PDI. The software comes pre-loaded with definitions for many of the popular standard forms in use today. Form definitions for other custom forms can be created using the included template editor functionality. We have maintained the ease of use for more common uses while adding powerful features for more complex needs. Remark Classic OMR is designed to seamlessly fit into your office. Remark works with the latest versions of the Windows operating system, with common OMR scanners, and can feed data into any spreadsheet, database, or other analysis tool.

Traditional OMR vs. Image Scanning

There are two types of scanners for collecting data from fill-in-the-bubble forms: traditional OMR scanners and image scanners. The main difference between the two types of scanning is the hardware with which they work. Remark Classic OMR works with traditional OMR scanners commonly associated with standardized testing, pre-printed forms, and number two pencils. When using traditional OMR products, you use pre-printed forms that are created to very exacting specifications. OMR scanners are specifically designed to read these specialized forms. Remark Classic OMR helps you make the most of this technology by offering a complementary software add-on to both collect your data and analyze your results.

OMR Scanners Directly Supported

Remark Classic OMR is compatible with most popular OMR scanners, including those manufactured by Scantron, Sekonic, Chatsworth Data, DATAWIN, PDI, and Apperson. Click <u>here</u> for more information on supported OMR scanners.

Try it out! Free Demo Version

Example Applications & Forms

Remark Classic OMR is used for many different applications and with many types of forms. The software ships with <u>pre-defined templates</u> for many popular standard forms from companies such as Scantron, Apperson, and Chatsworth Data. The product is well suited and widely used for processing tests and assessments, evaluations, surveys, and many other types of forms. Users come from many industries including education (primary and higher education), healthcare, market research, corporate, government, and non-profit organizations.

Forms are typically purchased from a vendor such as Scantron, Apperson, or Chatsworth Data. Here are a few representative forms that are used with the software.





Using Remark Classic OMR

There are three basic parts of the Remark Classic OMR software. The Data Center is where you scan forms and collect the data. Before you can scan forms, you choose a pre-defined template or use the Template Editor to "teach" Remark about your form. Finally, Remark Quick Stats is where you analyze your data with a variety of reports.

Form Template Editor

The template tells the software how to interpret the questions on a form. Most standard forms already have templates defined in the software so you can simply start scanning your filled in forms. If you want to use a custom form, you use the Template Editor to define a template for your form. The utility takes you through the steps of template creation, from basic layout to advanced options. Options you need to specify for each data area on the form include output data type, output values for each bubble, and whether to include the question in the analysis. Remark Classic OMR also has a database lookup and replace feature. You can connect certain fields from the form to a database, and then look up the scanned data in that database and replace it with another piece of data (or add additional data) from the same database. For instance, if you have a student ID number on your form and a spreadsheet containing the student ID numbers and other information about the students, such as their names, you can read the ID from the form and replace the ID with the student name in your data set. This way the reports show the student name rather than an ID number.



The Data Center

Once you have a form template for your form, Remark Classic OMR can read your filled in forms using an OMR scanner. When processing forms, the software can optionally use a database lookup feature to add external information to your data set for more detailed reporting. After reading completed forms, the collected data appear in a spreadsheet-style grid window with one row per form.

As data is processed and your spreadsheet grid grows, you may see some cells in the spreadsheet with a different background color. These are exceptions that were encountered during the processing phase. There are several categories of exceptions that are flagged in this way to alert you of the potential issue and allow you to review and correct the exception if desired. Often exceptions are the result of improperly filled in forms such as questions that were not answered (blank responses) and cases where multiple responses are marked when they are not allowed. The software provides a Review Exceptions feature that allows you to scroll through the exceptions one at a time where they can be corrected if desired. When in review mode, if you have an image supported scanner, an image of the exception is displayed on-screen and you can optionally correct these exceptions. In addition, the Review Exceptions function allows you to use the Windows speech-to-text engine to enter qualitative data, such as handwritten comments, using your microphone or headset. If your scanner supports a reject stacker, the pages with exceptions can also be sent to the reject stacker.



The processed data can be saved to a variety of <u>output file formats</u>, where it can be shared with any number of third party applications for further analysis, including the following:

Formats	Applications Supported
Spreadsheet Formats	Excel, CSV, and Text
Database Formats	Access, SQL Server, Oracle, dBase, and Paradox
HTML and XML	Internet or Intranet applications
Statistical Software	SPSS, Survey Pro, and Statpac
ODBC	Various relational databases, such as Oracle or SQL Server
Custom	Customized text file for virtually any analysis application
Cloud Storage	Google Drive, Dropbox
Remark	Format for use within the Remark software

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Collect and Analyze Data from Your Forms

In addition to exporting data and reports, an email option is available in the Remark Classic OMR Data Center and Remark Quick Stats to email data and reports as attachments. You can use Microsoft Outlook[®] or use Remark's builtin email client in conjunction with your SMTP server to share information quickly and easily. Student based reports can be emailed directly to students or parents.

Remark Quick Stats

Remark Quick Stats is a built-in analysis package that is used to analyze surveys and grade tests. The software provides many standard reports. Reports can be customized to include user specified titles, headers, colors, fonts, and graphics.

For both surveys and tests there is a "Quick" option that uses defaults in order to run your reports, and there is an "Advanced" option where you can create, save, and reuse a very customizable set of criteria for creating and running your reports. In most cases, the Quick mode will provide all the detail you need in the analysis of your data.

Test Grading Highlights

- **Quick and easy test grading**. Using Quick Grade, simply scan the answer key with the test answer sheets, click a button and reports are produced.
- **Modify your answer key at will.** You can modify your answer key and regrade as often as desired. Your answer key is separate from your data, you *never* have to rescan your test sheets to regrade your test!
- Sophisticated test grading. Use Advanced Grade to create or reuse an answer key for your test.
- **Question options**. Questions can include multiple correct answers. You can assign different point values for each question, throw out a question, give extra credit to questions, and establish complex partial credit options for any question.
- Grade scales. You can create and specify a grade scale for your tests and modify it at will.
- **Learning objectives**. Used to break down a test to measure learning on various test concepts and measure against mandated standards. Individual grade scales can be added to each learning objective.
- Multiple test versions. Grade multiple versions of a test with multiple answers keys to curb cheating potential.
- **Scaled scores**. Advanced Grade supports "scaling" a score, whereby you look up grades in an external table (based on total score, percent score or percentile) and then apply the scaled score from the external file. Provides customizable grading.
- **Grade export**. Supports various gradebooks, including a custom gradebook, for exporting into virtually any gradebook or learning management system.
- Achievement by group. Reports are available to compare achievement across various groups of students.
- Statistics Calculated:
 - ⇒ For each item Remark Quick Stats calculates: Mean, Variance, Standard Deviation, Standard Error, Min, Max, Range, Median, Skewness, Kurtosis, T-Value, Percentiles,
 - \Rightarrow Confidence Intervals, Percent Correct, Point Biserial Correlation
 - ⇒ For each answer choice Remark Quick Stats calculates: Frequencies, Percentages, Point Biserial
 - ⇒ For each student Remark Quick Stats calculates: Total score, Raw score, Grade, Dev. IQ, Number correct, incorrect, and unanswered
 - ⇒ For the test Remark Quick Stats calculates: Number of graded tests and items, Max, Min, Median, Range, Percentile scores, Mean, Variance, Standard Deviation, Confidence Intervals (1,5,95,99%), KR 20, KR21, Coefficient (Cronbach) Alpha.

Test Grading Reports Include:

<u>Test Analysis Report</u> - Provides overall summary information and points out red flags in a test, such as questions where a distractor is chosen more than the correct answer, students showing very strong comparisons of correct/incorrect answers, and test questions with a poor correlation.

<u>Student Statistics Report</u> - Used to view class performance for tests. Optionally shows detailed information about learning objectives, objective questions, and subjective questions. Great report for quickly seeing how students are performing and whether they are meeting standards.

<u>Comparative Grade Report</u> - Provides a comparison of information within the data set. For example you can compare schools, instructors, classes, gender, etc.

<u>Class Frequency Distribution Report</u> - Provides a distribution of the grades for an entire class and test. This report is useful for gaining a quick grasp on class performance.

<u>Test Statistics Report</u> - Provides basic statistics on the test as a whole and is useful for gaining a quick look at performance and basic statistical analysis.

<u>Student Response Report</u> - Provides a graphical view of each student on the test and each question on the test in a matrix style. This report allows you to quickly see performance on both a student and question level.

<u>Condensed Test Report</u> - Provides answer choice frequency information on a question by question basis, including distractor and class score information. This report is a great way to see question and class performance at a glance.

Demographic Grade Report - Provides a breakdown of student performance based on demographic information. This report is particularly effective when trying to ensure that all subgroups of students are making adequate progress.

<u>Item Analysis Reports</u> - Provides answer choice frequency information on a question-by-question basis, which for test grading is useful for question validity. Using the Item Analysis reports, you can see how students responded to the question. If problems are found (e.g. the question was poorly worded), you can throw out the question or allow additional responses to be considered correct without rescanning.

<u>Student Grade Report</u> - Provides a detailed grade report for each student included in the grade operation, including overall score, learning objective score(s) and correct/incorrect answer information. You may print these reports and give them to your students, parents, or other stakeholders.

<u>Changed Answer Reports</u> - Provides a breakdown of questions with answers that have been changed by crossing out responses or making changes to the data grid. This report can be generated by students or by questions.

<u>Student Response Similarities Report</u> - Provides a display of students who have similar responses on the test. This report is useful when concerned that students might be cheating.

<u>Student Achievement Report</u> - Provides the ability to evaluate students' grades in terms of whether they achieved the overall test benchmark or learning objectives benchmarks defined for the test. This report allows you to quickly see who has and has not mastered the information.

Incorrect Response Report - Provides the ability to quickly see which questions were answered incorrectly by which students, along with the distribution of selected answers.

Survey Tabulation Highlights

- **Quick and easy tabulation.** Using Quick Survey, generate standard reports in one click.
- **Customizable reporting.** Use Advanced Survey to customize the survey analysis process, including creating groups of like questions to compare means and measure against established benchmarks as well as weight importance of questions.
- Data comparisons. Compare survey responses across subsets of data.
- **Batch report.** Automatically filter data on specific criteria and produce reports based on the filters (e.g. if evaluating a conference, breaking reports down by session).
- The ability to exclude NA (non-applicable) responses: If your answer choices include a non-applicable option (e.g. Strongly Agree, Agree, Neutral, Disagree, Strongly Disagree, NA) and someone chooses NA, you can exclude it from the statistics, but still be able to see how many respondents chose the NA response.
- **Handwritten comments.** A Response Report displays all of the handwritten comments on one easy to read report.
- Statistics Calculated:
 - ⇒ For each item Remark Quick Stats calculates: Mean, Variance, Standard Deviation, Standard Error, Min, Max, Range, Median, Skewness, Kurtosis, T-Value, Percentiles, Confidence Intervals
 - ⇒ For each answer choice Remark Quick Stats calculates: Frequencies, Percentages, Valid Percent
 - \Rightarrow Crosstabs

Survey Reports Include:

<u>Item Analysis Report</u> - Provides answer choice frequency information on a question-by-question basis. (There are four different versions of this report to meet your needs.)

Item Statistics Report - Displays descriptive statistical information for each question. The statistics are displayed in groups, allowing you to show or hide the groups you need.

<u>Crosstabulation Report</u> - Provides information about two questions within one chart, allowing you to see a breakdown of responses for two questions simultaneously.

<u>Comparative Item Report</u> - Compares performance for various demographics included in the survey. Reports individual question information based on questions from the data (e.g. in the case of a course evaluation survey, you could report on instructors, courses, etc.).

<u>Question Mean Report</u> - Provides the mean for every question tabulated, allowing you to quickly see individual question performance.

<u>Analysis Group Report</u> - Provides overall analysis of each question, along with analysis of questions that are placed in groups. Question groups can be used to view analysis of related questions (e.g. if processing a course evaluation survey, you can view all questions related to the instructor as one question group).

<u>Response Report</u> - Typically used to provide responses from open-ended questions.

<u>Integrated Item Analysis Report</u> - Provides easy distribution and viewing of both quantitative data and handwritten responses in one streamlined report.

<u>**Ballot Results Report</u></u> - Streamlines the tabulation of ballot style responses. It tabulates and displays the choices in order from highest to lowest selection..</u>**

Remark Classic OMR Main Features

Forms Supported

- ⇒ Forms commonly scanned with Remark Classic OMR include tests, assessments, surveys, research studies, evaluations, inventory, field testing, and many others!
- \Rightarrow Processes many standard OMR forms out of the box.
- \Rightarrow Provides ability to create software definitions (templates) to scan custom forms.
- \Rightarrow Processes double-sided and multi-page forms.

Scanning

- ⇒ Works with common OMR scanners from Scantron, Chatsworth Data, Sekonic, DATAWIN, and Apperson.
- \Rightarrow Provides accurate optical mark recognition for bubble sheets.
- \Rightarrow Supports barcode reader on Scantron and Sekonic OMR scanners.
- ⇒ Prints user-specified information on scanned sheets when used in conjunction with a Scantron or Sekonic scanner containing a printer (e.g. date, time, record number).
- ⇒ Scan and Grade option allows you to print a grade on pages as they are scanned when using a scanner with a printer.
- ⇒ Supports SelfScore mode on Scantron OMR scanners so that grading can occur on the scanner as forms are scanned.
- \Rightarrow Supports select stacker to reject pages with errors on them and send them to the select stacker for review.
- \Rightarrow Allows for the correction of exceptions while scanning pages or as an automated post-scanning task.
- \Rightarrow Input field type allows for data entry of handwritten data.
- ⇒ Processes batch header sheets that provide descriptive information about the forms being scanned (e.g. teacher and class name on a batch of tests).
- ⇒ Validates data against an external database to: 1) confirm that recognized data from a field appear in a particular database field, and 2) bring in external data to assist with detailed reporting.
- ⇒ Allows for data validation and transformation. This allows you to validate what is found in your data, turn exception flags on or off, enter new data, or clear data for desired questions. This powerful new tool allows you to transform your data to your specific requirements.
- \Rightarrow Tracks changes made to data files for the utmost in security.
- \Rightarrow Emails data directly to constituents as soon as it is collected.

Analysis and Data Export

- ⇒ Produces output that can be used with most popular spreadsheet, database, survey design, and statistical programs.
- ⇒ Includes Remark Quick Stats, a built-in reporting tool for grading tests and tabulating surveys. Provides full featured reports.
- \Rightarrow Automatically filters data and generates separate reports determined by fields you select.
- ⇒ Analysis results can be saved to PDF, XLSX, HTML, Text, and RTF file formats, as well as right to Google Drive or Dropbox.
- ⇒ Email data and reports as attachments with Remark's built-in email client in conjunction with your SMTP server or Microsoft Outlook[®].

Who Uses Remark Classic OMR?

- ⇒ Education Professionals for student testing, institutional research, course evaluations, and community surveys
- ⇒ **Marketing Professionals** for consumer surveys and customer satisfaction
- ⇒ Psychology Professionals for testing, assessments, and evaluations
- ⇒ **Training Professionals** for course/instructor evaluations, assessments, and tests
- ⇒ **Government Agencies** for data compilation from internal and external sources
- \Rightarrow Healthcare Industry for customer surveys, patient data, and research
- ⇒ Pharmaceutical Companies for clinical trials and product evaluation
- ⇒ Human Resource Departments for employee surveys, time sheets, and evaluations
- \Rightarrow And Many More

Helpful Links

Our website includes many resources that can help you learn the product. The following are some useful links for new users of Remark Classic OMR.

- <u>Scanner Information</u>
- <u>Knowledgebase</u>

Need a live voice?

Call us: 1.800.858.0860 or 1.610.647.7850

System Requirements

Minimum System Requirements

- Personal computer with 2 GHz or faster processor
- Supported Microsoft Windows® 32-bit and 64-bit desktop operating systems: Windows 8.1, Windows 10, Windows 11 (Note: Please ensure your OMR scanner is supported on Windows 11.)
- .NET 4.8 (or higher) framework
- 2 GB RAM
- 1 GB free fixed disk space
- Screen/monitor resolution of 1024x768 or higher and at least 32-bit color
- Mouse or other pointing device

Recommended Optional Requirements

- Supported OMR scanner
- Windows-supported printer
- Internet connection recommended for initial software activation and email functionality
- PDF viewer required to view installed documentation
- Microphone for speech recognition
- Microsoft Outlook 2007 or greater can be used for email functionality; if not present an internal Remark Office OMR email client (using your SMTP server) may be used

*The software uses activation for license regulation. If you choose to install on a virtual machine (VM), due to the nature of how virtual environments behave, online activation is required every time the software is run.

Collect and Analyze Data from Your Forms



About Gravic, Inc.

Gravic, Inc. is a privately-held corporation located in Malvern, PA, about ten miles (16km) west of Philadelphia, PA USA. We make a number of computer software products for data collection, transformation and distribution uses. Customers for our products include schools (Primary and Higher Education), hospitals, large and small businesses, healthcare, government agencies, market researchers, trainers, meeting planners, brokerages, travel agencies, stock exchanges, electric utilities, and telcos.

The Remark Products Group of Gravic, Inc. was founded as Principia Products in 1991. We have worked in the area of image processing and pattern recognition since the early 1980's. Our early work in OCR and ICR sold thousands of licenses. In 1991, we began to focus on OMR (optical mark recognition) with image scanners (Remark Office OMR® 1.0 release). Our strength is in our ability to innovate and develop solutions for common problems, while maintaining easy-to-use and affordable software.

In 2001, we renamed Principia Products, Inc. to Gravic, Inc. and began a merger of our other entities (ITI and Compucon Services). We completed the merger in 2003 and now all product groups are run by common management.

Please visit our website to learn more about our company, values and purpose.

Thank you for your interest in Remark Classic OMR

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