TECHWARE
Engineering Applications, Inc.

Installation Instructions

Your Guide to Installing and Getting Started with @Air
Version 4.0

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Welcome to @Air 4.0 from
Techware Engineering Applications, Inc.

@Air Version 4.0 provides accurate moist air property functions which can be accessed through *DeskTop Air*, our interactive air property calculator, and can be called by many Windows applications including Microsoft Excel, Lotus 1-2-3, and MathSoft Mathcad. Programmers can call the air property functions from programming languages such as Visual BASIC, Visual C++ and many databases. The software supports 32-bit and 64-bit versions of most applications and can run under Windows Windows 95, 98, NT, 2000, XP, Vista, Windows 7 or Windows 8.

System Requirements

The minimum system requirements needed to use **@Air** Version 4.0 include:

- Microsoft Windows 95, 98, NT, 2000, XP, Vista, Windows 7 or Windows 8.
- All other hardware required by your version of Microsoft Windows.
- Approximately 2.8 MB of free disk space

Multi-User Licenses

If your **@Air** license allows more than one concurrent user, then you may repeat the installation on as many computers as indicated on your license. In each installation, you will use the same serial and authorization numbers.

Preparing for Installation

Locate Your Serial and Authorization Numbers
You will find your serial number and authorization number on the license document we sent you with your purchase. You will be asked for these numbers during the installation process. These are your unique numbers. Be sure to store them in a safe and secure place.

If someone else wishes to try **@Air** on his computer, **do not** give him your numbers. You are responsible for keeping these numbers private. Instruct them to visit our website where they can download a copy for a 30 day evaluation.

If you are installing **@Air** as a demo you will not need a serial number, however, if you try to install @Air as a demo after the evaluation period has expired, you will be prompted for a demo number. If you require a second evaluation period, call Techware.

Log On with Administrator Privileges
If your computer is running Windows NT, 2000, XP, Vista, Windows 7 or Windows 8 you must be logged in with Administrator privileges for a complete installation.

Decide Whether You Need to Support 32-bit Applications, 64-bit Applications or Both
@Air 4.0 has separate 32-bit and 64-bit installation programs. If your computer is running a 64-bit operating system, such as Windows 7, you may install either the 32-bit or 64-bit versions of **@Air**, depending upon the applications you wish to support. For example, if you have installed the 64-bit version of Office 2010 or later, you should install the 64-bit version of **@Air**. This will provide the proper **@Air** Add-in for Excel and install the 64-bit version of the DeskTop Air calculator. If, however, you have a 32-bit operating system or have installed an earlier version of Office or the 32-bit version of Office 2010 or later, you only need to install the 32-bit version of **@Air**. This will give you the proper **@Air** Add-in for Excel and the 32-bit version of the DeskTop Air calculator, which is functionally identical to the 64-bit version.

If you are not sure whether you have the 32-bit or 64-bit version of Excel 2010 installed, open Excel, click the 'File' menu then click the 'Help' item near the bottom of the menu. On the right side of the page just below "About Microsoft Excel" you will see a version number followed by either (32-bit) or (64-bit). That tells you which version of Excel you are running.

If you are not sure whether you have the 32-bit or 64-bit version of Excel 2013 installed, open Excel, click the 'File' menu then click the 'Account' item near the bottom of the menu. On the right side of the page click the 'About Excel' button. On the first line of the "About Microsoft Excel" dialog box, you will see a version number followed by either (32-bit) or (64-bit). That tells you which version of Excel you are running.

If you installed the 64-bit version of **@Air** and also wish to support some 32-bit applications, such as MathCad or 1-2-3, you may also install the 32-bit version of **@Air** to support those applications. Since Windows 7 segregates 32-bit and 64-bit programs and operations, you will have to enter your same license data for both versions.

Install Other Applications before @Air
If you wish to use **@Air** with Excel, 1-2-3 or Mathcad, make sure these applications are installed before installing **@Air**. The Setup program will copy add-in files to specific directories of these applications so that they can find the **@Air** add-ins. If you upgrade any of these applications after installing **@Air**, you may have to re-install **@Air** for proper operation.

Step-by-Step Installing @Air (32-bit)

1. If you have already installed **@Air** as a demo, you do not need to reinstall the software. Just go to the "TechwareEng/@Air" program group and click "Register @Air" (If you are running Windows Vista or later, right click on "Register @Air" and select "Run as Administrator".) Skip ahead to Step 9.

2. If you have any version of **@Air 3** installed, go to the Windows Control Panel and uninstall **@Air**.

3. Download the **@Air** software from our website at http://www.techwareeng.com/DlAA40.html Open Windows Explorer, and find the **@Air** file that you downloaded from our website. Double click the file "@Air40x86.exe" to begin the installation.

4. In the **Welcome** dialog box, press *'Next'*

5. In the **Software License Agreement** dialog box, select "I agree…" and press *'Next'*.

6. In the **Choose Destination Location** dialog box, press '*Next'* to accept the default location. Press '*Browse*' to select an alternate location then press '*OK*' and then '*Next*' to continue.

7. In the **Shortcut Folder** dialog box, press '*Next'* to accept the default location for shortcuts. You may change the shortcut location or make the shortcuts visible only to the current user if you wish.

8. In the **Select Components** dialog box, DeskTop Air, the add-in for Excel and Programming Support will be checked. If you wish to install add-ins for 1-2-3 and MathCad, you should check these boxes. If these applications are installed on your computer, the add-ins will be installed to a location where they will be found automatically by the applications. If not, they will be installed to the@Air program folder from where you can move them later. If you are not planning to use the functions with C++ or Visual Basic programming, you may uncheck the "Programming Support" box to save some disk space. Press '*Nex*t' to continue.

9. In the **Ready To Install** dialog box, press '*Next*' to proceed.

10. In the **Product License Verification** dialog box, press the "Enter License Numbers" button if you have your Serial and Authorization numbers; enter them then press '*OK*' and then *'Done'*. If you are installing @Air as a demo, press the 'Demo' button. You should receive a notice that you have 30 days to evaluate the software.

11. Press *'Finish'* to complete the installation.

Step-by-Step Installing @Air (64-bit)

1. If you have already installed **@Air** as a demo, you do not need to reinstall the software. Just go to the "TechwareEng/@Air (x64)" program group and right click on "Register @Air" and select "Run as Administrator". Skip ahead to Step 9.

2. Download the **@Air** software from our website at http://www.techwareeng.com/DIAA40.html Open Windows Explorer, and find the **@Air** file that you downloaded from our website. Double click the file "@Air40x64.exe" to begin the installation.

3. In the **Welcome** dialog box, press *'Next'*

4. In the **Software License Agreement** dialog box, select "I agree…" and press *'Next'*.

5. In the **Choose Destination Location** dialog box, press '*Next'* to accept the default location. Press '*Browse*' to select an alternate location then press '*OK*' and then '*Next*' to continue.

6. In the **Shortcut Folder** dialog box, press '*Next'* to accept the default location for shortcuts. You may change the shortcut location or make the shortcuts visible only to the current user if you wish.

7. In the **Select Components** dialog box, DeskTop Air, the add-in for Excel and Programming Support will be checked. If you are not planning to use the functions with C++ or Visual Basic programming, you may uncheck the "Programming Support" box to save some disk space. Press '*Next*' to continue.

8. In the **Ready To Install** dialog box, press '*Next*' to proceed.

9. In the **Product License Verification** dialog box, press the "Enter License Numbers" button if you have your Serial and Authorization numbers; enter them then press '*OK*' and then *'Done'*. If you are installing @Air as a demo, press the 'Demo' button. You should receive a notice that you have 30 days to evaluate the software.

10. Press *'Finish'* to complete the installation.

Getting Started

Using the DeskTop Air Calculator

DeskTop Air is a Windows program that calculates the thermodynamic and transport properties of moist air. It calculates all unknown properties when a state point is defined by two known properties. *DeskTop Air* allows you to label and store a collection of state points, which can be printed in a table or copied to the clipboard and pasted into other Windows applications.

You can launch *DeskTop Air* by clicking the Windows '*Start*' button then go to '*All Programs'*, '*TechwareEng*' folder, '*@Air*' folder and click "DeskTop Air'.

Once you have started *DeskTop Air*, you can get specific instructions for using it from the Help Menu. We suggest that you start by clicking "DeskTop Air Topics" on the Help 'Contents' tab and review the topics in order.

You can find operating instructions for *DeskTop Air* in Chapter 3 of the User's Manual as well.

Loading the @Air Functions into Excel (32-bit)

The **@Air** add-in for Excel is launched from within Excel. Once you have started Excel, use the Tools, Add-ins menu to start Excel's Add-In Manager.   (In Office 2007, click the Office button, then click the "Excel Options" button, then select the Add-ins tab and click the "Go…" button at the bottom. In Office 2010 or 2013, you can get to the Add-ins tab by clicking the File menu and then the Options item.)   You should see an item "@Air for Excel" in the list box or "@Air for Excel 2007" if you are running Excel 2007 or later. If you did not find "@Air for Excel" in the Add-in Manager list box, click the '*Browse*' button and look for the file XLAir32.xll. It should be in the C:\Program Files\TechwareEng\@Air directory. When you find it, click OK. "@Air for Excel" or "@Air for Excel 2007" should now appear in the list box. If you are running Windows 7 or 8, look in the C:\Program Files (x86)\TechwareEng\@Air directory for the file.

Click the check box next to "@Air for Excel" and press '*OK*'. The **@Air** copyright notice should be displayed on the status bar at the bottom of Excel. The **@Air** add-in is now loaded into Excel and will reload every time you start Excel. If you do not want the Add-in to load each time you start Excel, go back to the Add-in Manager and uncheck the **@Air** box before closing Excel.

Loading the @Air Functions into Excel (64-bit)

The **@Air** add-in for Excel is launched from within Excel. Once you have started Excel, click the File button, then click the "Options" button, then select the Add-ins tab and click the "Go…" button at the bottom.   Click the '*Browse*' button and look for the file XLAir64.xll. It should be in the C:\Program Files\TechwareEng\@Air directory. When you find it, click OK. "@Air for Excel 2010" should now appear in the list box.

Click the check box next to "@Air for Excel 2010" and press '*OK*'. The **@Air** copyright notice should be displayed on the status bar at the bottom of Excel. The **@Air** add-in is now loaded into Excel and will reload every time you start Excel. If you do not want the Add-in to load each time you start Excel, go back to the Add-in Manager and uncheck the **@Air** box before closing Excel.

Using the @Air Functions from Excel

Once the add-in is loaded, you can use the air property functions in the same way as you would use Excel's built-in functions. That is, you can type the function in a cell formula or use the Insert Function menu to guide you.

If you use the Insert Function menu, select the "Engineering" category and choose one of the functions beginning with "Air". If you have other Techware add-ins installed, you will see those functions as well. As you click on a function, you will see its description below the list box. When you find the function that you want, click 'OK' and the next dialog box will guide you through the selection of each function argument.

You can find more detailed information by clicking "Help for Excel Add-in" or in the "**@Air** User's manual" in the "TechwareEng\@Air" program group.

Using the @Air Functions from 1-2-3

The **@Air** add-in for 1-2-3 is launched from within 1-2-3. Once you have started 1-2-3, use the File, Add-Ins, Manage Add-ins menu selections to start the Add-In manager. Before you can use the **@Air** add-in for the first time, you must register it by pressing the 'Register' button. You should see the file 123air.12A in the Register Add-Ins window. If you installed the file elsewhere, you will have to use the 'Look in' window to search for the file. When you have located the 123air.12A file, select it and press '*Open*'. The add-in is now registered.

To load the add-in after it is registered, click on the path name that has the 123air.12A file. A check mark will appear to the left of the path name indicating that the add-in is selected. Press 'Done' to complete the task.

Thereafter, each time you start 1-2-3, the functions will be loaded automatically. If you wish to unload the functions, use the Add-In manager and uncheck the add-in.

Once the add-in is loaded, the air property functions can be used in any cell formula by typing the function name in the same ways as 1-2-3's built-in functions.

You can find more detailed information by clicking "Help for 123 Add-in" or in the "**@Air** User's manual" in the "TechwareEng\@Air" program group.

Using the @Air Functions from Mathcad

The **@Air** add-in for Mathcad is a self-registering dynamic link library (DLL) named Mcdair32.dll. The setup program should have installed this file in the Mathcadx\userefi directory. Whenever an **@Air** function is used, Mathcad will automatically load and register the function.

You can use the air property functions by typing the function with its arguments or by using the Insert Function menu.

If you use the Insert Function menu, select the "Engineering" category and choose one of the functions beginning with "Air". If you have other Techware add-ins installed, you will see those functions as well. As you click on a function, you will see its description in the box below the list. When you find the function that you want, click 'OK' and the function will be inserted in your worksheet with spaces for the arguments.

You can find more detailed information in the **@Air** User's manual.