

# KTE Interactive V9.1 Service Pack 3

## Software Release Notes & Installation Instructions

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### Introduction

This document provides supplemental information regarding KTE Interactive V9.1 Service Pack 3 (SP3). This information is grouped into two categories:

- Installation Instructions – Detailed instructions describing how to install this service pack.
- Changes – Summary of Fixes and Enhancements included in KTE Interactive V9.1 SP3.

KTE Interactive V9.1 SP3 includes all changes from KTE Interactive Service Pack 2, plus additional changes. This service pack should be applied instead of Service Pack 2. However, if KTE Interactive Service Pack 2 is already installed, it is permissible to install this service pack over it. Note that KTEI V9.1 SP3 requires Microsoft Windows® 7 or later running on your 4200-SCS.

### Updates

This document is updated and distributed with each release and service pack to provide the most up-to-date information. Refer to the previous documents for earlier updates.

- 02-JUN-2017 – V9.1 Service Pack 3 release (document number: PA-895 Rev. S / Jun 2017)
- 27-JAN-2017 – V9.1 Service Pack 2 release (document number: PA-895 Rev. R / Jan 2017)
- 18-DEC-2015 – V9.1 Service Pack 1 release (document number: PA-895 Rev. Q / April 2016)
- 03-MAR-2015 – V9.1 release (document number: PA-790 Rev. T / March 2015)

### Update firmware

To enable all V9.1 SP3 fixes, you must flash upgrade the firmware on all 4200-SMU, 4210-SMU, 4220-PGU, and 4225-PMU cards in the system after installing the service pack.

For instrument card flash update instructions, refer to the Version 9.1 release notes. Use the updated version table shown below in place of the table in the 9.1 release notes. To verify that all your cards are at the correct version level, open the KCON utility and select each card in turn. Compare the firmware version shown with the version portion of the filenames shown in the table below.

### Card/hardware/firmware version table

4200-SCS Card	Hardware Version from KCON	Firmware file to use
4200-SMU/4210-SMU <sup>1</sup>	05,XXXXXXXX or 5,XXXXXXXX	4200-803-4H31.x
	06,XXXXXXXX or 6,XXXXXXXX	4200-803-4M31.x
4220-PGU/4225-PMU <sup>2</sup>	1.0 and later	422xPxU-802SV2.05.x

<sup>1</sup> There are two different models of SMUs in the 4200, 4200-SMU (medium power) and 4210-SMU (high power). Both models use the same firmware files.

<sup>2</sup> The 4225-PMU and 4220-PGU share the same pulse/source board and use the same firmware file. The 4225-PMU adds measure capability through an additional hardware board but uses the same firmware image/file.

## Installation instructions

The Model 4200-SCS KTE Interactive V9.1 SP3 must be installed after you have successfully installed KTE Interactive V9.1. This service pack will only install on top of KTE Interactive V9.1 or KTE Interactive V9.1 SP1 or SP2 on a 4200-SCS running Microsoft® Windows® 7. After the software installation, make certain you have also performed all firmware upgrades (see [Update firmware](#)).

Before performing this installation, make sure that all of the KTE Interactive programs and all Windows programs, including any virus checkers, are stopped.

For information on the installation of the 4200 Compiler, or the version details of supported Microsoft Visual Studio®, see the information at the bottom of the release notes in "[4200 Compiler](#)."

## CD-ROM installation

To install the Model 4200-SCS KTE Interactive V9.1SP3 from the CD-ROM:

- Insert the Model 4200-SCS V9.1-SP3 CD-ROM into the 4200-SCS CD-ROM drive.

**NOTE:** The installation will execute automatically. However, if it does not, open the executable file **KTEI\_SP.exe** in Windows Explorer or with the command prompt.

After you have successfully installed the service pack, a window opens that reminds you to upgrade the instrument firmware and provides an option to display the release notes.

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## Changes

### Problem fixes

<b>Issue Number</b>	<b>SCS-2303</b>
<b>Subsystem</b>	<b>LPT</b>
<b>Symptom</b>	The <code>pulse_load()</code> LPT command may override the user-specified setting and change it to 1e6 when the PMU/RPM is on the 40 V/100 µA ranges. The <code>pulse_load()</code> LPT command may allow a user-specified setting on the 10 V/10 mA (RPM) ranges, instead of overriding it to 1e6.
<b>Resolution</b>	This issue has been corrected.
<b>Issue Number</b>	<b>SCS-2304/AR55649</b>
<b>Subsystem</b>	<b>KITE</b>
<b>Symptom</b>	In rare instances, KITE can crash when opening or saving test data.
<b>Resolution</b>	This issue has been corrected.
<b>Issue Number</b>	<b>SCS-2305</b>
<b>Subsystem</b>	<b>InitUser</b>
<b>Symptom</b>	InitUser fails with the latest Microsoft Visual Studio® 2015 installation files from the Internet. As a result, you cannot use KULT with a newly installed version of Visual Studio 2015.
<b>Resolution</b>	This issue has been corrected.

<b>Issue Number</b>	<b>SCS-2307/AR55675</b>
<b>Subsystem</b>	<b>4220-PGU, 4225-PMU</b>
<b>Symptom</b>	Spikes can appear on the VPU output with the <code>pg2_init()</code> command.
<b>Resolution</b>	This issue has been corrected.
<b>Issue Number</b>	<b>SCS-3133</b>
<b>Subsystem</b>	<b>KITE</b>
<b>Symptom</b>	KITE can crash under certain subsite configurations.
<b>Resolution</b>	This issue has been corrected.
<b>Issue Number</b>	<b>SCS-3189/SCS-3193/AR55967/AR55753</b>
<b>Subsystem</b>	<b>4225-RPM</b>
<b>Symptom</b>	RPM detection of SMU connections may not detect a connected SMU.
<b>Resolution</b>	This issue has been corrected.
<b>Issue Number</b>	<b>SCS-3224/AR55969</b>
<b>Subsystem</b>	<b>Datasheet</b>
<b>Symptom</b>	The cabling information in the Supplied Accessories section of the 4200A-SCS datasheet was confusing.
<b>Resolution</b>	This issue has been corrected.
<b>Issue Number</b>	<b>SCS-3245/AR56302</b>
<b>Subsystem</b>	<b>Manuals</b>
<b>Symptom</b>	The formula for interface trap capacitance CIT and density DIT are incorrect in the Reference Manual.
<b>Resolution</b>	This issue has been corrected.

## Usage notes

In order to verify the proper installation of the Model 4200-SCS KTE Interactive V9.1SP3, follow these instructions to check the software and firmware versions:

1. In KITE, save your projects and tests.
2. Close the KITE software.
3. Run KCON software by clicking the KCON icon on the desktop.

**NOTE** In the left pane, the KI System Configuration function will be highlighted. If it is not, click the KI System Configuration. The right pane shows the system configuration information. Note that the KTE Interactive Version is V9.1SP3.

4. Expand the system instrument tree by clicking the + symbol next to the KI 4200-SCS in the left pane.

## 4200 Compiler

Model 4200-SCS Semiconductor Characterization Systems shipped prior to October 2010 included the Microsoft® C++ compiler as a standard, preinstalled part of the system.

Model 4200-SCS systems shipped after October 2010 no longer include a preinstalled compiler, unless you specifically order it when you purchase your 4200-SCS.

NOTE: You need a compiler if:

- You are using Keithley User Library Tool (KULT) to create user test modules (UTMs).
- You want to modify the standard UTMs supplied with KULT.
- You plan to do custom C++ programming to control the 4200-SCS or other equipment.

If you need the compiler, you are encouraged to order it when you are ordering your 4200-SCS system, because it will then be preinstalled at the factory. If you already have a 4200-SCS system that does not include a compiler, you can order the compiler using the catalog number 4200-Compiler, which will be Microsoft® Visual Studio® Professional 2013 or 2015, depending on the availability of the 2013 version. Or, you can purchase the 2015 version (Microsoft part number C5E-01235) or 2013 version (Microsoft part number C5E-01018) and install it on your system following the procedure “Installing the 4200-Compiler” found on the 4200 Complete Reference Technical Notes page.