



Apriva[®] BT200-T Device Utility for RIM[®] Mobile Devices

Installation and User's Guide



Apriva® BT200-T Device Utility for RIM Mobile Devices Installation and User's Guide

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Introduction

This guide provides instructions to install and operate the Apriva® BT200 –T Smart Card Reader (SCR) on a Research in Motion (RIM®) mobile device. The Apriva products covered in this guide provide one-to-one login access and secure, encrypted data features.

NOTICE

For wireless connections, mobile devices must support Bluetooth® stack requirements. For more information, contact Apriva Technical Support. See [Apriva Technical Support](#) on page 30.

This guide assumes you are familiar with the RIM mobile device and its features (buttons, interface, and so on). For more information about the RIM mobile device, refer to the user's guide for your model.

Due to differences in operating systems, preference settings, and software versions, the images and feature options described in this guide may differ from the ones shown on your computer or mobile device. For more information about applications or features described in this guide, contact Apriva Technical Support. See [Apriva Technical Support](#) on page 30.

Definitions

Table 1 shows product terms and definitions used in this guide.

Term	Definition
Apriva Smart Card Reader	Apriva device for allowing an interface between a mobile device and a smart card.
Apriva Device Utility	Apriva software that integrates Apriva secure applications with the mobile device.
RIM mobile device	Mobile device designed and supported by RIM.
BlackBerry Desktop Manager®	RIM software used to transfer files from computers to mobile devices that use the RIM operating system.

Table 1 – Definitions

Hardware and Software Requirements

The following sections describe hardware and software requirements.

Hardware Required

The following hardware is required:

- A mobile device with a RIM operating system
- Apriva BT200-T Bluetooth Smart Card Reader
- Smart card
- USB cable with mini adapter
- USB adaptor (supplied with reader)
- Computer

Software and Firmware Required

The following software and firmware are required:

- Apriva driver for RIM
- Apriva Device Utility
- BlackBerry® Desktop Manager

BES Server Requirements

The following table shows how BlackBerry Enterprise Server® (BES) policies must be configured **before** you can install the Apriva Device Utility. If necessary, contact your network administrator to configure server settings.

BlackBerry Enterprise Server Requirements	
Policies that must be set for either Bluetooth or USB	Setting
Disallow Third Party Application Downloads	False
Allow Third Party Apps to Use Serial Port	True
Bluetooth-only policies	Setting
Disable Cut/Copy/Paste	False
Disable Serial Port Profile	False
Force Memory Cleaner When Holstered	True

Table 2 – BlackBerry Enterprise Server requirements

RIM OS – S/MIME – Apriva Device Utility Requirements

The mobile device must have the RIM operating system (OS) and Secure/Multipurpose Internet Mail Extensions (S/MIME) installed before you can install the Apriva Device Utility. See [Importing Certificates](#) on page 18. You can download the software from the RIM website or the reseller where the device was purchased.

CAUTION

To avoid system errors, The RIM OS and S/MIME versions must be compatible. The following table shows recommended version usage.

RIM OS Version	S/MIME Version	Apriva Device Utility Version
3.7	1.5	V02.02.11
4.0	4.0	v03.21.02 or later
4.1	4.1	v03.21.02 or later
4.2	4.2	v03.3.02 or later
4.5	4.5	v03.3.02 or later
4.7	4.7	v03.3.02 or later
5.x	5.x	v03.30.18

Table 3 – RIM, S/MIME, and Apriva software compatibility table

Apriva BT200-T Reader

The Apriva BT200-T Reader uses a hardware security module with embedded public key infrastructure (PKI) information to create a secure, one-to-one connection with the mobile device through wireless Bluetooth protocol or a Universal Serial Bus (USB) connection.

Apriva Reader Features

Figure 1 shows the following Apriva Reader features:

- **ON/OFF button:** Powers the reader on and off.
- **GREEN/RED LEDs:** Indicate battery and connection statuses.
- **Smart card:** Activates the reader when inserted using embedded PKI information.
- **PC/CHARGE port:** Connects the reader to a computer or wall charger through a USB cable.
- **PDA port:** Connects the reader to a mobile device for a tethered (non-wireless) connection.



Figure 1 – Apriva Reader features

Powering on the Reader

When powered on, both LEDs illuminate while the reader performs a series of startup tests. For LED startup descriptions, see [Reader LED Startup Indications](#) on page 24.

To power the reader on or off:

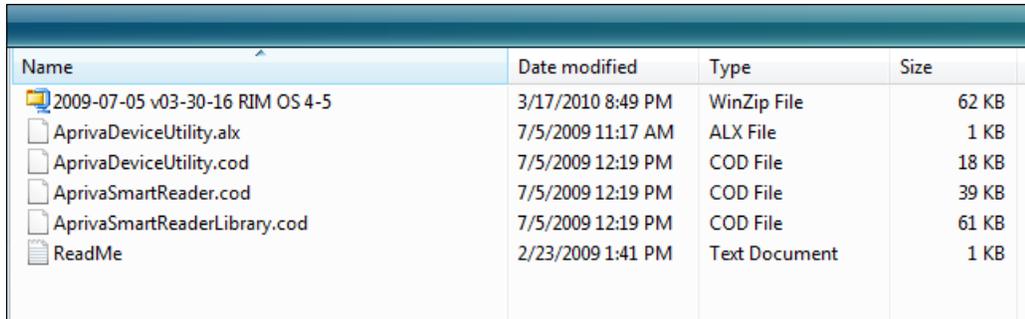
Press the **Power On/Off** button on the top of the reader. If the reader will not power on (the LEDs are not lit), try charging the battery as described in [Charging a Completely Discharged Reader Battery](#) on page 24.

Downloading the Apriva Reader Driver

You must download the Apriva reader driver from the Apriva Support website before you can install it on the mobile device. See below.

To download the Apriva reader driver:

1. Go to the Apriva Support website at http://iss.apriva.com/support_rim_drivers.aspx.
2. Download the driver (Zip file) for your RIM operating system version. For version compatibility information, see [RIM OS – S/MIME – Apriva Device Utility Requirements](#) page 3.
3. Save the Zip file to a folder that you will keep on your computer.
4. Unzip (extract) the Zip file. After unzipping the file, the following files should be in the folder (see Figure 2):
 - The Zip file with the version number
 - AprivaDeviceUtility.alx
 - AprivaDeviceUtility.cod
 - AprivaSmartReader.cod
 - AprivaSmartReaderLibrary.cod
 - Readme.txt



Name	Date modified	Type	Size
2009-07-05 v03-30-16 RIM OS 4-5	3/17/2010 8:49 PM	WinZip File	62 KB
AprivaDeviceUtility.alx	7/5/2009 11:17 AM	ALX File	1 KB
AprivaDeviceUtility.cod	7/5/2009 12:19 PM	COD File	18 KB
AprivaSmartReader.cod	7/5/2009 12:19 PM	COD File	39 KB
AprivaSmartReaderLibrary.cod	7/5/2009 12:19 PM	COD File	61 KB
ReadMe	2/23/2009 1:41 PM	Text Document	1 KB

Figure 2 – Apriva Device Utility files

Installing the Apriva Device Utility

You must install the Apriva Device Utility on the mobile device before you can connect to the reader. To install the Apriva Device Utility on the mobile device, you must use the BlackBerry Desktop Manager application. You can download BlackBerry Desktop Manager from the RIM website at:

<http://na.blackberry.com/eng/services/desktop/>.

To start BlackBerry Desktop Manager:

1. Connect the mobile device to the computer with the USB cable.
2. Double-click the **Desktop Manager** icon on the computer desktop (shown on the right), or start the application from the **Programs** menu. The BlackBerry Desktop Main Menu appears. See Figure 3.

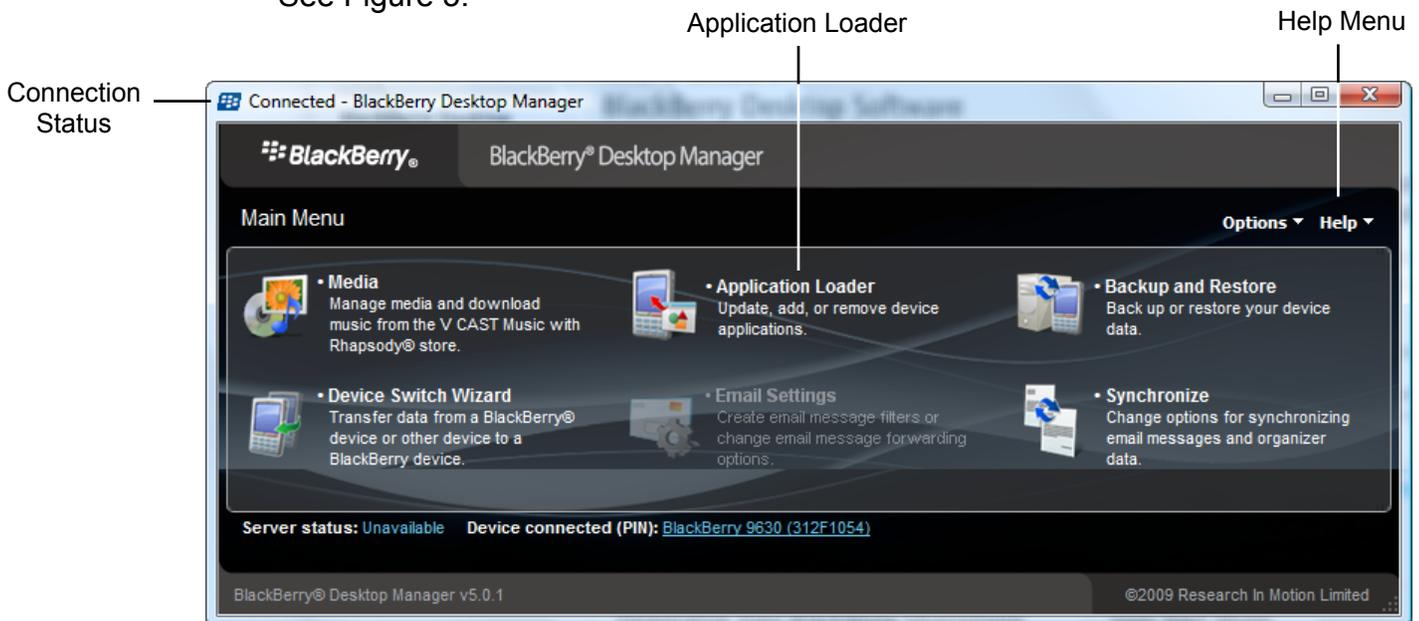


Figure 3 – BlackBerry Desktop Manager Main Menu

3. Make sure the mobile device is properly connected. The title bar shows the connection status. See Figure 3.

To view mobile device Properties:

From the Main Menu, select **Help > Device Properties**. The device properties screen shows the device properties. See Figure 4.

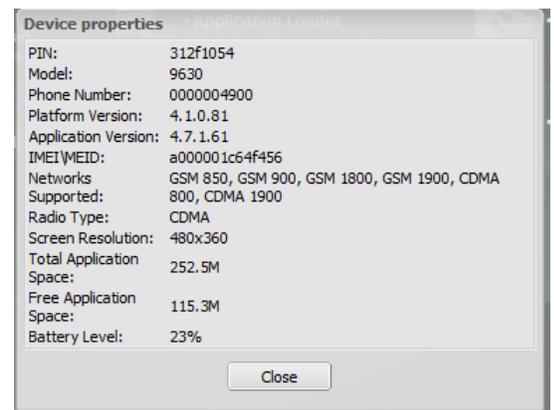


Figure 4 – Device properties screen

To install or uninstall the Apriva Device Utility on the mobile device:

1. Click the **Application Loader** icon. The Application Loader dialog box appears. See Figure 5.

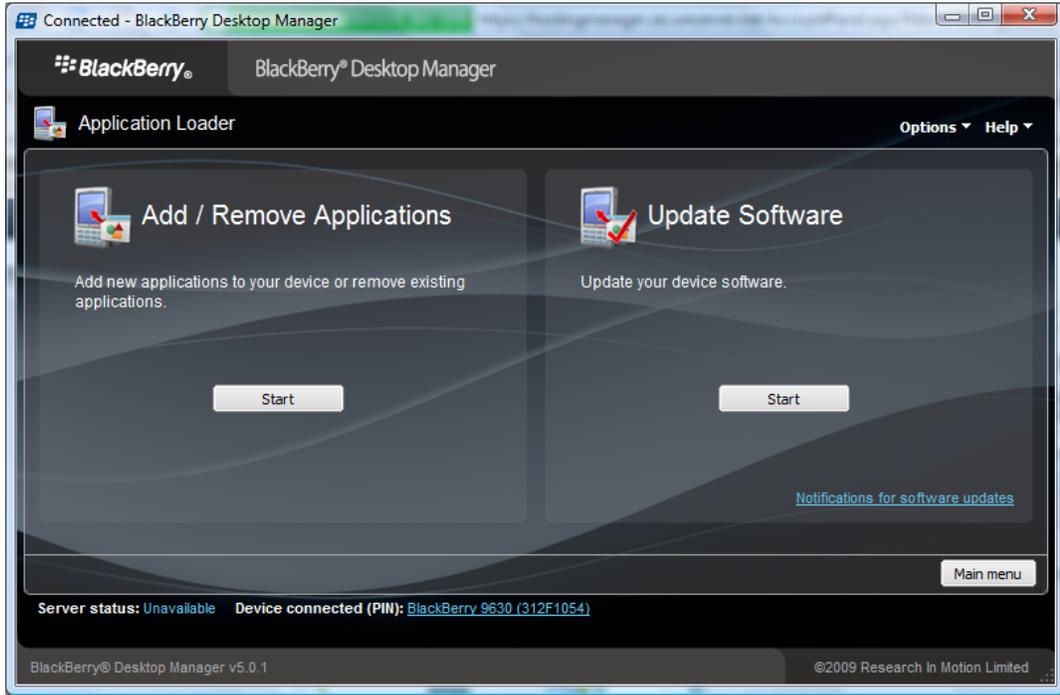


Figure 5 – Application Loader dialog box

2. In the **Add / Remove Applications** area, click **Start**. BlackBerry Desktop Manager shows The Device application selection area and applications that are currently installed on the mobile device. See Figure 6.

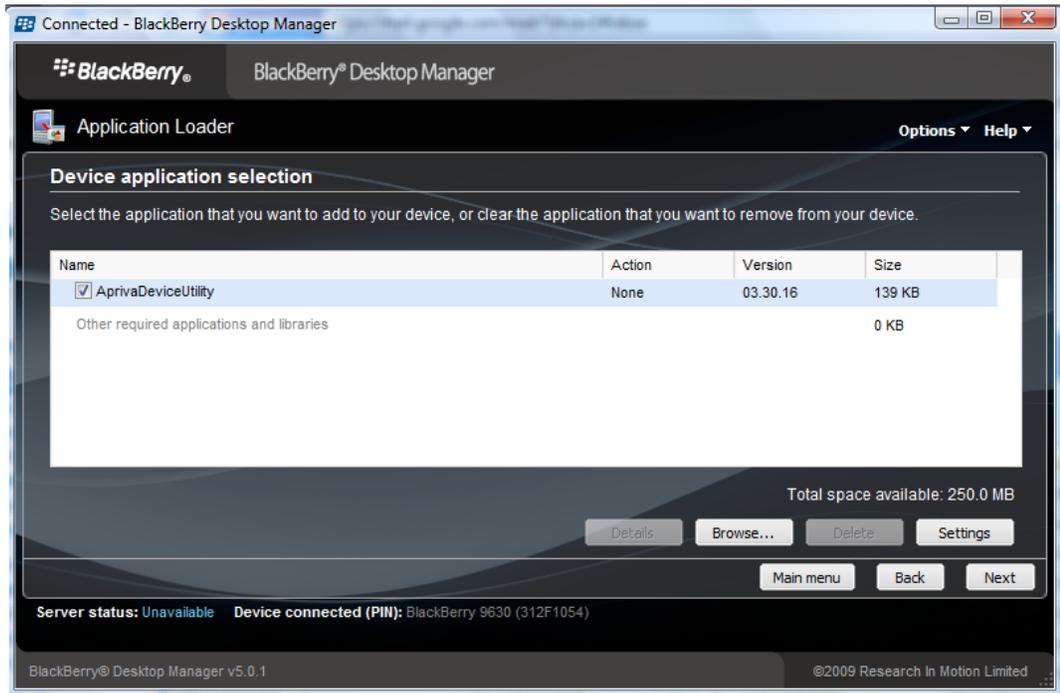


Figure 6 – Device application selection area

3. Do one of the following:

If you are installing or upgrading the Apriva Device Utility:

- a. Click **Browse**.
- b. From the folder in which the Apriva Device Utility files were saved, select the `AprivaDeviceUtility.alx` file, and then click **Open**.
- c. Click **Next**, and then click **Finish**.

If you are uninstalling the Apriva Device Utility:

- a. Clear the check box next to the Apriva Device Utility option.
- b. Click **Next**, and then click **Finish** to delete the application. The installation message appears while BlackBerry Desktop Manager installs or uninstalls the application. See Figure 7.

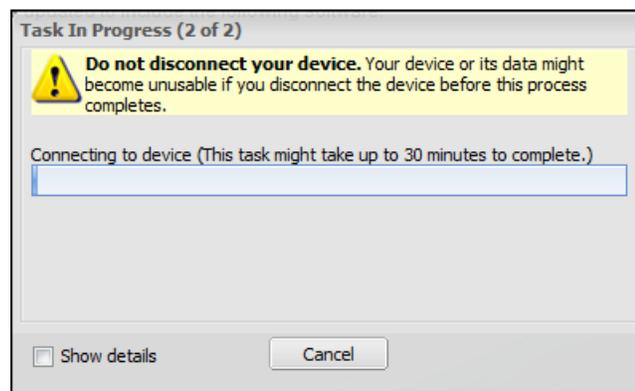


Figure 7 – BlackBerry Desktop Manager installation message

4. When finished, BlackBerry Desktop Manager shows “Operation complete.” Then the mobile device reboots to complete installing or uninstalling the Apriva Device Utility.
5. Exit BlackBerry Desktop Manager, and then disconnect the mobile device from the computer. After the mobile device reboots, the message shown in Figure 8 appears.

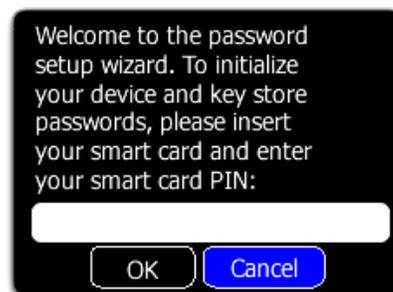


Figure 8 – Smart card PIN screen

6. Connect the reader to the mobile device with the USB cable. Use the supplied USB adapter if necessary.
7. Power on the reader, and then insert the smart card.
8. Enter your smart card PIN, and then select **OK**. If you do not know your PIN, contact your system administrator.

Using the Apriva Device Utility

Most of the features described in the following sections require you to pair the devices first. See [Pairing the Reader to the Mobile Device](#) on page 10.

The following sections cover Apriva Device Utility options available on the mobile device:

- [Viewing the Apriva Device Utility Menu](#) below
- [Pairing the Reader to the Mobile Device](#) on page 10
- [Testing the Reader Connection](#) on page 12
- [Using the Mobile Device in Tethered USB Mode](#) on page 13
- [Viewing the Apriva SmartReader Version Number](#) on page 14
- [Viewing the Device Revision Number](#) on page 15
- [Using Reader Sessions](#) on page 16
- [Importing Certificates](#) on page 18
- [Viewing the Reader Battery Level](#) on page 20
- [Viewing the Reader Serial Number](#) on page 21

Viewing the Apriva Device Utility Menu

You can view all of the reader settings from the Apriva Device Utility menu.

To view the Apriva Device Utility menu:

1. Press the menu key ().
2. Use the trackpad to navigate to and select Downloads () > Apriva Device Utility ().
3. Press the trackpad to select the Apriva Device Utility line. The Apriva options screen appears. See Figure 9.

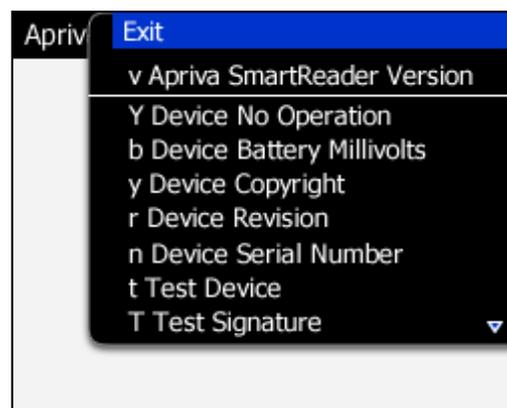


Figure 9 – Apriva options screen

Pairing the Reader to the Mobile Device

Before you can operate the reader with the mobile device, you must pair the devices.

About Bluetooth Security

Bluetooth communication between the mobile device and the reader is conducted over a locked down Bluetooth encrypted link, which is further encrypted with an Advanced Encryption Standard (AES) AES-256 session key. The session key is passed between the mobile device and the reader using Rivest, Shamir, and Adleman (RSA) encryption and two-factor authentication.

After the reader is paired with the mobile device, it is not discoverable and can only be connected with the paired mobile device. The only way to force the reader into a discoverable state is to perform another pairing operation with a wired USB communication. All Bluetooth communications are forced to use Bluetooth encryption.

During the USB-wired pairing operation, public 1024-bit RSA keys are generated and exchanged between the mobile device and the reader. When a Bluetooth session is started, the mobile device and the reader perform an RSA encrypted two-way challenge and response to authenticate each other and then share an AES-256 session key using RSA encryption. The shared AES-256 session key is used to encrypt sensitive data being sent between the mobile device and the reader.

Pairing the Devices

To pair the devices:

1. Connect the reader to the mobile device with the USB cable.
2. Power on the reader.
3. Insert the smart card.
4. Press the menu key ()
5. Use the trackpad to navigate to and select **Downloads** () > **Apriva Device Utility** ()

6. Press the trackpad to select the **Apriva Device Utility** line. The Apriva options screen appears.
7. Either use the trackpad to scroll to **Bluetooth Pair** or press uppercase **B** on the keyboard.
8. Press the trackpad to select the option. If the connection is successful, the message shown in Figure 10 appears, and both LEDs on the reader flash rapidly (for about 90 seconds) to indicate that the reader is ready for pairing. **You must pair the reader with the mobile device before the timer expires** (steps 9 through 15). If the timer expires, you must repeat this step.

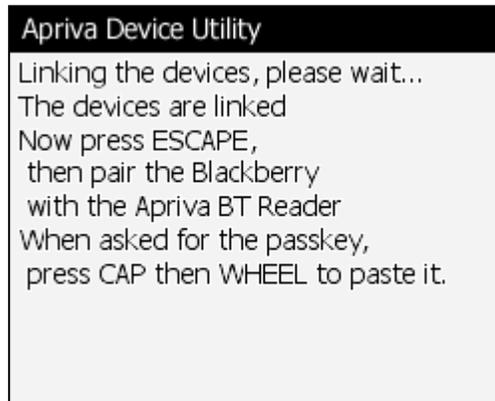


Figure 10 – Pairing message

9. Press the **Escape** key twice on the mobile device to return to the main menu.
10. Use the trackpad to navigate to and select **Options > Bluetooth**. If the mobile device shows that it is currently paired with another Apriva Reader, you must delete the device before you can pair the new device. See the following section, [Deleting a Currently Paired Device](#).
11. Press the trackpad, and then select **Add Device**. Press the trackpad again to display the Add Device options menu.
12. Press the trackpad to select **Search**. The mobile device searches for devices. "Apriva BT Reader" is displayed. If this does not display, the timer has expired and you must repeat this procedure from step 4.
13. Press the trackpad. You are prompted for a passkey. **The passkey is automatically on the mobile device clipboard. Do not use the keyboard to enter one.**
14. Enter the passkey by pressing the **Shift** button on the keyboard, and then press the trackpad to enter the passkey stored on the clipboard.
15. Press the trackpad again to complete the pairing operation.

Deleting a Currently Paired Device

You can delete paired devices.

To delete a currently paired device:

1. Select the device shown, and then use the trackpad to scroll to and select **Delete Device**.
2. Select **Delete**, and then press the trackpad again to delete the device.

Testing the Reader Connection

You can test the reader connection to verify that it is communicating with the mobile device.

To test the reader connection:

1. Power on the reader.
2. Insert the smart card.
3. Press the menu key ().
4. Use the trackpad to navigate to and select **Downloads** () > **Apriva Device Utility** ().
5. Press the trackpad to select the **Apriva Device Utility** line. The Apriva options screen appears.
6. Either use the trackpad to scroll to **Test Device** or press the lowercase **t** on the keyboard.
7. Press the trackpad to activate the test. Test results display after a few seconds. Following are example test result screens. The image on the left shows a good reader connection. The image on the right shows a failed reader connection.
8. **NOTE:** The last line of the “good” test shows the connection type. If the mobile device is connected to the reader with a USB cable, the Channel Type is USB. Otherwise, the Channel Type is Bluetooth. See Figure 11.

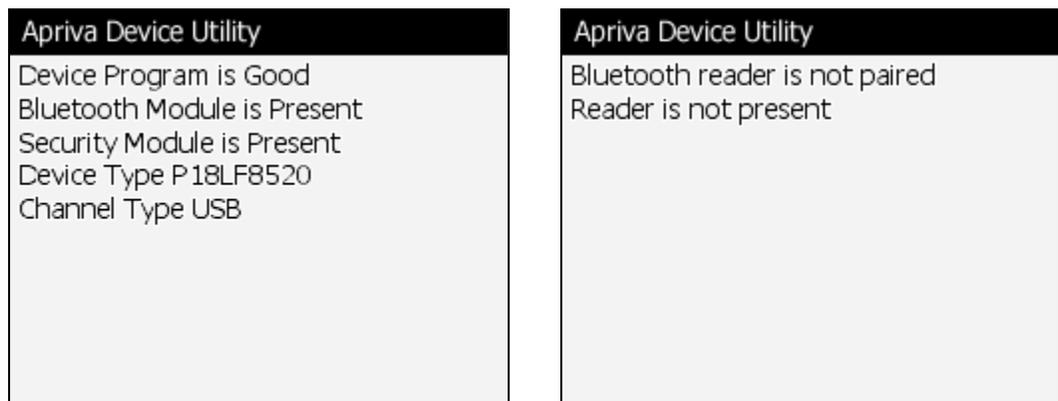


Figure 11 – Bluetooth connection test messages

Using the Mobile Device in Tethered USB Mode

You can disable Bluetooth (wireless) mode and use the reader in tethered USB mode. Tethered USB mode prevents wireless RF emissions, which is useful in situations where RF emissions are not allowed, such as airplanes or Sensitive Compartmented Information Facilities (SCIFs).

NOTE: The devices must be paired before you can switch between USB and Bluetooth modes. See [Pairing the Reader to the Mobile Device](#) on page 10.

To use the mobile device in tethered USB mode:

Connect the USB cable from the reader to the mobile device. Use the supplied adapter if necessary. The mobile device automatically switches to USB mode.

To switch from USB mode to Bluetooth (wireless) mode:

Remove the USB cable from the reader and the mobile device. The mobile device automatically switches from USB mode to Bluetooth mode.

Viewing Version Numbers

You can view the Apriva SmartReader (Device Utility) and reader version numbers to make sure they match. For example, if the mobile device has Apriva Device Utility version v03.30.16 installed, the reader should have the same version number. If the versions are different, the reader may not work properly.

Viewing the Apriva SmartReader Version Number

You can view the Apriva SmartReader (Device Utility) version.

To view the Apriva Device Utility version number:

1. Press the menu key ().
2. Use the trackpad to navigate to and select **Downloads** () > **Apriva Device Utility** ().
3. Press the trackpad to select the **Apriva Device Utility** line. The Apriva options screen appears.
4. Either use the trackpad to scroll to **AprivaSmartReader Version** or press the lowercase **v** on the keyboard.
5. Press the trackpad to select the option. The Apriva SmartReader version number is displayed. See Figure 12.

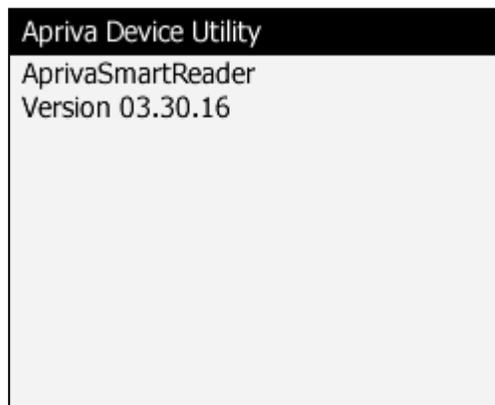


Figure 12 – Apriva Smart Reader version number

Viewing the Device Revision Number

You can view the device revision number and update the firmware on the reader if applicable. If the reader revision is current, the screen only shows the revision number. If the reader firmware version is an earlier version than the version stored on the mobile device, you are prompted to “flash” the reader firmware, as described below.

To view the device revision number:

1. Power on the reader.
2. Insert the smart card.
3. Press the menu key ().
4. Use the trackpad to navigate to and select **Downloads** () > **Apriva Device Utility** ().
5. Press the trackpad to select the **Apriva Device Utility** line. The Apriva options screen appears.
6. Either use the trackpad to scroll to **Device Revision** or press the lowercase **r** on the keyboard.
7. Press the trackpad to select the option and display the version number.

If the reader firmware is an earlier version than what is shown in the Apriva Device Utility version, you are prompted to flash the reader.

To flash (update) the reader firmware version:

1. While you are in the Device Revision screen, either use the trackpad to scroll to **Factory Flash** or press uppercase **F** on the keyboard.
2. Press the trackpad to select the option. If the Apriva Device Utility reader firmware version installed on the mobile device is a later version than what is installed on the reader, the firmware is updated on the reader. The flash operation takes **45 to 60** seconds.

Using Reader Sessions

You can use reader sessions to identify the smart card that is inserted in the reader.

Opening a Reader Session

You must open a reader session before you can identify the smart card.

To open a reader session:

1. Power on the reader.
2. Insert the smart card.
3. Press the menu key ().
4. Use the trackpad to navigate to and select **Downloads** () > **Apriva Device Utility** ().
5. Press the trackpad to select the **Apriva Device Utility** line. The Apriva options screen appears.
6. Either use the trackpad to scroll to **Smart Card Open Session** or press the lowercase **o** on the keyboard.
7. Press the trackpad to select the option. A session screen similar to the one shown in Figure 13 appears, identifying the session connection.

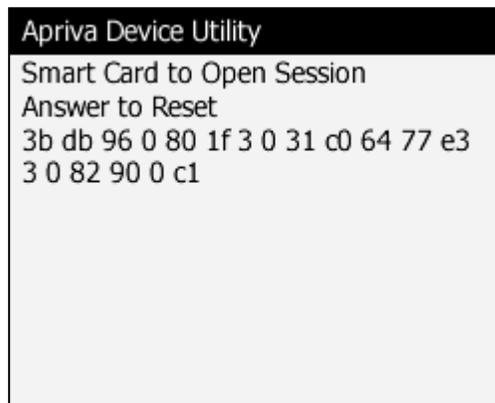


Figure 13 – Open Session message

Identifying the Smart Card

Identifying the smart card verifies that the Personnel applet and PKI are present. If you receive an error, such as “Smart Card not present” or “Smart Card not found” while attempting to identify the smart card, make sure the smart card is placed in the reader as shown in the example in [Apriva Reader Features](#) on page 4. If you still receive an error message, you must log in to the mobile device with the smart card PIN. Then exit the Apriva Device Utility, power cycle the reader, and perform the operation again.

To identify the smart card:

1. **During the session**, either use the trackpad to scroll to **Smart Card Identification** or press the lowercase **i** on the keyboard.
2. Press the trackpad to select the option. The smart card verification information appears. If the screen shows “No Smart Card Reader Session. Session is not open,” the smart card is not identified by the mobile device. If the mobile device displays this message, you must log on to the device using your smart card pin before the mobile device can identify the smart card.

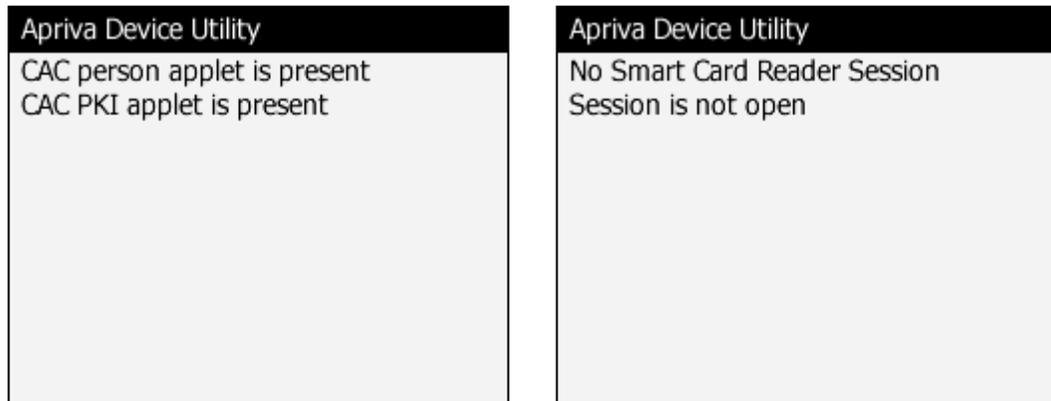


Figure 14 – Open Session message

Closing a Reader Session

After you have identified the smart card, close the reader session to complete the test.

To close a reader session:

1. **During the session**, either use the trackpad to scroll to **Smart Card Close Session** or press the lowercase **d** on the keyboard.
2. Press the trackpad to select the option. The screen shows “Smart Card Closed Session.”

Importing Certificates

Because S/MIME is RIM software, there may be different steps for importing S/MIME certificates. The following procedure shows one way to import the certificates, but if you experience any problems with RIM, S/MIME, or importing the certificates, contact RIM (see [RIM Support](#) on page 30) or the reseller where the S/MIME was purchased. RIM or the reseller can provide customer service to best import the certificates. After the certificates have been imported, the smart card and the mobile device are paired.

To import a certificate:

1. Press the menu key ().
2. Use the trackpad to navigate to and select **Options**. Depending on your mobile device model, one of the following screens shown in Figure 15 appears.

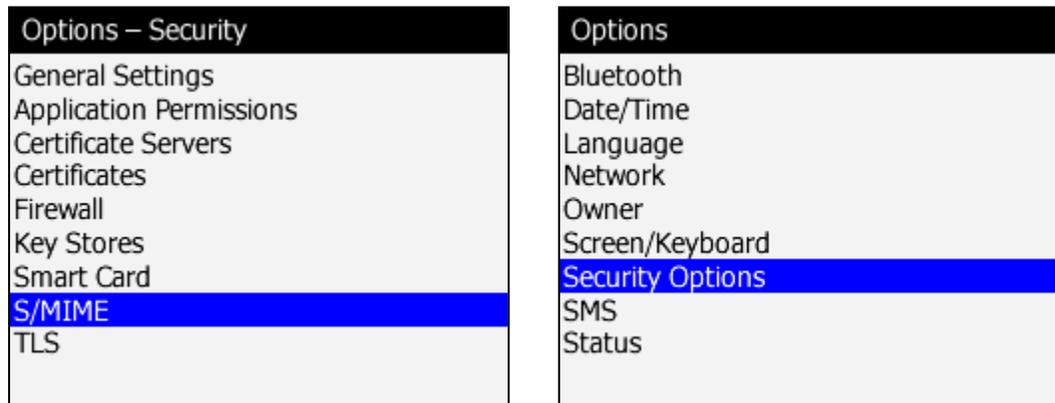


Figure 15 – Security options screens

3. Use the trackpad to locate and select the S/MIME option in the applicable screen. The S/MIME screen appears. See Figure 16.

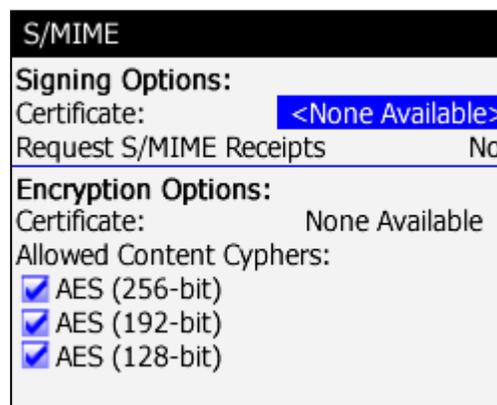


Figure 16 – S/MIME screen

4. If it is not currently highlighted, use the trackpad to navigate to and select **<None Available>**.
5. Press the trackpad to continue. A new menu appears. See Figure 17.

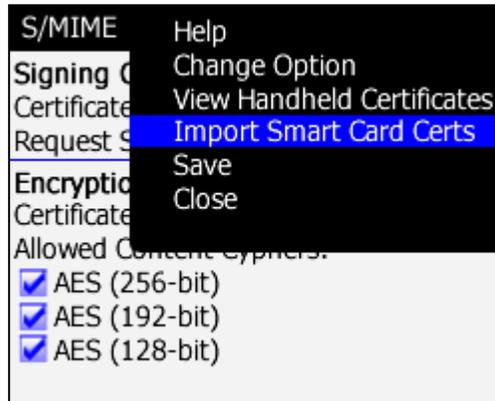


Figure 17 – Import Smart Card Certs option

6. Using the trackpad, navigate to and select **Import Smart Card Certs**. After the S/MIME has read the smart card, it displays the certificates available for importing.
7. Use the **Space** button on the keyboard to select or clear the certificates listed. After you select all of the certificates that you want to import, select **OK**.
8. After the certificates import process is complete, press the **Escape** key to return to the main screen. The Reader and Apriva Device Utility should be ready for normal use.

Viewing the Reader Battery Level

After the reader is paired with the mobile device (see [Pairing the Reader to the Mobile Device](#) on page 10), you can view the reader battery level from the Apriva Device Utility menu.

NOTE: To keep the reader functioning properly, make sure the battery level is always at least 50%.

To view the battery level:

1. Power on the reader.
2. Insert the smart card.
3. Press the menu key ().
4. Use the trackpad to navigate to and select **Downloads** () > **Apriva Device Utility** ().
5. Press the trackpad to select the **Apriva Device Utility** line. The Apriva options screen appears.
6. Either use the trackpad to scroll to **Device Battery Millivolts** or press the lowercase **b** on the keyboard.
7. Press the trackpad to select the option. Battery voltage results are displayed in millivolts (1000 millivolts = 1 volt), as shown in Figure 18.

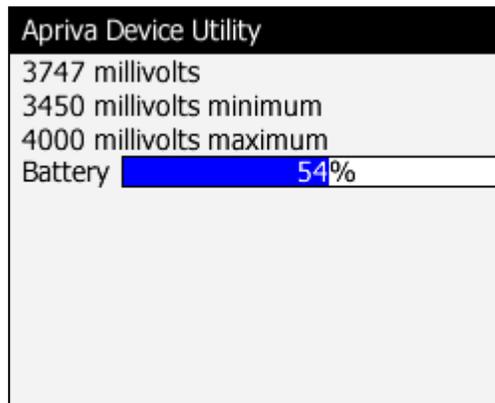


Figure 18 – Battery voltage screen

Viewing the Reader Serial Number

You can use the Apriva Device Utility menu to view the reader serial number.

To view the battery level:

1. Power on the reader.
2. Insert the smart card.
3. Press the menu key ().
4. Use the trackpad to navigate to and select **Downloads** () > **Apriva Device Utility** ().
5. Press the trackpad to select the **Apriva Device Utility** line. The Apriva options screen appears.
6. Either use the trackpad to scroll to **Device Serial Number** or press the lowercase **n** on the keyboard.
7. Press the trackpad to select the option. The serial number is as shown in Figure 19.

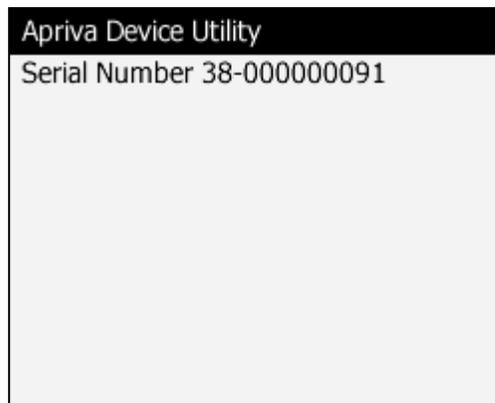


Figure 19 – Serial number screen

Charging the Reader Battery

The reader battery must be fully charged before use. It takes approximately three hours to charge a completely discharged battery. The LEDs on the top of the reader indicate the charge status. See [Charging Indications](#) on page 22.

NOTICE

If you are charging the battery with a computer that uses Windows XP, you must first install the Apriva USB driver. Failure to do so will drain the reader battery. See [Installing the Reader USB Driver](#) on page 23.

You cannot charge the reader battery with computers that use Windows Vista or Windows 7 operating systems. If your computer uses one of these operating systems, you must use a wall charger to charge the battery.

To keep the reader functioning properly, **make sure the battery level is always at least 50%**. If the reader battery is completely discharged (LEDs do not illuminate when reader is powered on), charge the reader battery as described in [Charging a Completely Discharged Reader Battery](#) on page 24.

To charge the reader battery:

Connect the USB cable from the **PC/CHARGE** port on the reader to the USB port on the computer or a standard wall charger. Allow the battery to charge for **20 to 30 minutes**. When charging, the **GREEN** LED is continuously lit with occasional quick flashes.

Charging Indications

Table 4 shows reader LED charging indications. For general LED operation descriptions, see [Reader LED Descriptions](#) on page 25.

Indication	Description
GREEN LED is continuously lit with occasional quick flashes.	The reader is connected to a computer and the battery is charging.
GREEN LED is not continuously lit but blinks on every few seconds.	The reader has a sufficient charge.
RED LED is continuously lit.	The battery is low and needs to be charged.

Table 4 – LED Charging indications

Installing the Reader USB Driver

If you are using a USB connection to charge the battery (not a wall charger), and the battery does not seem to be charging, or if it takes more than one hour to charge, you might need to install the Apriva USB driver.

To install the USB driver and recharge the reader:

1. Download the USB driver from the Apriva downloads website. For driver download information, see [Apriva Technical Support](#) on page 30.
2. Connect the reader to the computer with the USB cable to start the driver installation wizard.
3. Follow the wizard instructions to install the USB driver.

After installing the driver, connect the reader to the computer with the USB cable to charge the reader.

Reader Troubleshooting Tips

The following sections describe general reader troubleshooting tips.

Reader LED Startup Indications

When you power on the reader, the LEDs remain lit for a few seconds while the reader performs an integrity check. During the integrity check, the reader first determines if there is a USB connection and then adjusts the settings as follows:

- *If a USB connection is found*, the reader disables Bluetooth and uses the USB connection.
- *If a USB connection is not found*, the reader disables the USB option and looks for a Bluetooth pairing.
- *If the reader is not paired with the mobile device*, the reader powers off.
- *If the reader is paired with the mobile device*, the reader determines if Bluetooth is enabled.
- *If Bluetooth is not enabled*, the reader powers off.
- *If Bluetooth is enabled*, the LEDs blink every four seconds while awaiting the Bluetooth connection.

Charging a Completely Discharged Reader Battery

If the reader battery is completely discharged (the LEDs are not lit), the microprocessor that operates the LEDs might not be working, which may cause faulty LED indications. This is because the microprocessor requires enough battery voltage to operate the LEDs. If you find that the LEDs are not lit even when you are charging the battery, try the following procedure.

To charge a completely discharged battery:

1. Connect the USB cable from the **PC/CHARGE** port on the reader to the **USB** port on the computer or a standard wall charger. Allow the battery to charge for **20 to 30 minutes**.
2. Disconnect the reader from the charger.
3. Power the reader on to make sure the LEDs illuminate.
4. Reconnect the reader to the charger.
 - *If the LEDs still do not illuminate*, contact Apriva Technical Support. See [Apriva Technical Support](#) on page 30.
 - *If the LEDs are lit*, allow the battery to charge for about three hours, and then disconnect the USB cable. The battery is charged.

Reader LED Descriptions

Table 5 describes reader LED indications and their meanings.

Action	Indication	Meaning
Reader powered on using power button	Solid GREEN and solid RED for about two seconds	Normal power on indication while reader completes self test.
Battery test mode (about four seconds)	Solid GREEN	Battery over 75% charged, ready for reader operations.
	Rapid GREEN blinking (two per second)	Battery between 25% and 75% charged, ready for reader operations.
	Rapid RED blinking (two per second)	Battery less than 25% charged, you should charge before use.
	After four seconds both LEDs turn off	Normal transition to reader ready mode.
Reader ready mode	GREEN blinking (every four seconds)	No USB or Bluetooth connection, battery over 25% charged.
	RED blinking (every four seconds)	No USB or Bluetooth connection, battery less than 25% charged.
	GREEN blinking (every one second)	USB or Bluetooth connection, battery over 25% charged.
	RED blinking (every one second)	USB or Bluetooth connection, battery less than 25% charged.
Power down mode	GREEN and RED solid for about two seconds then both turn off	Power down indicates power switch pressed, card removed, reader not paired, no Bluetooth or USB connection, or inactivity timer expired.
Reader charging mode (Reader is connected to a charger or a computer through a USB cable)	Solid GREEN blinking off every four seconds	No USB or Bluetooth connection, reader charging. NOTE: If the reader is off when the cable is inserted, the reader will power on.

Table 5 – Reader LED descriptions

Errors and Error Messages

The following tables provide information to help you troubleshoot errors and error messages that you may experience with the reader or mobile device. For errors not defined here or for additional technical support, contact Apriva Technical Support. See [Apriva Technical Support](#) on page 30.

Installation Errors

Table 6 shows installation errors and possible solutions.

Error or Message	Possible Solution
“Invalid Configuration – The application Apriva Device Utility cannot be loaded because some required files are not available.”	The S/MIME has not been installed or the installation was corrupted. Make sure you have the latest updates for the RIM OS, BlackBerry Desktop Manager, and the S/MIME. After you have successfully installed the S/MIME, re-install the Apriva Device Utility.
“Digital Signatures for the Application, ‘Apriva Device Utility’ are not valid/or missing.”	This is a BlackBerry Enterprise Server (BES) error. Third Party Downloads and Third Party Serial Connections must be enabled. Do this immediately, because after the policies are changed, they need to populate down to the mobile device. The mobile device must be in coverage to receive the updated policies.
“Device Program is Bad.”	This error appears when trying to load the Apriva Device Utility on top of an already installed Apriva Device Utility. First using the BlackBerry Desktop Manager, delete the current Apriva Device Utility off the mobile device (see Installing the Apriva Device Utility on page 6). After uninstalling the current Apriva Device Utility, download the latest version and reinstall.
“Error Loading S/MIME Package.”	This is a RIM error. The S/MIME version conflicts with the mobile device version. Make sure the correct mobile device and S/MIME package are present and re-install. This error can also mean the RIM mobile device software has not been fully installed.
Apriva Device Utility Icon Not Present After Loading Driver.	Use BlackBerry Desktop Manager to delete the Apriva Device Utility. After it is deleted, download the latest driver and reinstall the Apriva Device Utility. This error is seen when users bypass the following error message, "Digital Signatures for Apriva Device Utility not valid". If you receive that error, have the BES administrator enabled third Party Downloads. When the policy has been populated to the mobile device, install the Apriva Device Utility and the icon will appear.

Table 6 – Installation errors

Reader Errors

Table 7 shows reader errors and possible solutions.

Error or Message	Possible Solution
"Reader Not Present, Bluetooth Not Paired."	The mobile device is using BES policy on how to connect to the reader. The BES has to set the policy to enable both Third Party Downloads and Third Party Serial Connections. After this is done and the policy updates the mobile device, the error should be gone.
"USB charging current is not sufficient."	Make sure the mobile device is connected to a powered USB charging source and that the proper USB driver is installed.
The device is not reading digitally signed emails.	<p>Smart Card Certificates must be imported before opening secure emails. This is done through the S/MIME on the mobile device. For questions regarding certificates, contact RIM Technical Support. See RIM Support on page 30.</p> <div style="background-color: #0070C0; color: white; padding: 2px;">NOTICE</div> <p>After the certificates are imported, the CAC and mobile device are linked, so make sure the correct CAC is inserted into the reader.</p>
The mobile device is unable to find supported smart card.	The problem is occurring with S/MIME mobile device because older versions of S/MIME did not support 64k cards. The reader is able to support all ISO 7816 Smart Cards using T=0 and/or T=1 protocol. This includes GEMPLUS as well as Schlumberger and many other companies' smart cards. The Apriva Smart Card Reader just reads and writes the smart cards under instructions from the S/MIME application. RIM or your reseller has the latest revision of S/MIME which fixes the problem with 64k cards.
Cannot open attachments and RIM does not prompt for password.	Reset the mobile device, and then try again.
CAC session violation.	Check the connection between the reader and the mobile device. Either they are not connected properly or the connection has become loose.
Mobile device is prompting to install a currently installed reader.	Remove all software from the mobile device. Reinstall the OS, S/MIME, and Apriva Device Utility.

Table 7 – Reader errors

Exception Errors

Table 8 shows reader errors and possible solutions. Exception errors are usually because either the connection between the reader and mobile device was not connected properly or has become loose, or the battery in the reader is too low for normal use.

NOTE: If the error message is abbreviated, use the trackpad to display a key menu and corresponding events. Press or scroll down to **G** to toggle the full error message.

Error or Message	Possible Solution
"AprivaSmartReader: microSynch:could not synchronize"	Test the battery level – b - to make sure it is fully charged. Also check the revision version – r - on the reader to determine that the Reader has the latest firmware. If not able to check revision version, double check BlackBerry Enterprise Server policies to make sure Third Party Serial Connections is still enabled.
"AprivaSmartReader: portPowerOn: AprivaSmartPortUSB: nullusbport"	Make sure the reader and mobile device are connected. Also make sure the latest drivers are installed. If problem persists, try disconnecting USB and removing CAC. Reconnect and restart Apriva Device Utility, once started try testing the CAC by pushing (o, i, d) to open a session, identify the CAC, and deactivate session. If it works with no errors, resume normal use.

Table 8 – Exception errors

Net_RIM Errors

Table 9 shows Net_Rim errors and possible solutions.

Error or Message	Possible Solution
"Net_Rim_Smartcard.cod missing required files that are not available."	This error means the S/MIME package has either not been installed, or during installation some files were corrupted. Make sure you have the latest S/MIME software the device that is being used and re-install. After the latest S/MIME is installed, that error should no longer exist.
"net.rim.device.api.smartcard.smartcard.blocktimeoutexception: AprivaSmartReaderInterface:testReply:SC Block Timeout"	This error is a result of the reader not reading the CAC. Make sure the CAC is being inserted correctly. For the S7700, the gold chip must be on the same side as the label. On all other readers, make sure the picture is facing the user and gold chip is on the bottom. Make sure the insertion is snug. Push down on the CAC to make sure they connect.
"net.rim.device.api.smartcard.SmartCardException: AprivaSmartReaderInterface:testReply:SC ATR Not Done"	This error is generated when an application on a mobile device attempts to do a CAC operation without first open a session with a CAC. Try resetting the RIM mobile device.

Table 9 – Net_RIM errors

Support

The following sections provide Apriva and RIM support information.

Apriva Technical Support

The Apriva Technical Support Department is available 24 hour a day, 7 days a week including holidays.

To allow us to resolve your problem as quickly as possible, please have the following information available:

- Name
- Job title
- Address
- Phone number
- Email address
- Reader version
- Mobile device operating system version
- Description of problem

Technical Support Phone Numbers

Toll-free customer support line (U.S. only): 866-277-9478

Countries outside the U.S.: 480-421-1303

Email: SCRsupport@apriva.com

Support/Download Links

Support: <http://iss.apriva.com/support.aspx>

Downloads: http://iss.apriva.com/support_rim_drivers.aspx

RIM Support

For questions regarding the RIM operating system or BlackBerry products, refer to the Rim website at <http://www.rim.com/index.shtml>

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