

FIPS & code



FIPS CR2700 & A271 Quick Start Guide

Understanding your CR2700 & A271 FIPS Devices

We have taken our flagship, award-winning CR2700 and A271 devices and implemented NIST FIPS 140-2 compliant security. Since you have ordered the CR2700 and A271 FIPS versions, the FIPS 140-2 data encryption mode is always running on your devices by default.

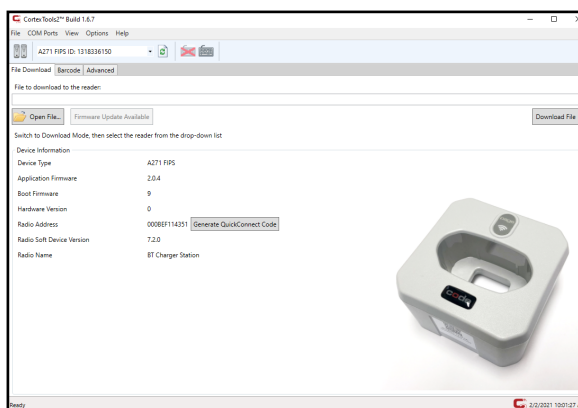
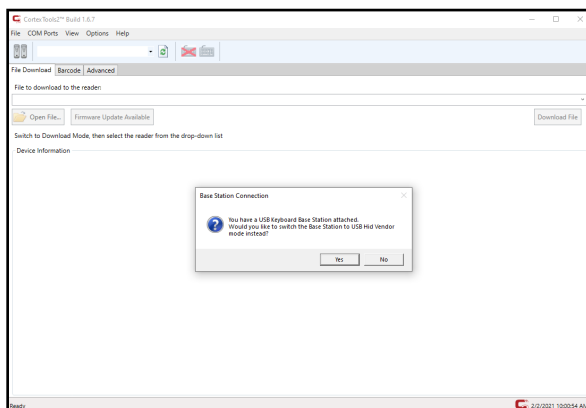
Disclaimer: CR2700 and A271 FIPS devices are password-protected. These devices operate in the same way as non-FIPS versions for normal usage out of the box. They always transfer encrypted and protected data, but they are setup with default passwords. It is highly recommended that this password be updated before use.

WARNING: Password renewal is a FIPS special service and should be executed by the IT administration's designated Crypto Officer(s) and not regular users for security preservation. Passwords must be maintained by crypto officers or specific services such as firmware upgrades will not be available.

Setting up your CR2700 & A271 FIPS Devices

Please follow these steps to setup your devices before first use:

1. Remove **A271 FIPS** from its shipping box, connect the **USB cable** to it, and then connect the other end to your **host PC**.
2. Open **CortexTools2™** Software on your **host PC**. You will be prompted to switch **USB HID Vendor** mode. CortexTools2™ is downloadable from the Code website. Version 1.6 or greater is recommended.
<https://www.codecorp.com/products/code-reader-2700>

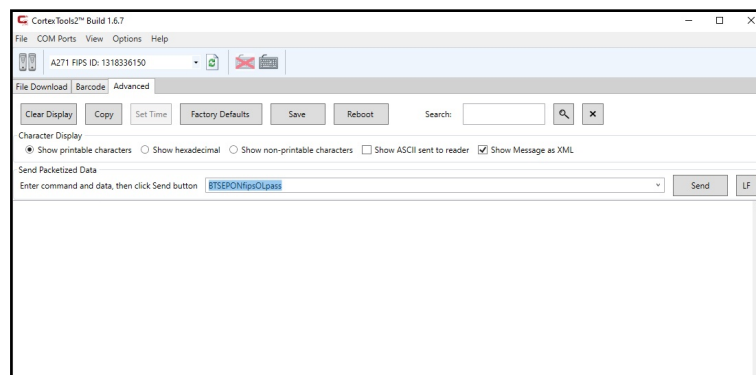


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- Click Yes to switch to **USB HID Vendor** mode. A picture of **A271** should appear with information regarding the product as seen in the image.
- Click the **Advanced** tab on **CortexTools2™**. Here you can issue commands and see the results returned.
- Login to the **Crypto Officer** role to activate special services. To do so, enter and send the following command, with default password:

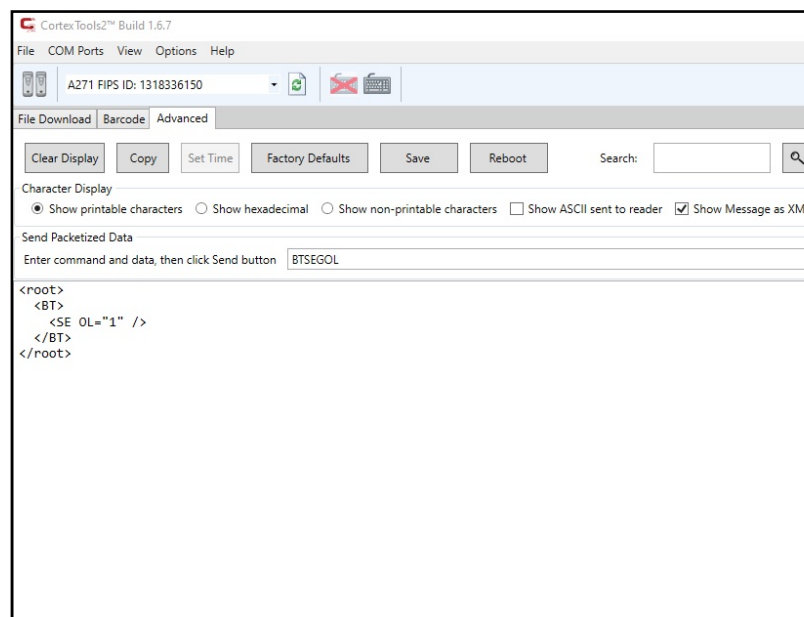
BTSEPONfipsOLpass

Note: A271 FIPS does not send back command responses, if there are no error messages printed to the **Advanced tab terminal, or rapid error blink on the LED, then execution was successful.**



- Verify that you are logged in. To do so, send the following command. Value 1 will appear on the **OL** setting if login is successful as seen in the image.

BTSEGOL

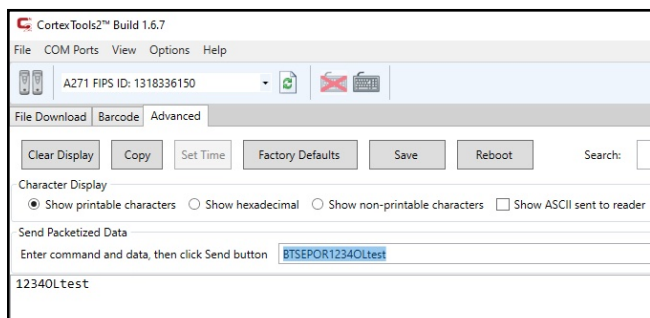


7. Renew officer password. To do so, enter the following commands and either append your own alphanumeric 10-character string such as **12340Ltest**, or a zero for a system-generated password, as seen below and then send it:

BTSEP0R12340Ltest or BTSEP0R0

Note: CortexTools2™ will respond by printing the appended or the system-generated string in the Advance tab's terminal.

WARNING: Ensure that you do not lose this password.

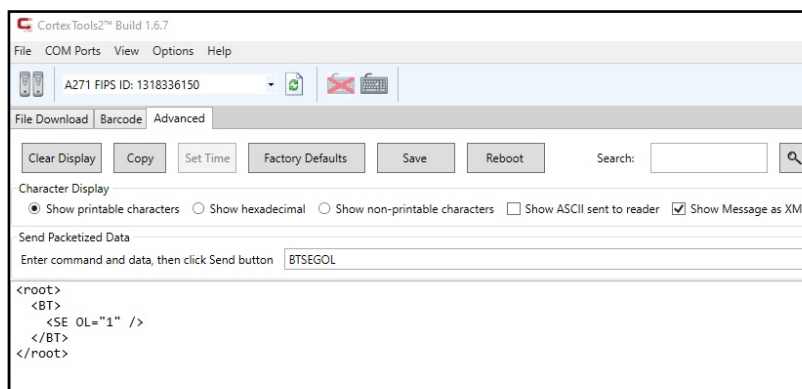


8. Log out and log back in with the new password to verify it is set properly. To do so, enter and send the following commands successively:

BTSEXOT

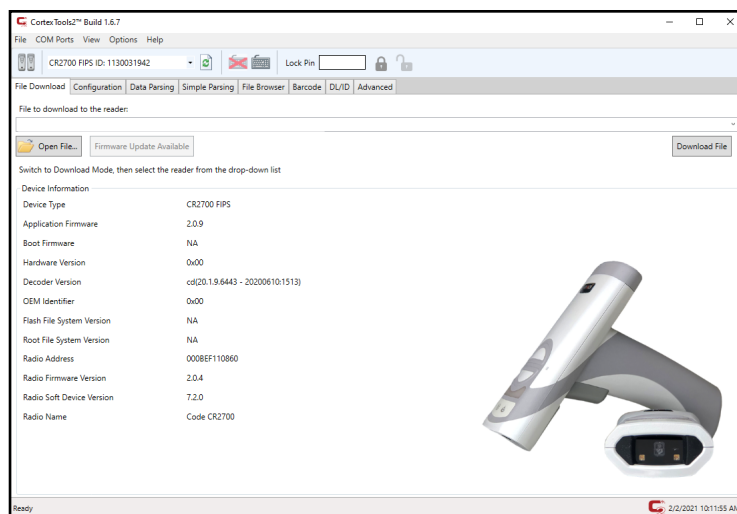
BTSEP0N12340Ltest (replace 12340Ltest with your password from the step above)

BTSEGOL



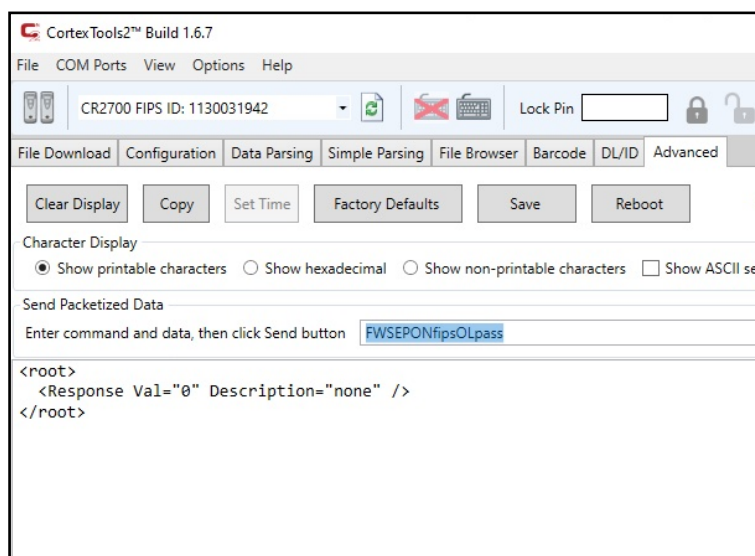
Note: The value 1 will appear on the **OL** setting if login and therefore password renewal was successful.

9. Keep **CortexTools2™** open and **A271 FIPS** connected to your **host PC**. Remove **CR2700 FIPS** and its battery from their shipping box, attach the battery to it, and then pull the scan trigger or push any of the top buttons to power it up.
10. Scan the **QuickConnect Code** label on the **A271 FIPS** to connect **CR2700 FIPS**. A picture of **CR2700** in place of **A271** should appear with information regarding the product as seen in the image.



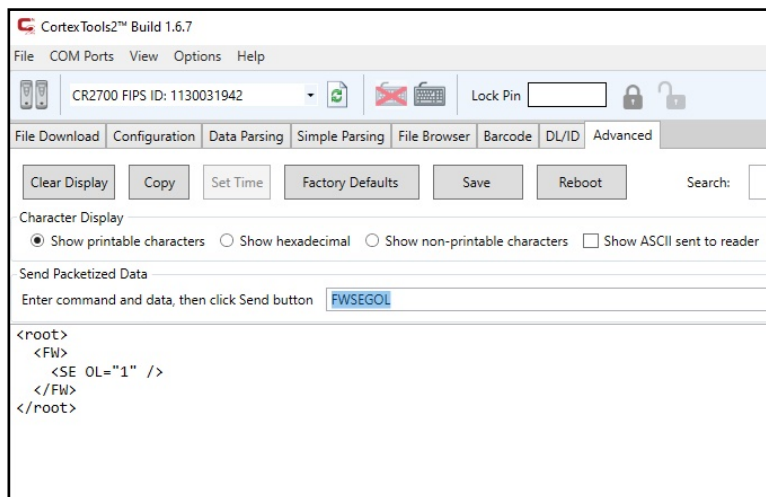
11. Click the **Advanced** tab on **CortexTools2**. Here you can issue commands and see the results returned.
12. Login to the **Crypto Officer** role to activate special services, with default password. To do so, enter and send the following command:

FWSEPOnfipsOLpass



13. Verify that you are logged in. To do so, send the following command. Value 1 will appear on the OL setting if login is successful as seen in the image. Enter and send the following command:

FWSEGOL

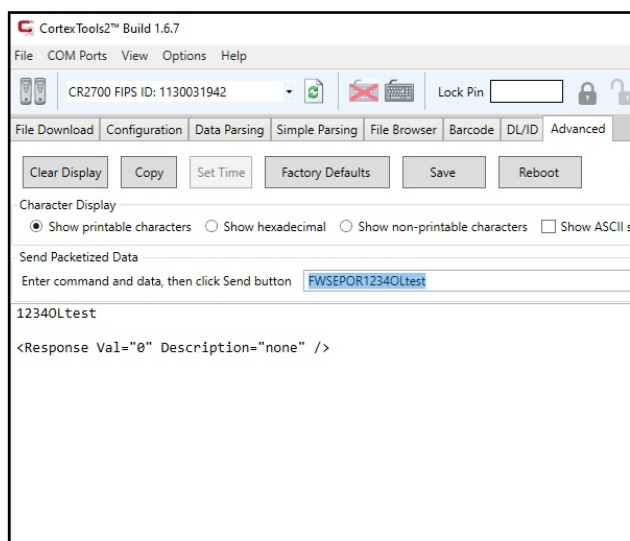


14. Renew officer password. To do so, enter the following commands and either append your own alphanumeric 10-character string such as 1234OLtest, or a zero for a system-generated password, as seen below and then send it:

FWSEPOR1234OLtest or FWSEPOR0

Note: CortexTools2™ will respond by printing the appended or the system-generated string in the Advance tab's terminal.

WARNING: Ensure that you do not lose this password.



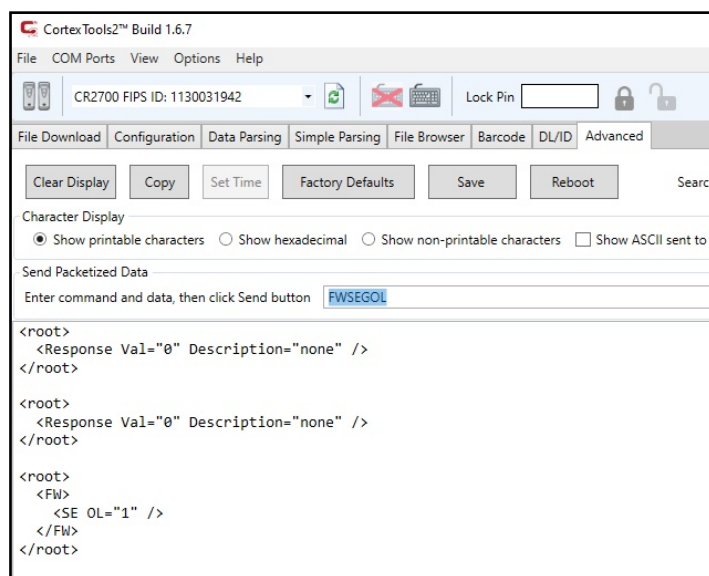
15. Log out and log back in with the new password to verify it is set properly. To do so, enter and send the following commands successively:

FWSEXOT

FWSEPON1234OLtest (replace 1234OLtest with your password from the step above)

FWSEGOL

Note: The value 1 will appear on the **OL** setting if login and therefore password renewal was successful.



You have now successfully renewed your FIPS Services Officer passwords. At this point if you are ready to scan data barcodes and test your devices in **CortexTools2™** or any Windows app that accepts keyboard input, such as Notepad. Please see the [CR2700 Quick Start Guide](#) for more details.

Other Resources

Utilizing your FIPS CR2700 & A271 special services

There are other FIPS special services available other than password renewal such as firmware upgrade, cryptographic key renewal, and running the FIPS core power-up self-test on demand. These special services are only available to crypto officers, and their execution without proper login is prohibited and will cause an error response. The commands and details are explained in the **CR2700/A271 FIPS Integration Guide** that comes in addition to the standard **CR2700** commands and services with the **FIPS 140-2** model. Please see the configuration control document and the configuration guide (linked below) for information on standard commands and services.

Warning: Attempting a service without being logged in to the correct credentials will result in a FIPS error-beep (one longer and higher pitched beep, followed by three slightly lower and shorter beeps—the same as normal error beeps—on CR2700 FIPS, and a series rapid blink on the A271 FIPS).

Standard Services and Commands

The following are documents that further explore standard commands and services for the **CR2700** and **A271** units.

- [Configurations Control Document 82X](#)
- [2700 Configurations Guide](#)

Other Documents and Resources

There are additional Data Sheets, Manuals & Guides located on Code Corporations website under the [CR2700 Resources](#).

- [2700 Quick Start Guide](#)
- [2700 User Manual](#)

If you have technical questions, please contact support@codecorp.com

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