App. Note Code: 1D-AB

# PPI,I **CR6-WiFi Daughter Board OS** Update Procedure to Resolve the KRACK Vulnerability **FION N** 12/17

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## CR6-WiFi Daughter Board OS Update Procedure to Resolve the KRACK Vulnerability

This procedure updates the CR6-WiFi daughter board OS to version 4.0 to resolve the KRACK vulnerability.

NOTE If your datalogger is running a WiFi daughter board OS version 3.01 or greater, skip to Section 3 after completing Section 1. Section 1 walks you through the steps to determine what OS version your datalogger has. If your datalogger is running a WiFi daughter board OS version less than 3.01, it must first be updated to version 3.01. Therefore, after completing Section 1, continue to Section 2 and complete the steps to update the OS to version 3.01. Then proceed to Section 3 and update the OS to version 4.00 which resolves the KRACK vulnerability.

#### 1. Download Executable and Check Current Operating Systems

- 1. Download the executable, CR6\_Wifi\_OS\_Update\_4.0.exe, from our website at *www.campbellsci.com/downloads*.
- 2. Run the executable file.
- 3. Apply power to the CR6. (A USB connection supplies 5 V power as well as a communication link, which is adequate for setup.)
- 4. If not using WiFi, connect your communication cable to the CR6.
- 5. Open Device Configuration Utility (DevConfig).
- 6. Under Device Type, select CR6 Series.
- 7. Select the correct **Communication Port**. (If using WiFi, select the **Use IP Connection** checkbox and browse to or enter the IP address.)



8. Click Connect.

- As a precaution, back up the CR6 datalogger using the wizard accessed from the Backup | Back Up Datalogger... command (see www.campbellsci.com/blog/update-datalogger-operating-system).
- Verify that you are running CR6 version 5 or later operating system. You can see this information in the **Deployment | Datalogger** tab in *DevConfig*. If you are running an earlier operating system, update the operating system (see www.campbellsci.com/blog/update-datalogger-operating-system).

Deployment Logger Control Data Monitor Data	a Collection	File (	Control	Send OS	VW Diag	nostics	Settings Editor	• •
Datalogger Com Ports Settings Ethernet C	S I/O IP PP	P	Wi-Fi	Network S	Services	TLS	Advanced	
Serial Number: 7501		Pa	kBus Se	curity				
OS Version: CR6.Std.07 CR6-WIFI.02				Secur	ity Code	1: 0	×	
Station Name: 7501				Secur	ity Code	2: 0	×	
PakBus Address: 1				Secur	ity Code	3: 0	The second secon	
			P	akBus Encry	yption Ke	у:		
		Pa	akBus Er	ncryption Ke	ey Confirr	n:		
			F	PakBus/TCP	Passwor	d:		
		c	onfirm F	PakBus/TCP	Passwor	d:		

11. Check to see what version of the WiFi daughter board operating system your datalogger is running. As in the previous step, you can see this information in the **Deployment** | **Datalogger** tab in *DevConfig*. The **OS Version** field shows the datalogger operating system version and WiFi daughter board operating system version (in red below) currently loaded into the datalogger.

Deployment Logger Control Data Monitor Data Collection	File Control Send OS VW Diagnostics Settings Editor T
Datalogger Com Ports Settings Ethernet CS I/O IP PP	P Wi-Fi Network Services TLS Advanced
Serial Number: 7501	PakBus Security
OS Version: CR6.Std.07CR6-WIFI.02	Security Code 1: 0
Station Name: 7501	Security Code 2: 0
PakBus Address: 1	Security Code 3: 0
	PakBus Encryption Key:
	PakBus Encryption Key Confirm:
	PakBus/TCP Password:
	Confirm PakBus/TCP Password:

12. If your datalogger is already running WiFi daughter board OS 3.01 or greater, skip to Section 3, *Update to WiFi OS 4.0 (p. 5)*.

### 2. Update to WiFi OS 3.01

- 1. Click the *DevConfig* File Control tab.
- 2. Click the **CPU:** drive.



- 3. Click Send.
- 4. The Select the files to send dialog will appear. Navigate to the C:\Campbellsci\Lib\OperatingSystems directory.
- 5. Set the Files of type: drop down list to Daughter Card Operating System Files (\*.iobj).
- 6. Select CR6\_WIFI.03.01.iobj from the file list.

7. Click Open.

Deployment Logger C	ontrol Data Monitor	Data Collection	File Control	Send OS	VW Diagnostics	Settings Editor	T · ·
Send	Format Ref	resh Retr	ieve				
Run Options	Delete S	top					
Drive Free CPU: 31.42 MB	File Nan	ne 🔺 Run Optic	ons Size Las	st Modified			
Selected the	files to send					×	
Look in:	OperatingSyst	ems	\ \	<ul> <li>G</li> </ul>	• 🖭 对		
Quick access Desktop Libraries This PC	Name CR6-WIFI.01. CR6-WIFI.02. CR6-WIFI.03. CR6-WIFI.03. CR6-WIFI.04.	niobj 101.iobj 101.iobj 10bj		Date 12/9/ 11/23 4/10/ 3/7/2 12/6/	modified (2015 4:58 PM 3/2016 2:36 PM (2017 9:36 AM 2017 1:13 PM (2017 12:19 PM	Type IOBJ File IOBJ File IOBJ File IOBJ File IOBJ File	
Network	< File name:	CR6-WIFI.03.01	obj	51 411		> Open	
Running Program: " Run on Power Up Prog Program State: no pro No Program	riles of type: gram: == gram running ==	Daughter Card Op Program Files (*.d. Program Files (*.d. <del>Datalouguer Opena</del> Daughter Card Op (All Files (*.*)	erating System 6) d) <del>ling System File</del> erating System	n Files (* Job <del>es (* Jobj)</del> n Files (* Job	j)	cancei	< >

8. The new daughter board operating system is sent to the datalogger.

	$\times$					
Sending "J:\CR6\Wi-Fi\CR6-WIFI.03.01.iobj" to CPU:						
	~					
Cancel						

9. Once the progress bar reaches 100%, click **OK**.

10. The WiFi LED on the CR6-WiFi will flash green and red as the daughter board is being updated; the update generally takes two or three minutes to complete. After the flashing stops, return to the Deployment | Datalogger tab and check that the WiFi daughter board operating system shows version 03.01. You may to have to press the F5 key to refresh the displayed information.

Deployment Logger Control Data Monitor Data Collection	File Control Send OS VW Diagnostics Settings Editor T
Datalogger Com Ports Settings Ethernet CS I/O IP PPP	Wi-Fi Network Services TLS Advanced
Serial Number: 7501 OS Version: CR6.Std.07 CR6-WIFI.03.01 Station Name: 7501	PakBus Security Code 1: 0
PakBus Address: 1	Security Code 3: 0
	PakBus Encryption Key Confirm: PakBus/TCP Password:
	Confirm PakBus/TCP Password:

#### 3. Update to WiFi OS 4.0

- 1. Click the *DevConfig* File Control tab.
- 2. Click the **CPU:** drive.
- 3. Click Send.
- 4. The **Select the files to send** dialog will appear. Navigate to the C:\Campbellsci\Lib\OperatingSystems directory.
- 5. Set the Files of type: drop down list to Daughter Card Operating System Files (\*.iobj).
- 6. Select CR6\_WIFI.04.iobj from the file list.

7. Click Open.

Deployment Logger Co	ontrol Data Monito	r Data C	Collection Fil	e Control	Send (	DS VW Diagno	stics	Settings Editor	Ţ
Send	Format Re	fresh	Retrieve	2					
Run Options	Delete S	top							
Drive Free CPU: 31.42 MB	File Nar	ne 🔺	Run Options	Size La	ist Modi	fied			
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Quick access	Name CR6-WIFI.01 CR6-WIFI.02 CR6-WIFI.03	.iobj .iobj .01.iobj	^		D 1. 1 4	ate modified 2/9/2015 4:58 F 1/23/2016 2:36 /10/2017 9:36 J	PM PM AM	Type IOBJ File IOBJ File IOBJ File	
Desktop	CR6-WIFI.03	.iobj			3,	2/6/2017 1:13 Pi	PM	IOBJ File	
Libraries	Type: IO Size: 1.8 Date mo	BJ File 4 MB odified: 12	2/6/2017 12:	19 PM					
Network	<							>	
	File name: Files of type:	CR6-W	IFI.04.iobj er Card Opera	ting Syster	m Files (	∼ *.iobj) ~	L	Open Cancel	
Running Program: "" Run on Power Up Prog Program State: no pro No Program	gram: <sup>==</sup> ogram running ==								< >

8. The new daughter board operating system is sent to the datalogger.

	×					
pending "J:\CR6\Wi-Fi\CR6-WIFI.04.iobj" to CPU:						
	~					
Cancel						

9. Once the progress bar reaches 100%, click **OK**.

10. The WiFi LED on the CR6-WiFi will flash green and red (and at times, just red) as the daughter board is being updated; the update generally takes two or three minutes to complete. After the flashing stops, return to the **Deployment | Datalogger** tab and check that the WiFi daughter board operating system shows version 04.00. You may have to press the F5 key to refresh the displayed information.

Deployment	Logger Control D	Data Monitor	Data Collectio	n Fil	e Control	Send OS	VW Diag	postics	Settings Editor	T
Datalogger	Com Ports Settin	ngs Ethernet	CS I/O IP	PPP	Wi-Fi	Network S	Services	TLS	Advanced	
Serial Nu OS Vi Station PakBus Ad	umber: 7501 ersion: CR6.Std. Name: 7501 Idress: 1	07 CR6-WIFI.04	1		PakBus Se P PakBus Er F Confirm F	ecurity Secur Secur Secur akBus Encr ncryption Kr PakBus/TCP	ity Code ity Code ity Code yption Ke ey Confirr Passwor Passwor	1: 0 2: 0 3: 0 y: d: d:		

Your datalogger is now updated and running the latest WiFi daughter board operating system.

#### **Campbell Scientific Companies**

Campbell Scientific, Inc. 815 West 1800 North Logan, Utah 84321 UNITED STATES www.campbellsci.com • info@campbellsci.com

Campbell Scientific Africa Pty. Ltd. PO Box 2450 Somerset West 7129 SOUTH AFRICA www.campbellsci.co.za • cleroux@csafrica.co.za

Campbell Scientific Southeast Asia Co., Ltd. 877/22 Nirvana@Work, Rama 9 Road Suan Luang Subdistrict, Suan Luang District Bangkok 10250 THAILAND www.campbellsci.asia • info@campbellsci.asia

Campbell Scientific Australia Pty. Ltd. PO Box 8108 Garbutt Post Shop QLD 4814 AUSTRALIA www.campbellsci.com.au • info@campbellsci.com.au

Campbell Scientific (Beijing) Co., Ltd. 8B16, Floor 8 Tower B, Hanwei Plaza 7 Guanghua Road Chaoyang, Beijing 100004 P.R. CHINA www.campbellsci.com • info@campbellsci.com.cn

Campbell Scientific do Brasil Ltda. Rua Apinagés, nbr. 2018 — Perdizes CEP: 01258-00 — São Paulo — SP BRASIL www.campbellsci.com.br • vendas@campbellsci.com.br Campbell Scientific Canada Corp. 14532 – 131 Avenue NW Edmonton AB T5L 4X4 CANADA

www.campbellsci.ca • dataloggers@campbellsci.ca

Campbell Scientific Centro Caribe S.A.

300 N Cementerio, Edificio Breller Santo Domingo, Heredia 40305 COSTA RICA www.campbellsci.cc • info@campbellsci.cc

Campbell Scientific Ltd. Campbell Park 80 Hathern Road Shepshed, Loughborough LE12 9GX UNITED KINGDOM www.campbellsci.co.uk • sales@campbellsci.co.uk

> **Campbell Scientific Ltd.** 3 Avenue de la Division Leclerc

92160 ANTONY FRANCE www.campbellsci.fr • info@campbellsci.fr

Campbell Scientific Ltd. Fahrenheitstraße 13 28359 Bremen

GERMANY www.campbellsci.de • info@campbellsci.de

Campbell Scientific Spain, S. L. Avda. Pompeu Fabra 7-9, local 1 08024 Barcelona SPAIN www.campbellsci.es • info@campbellsci.es

Please visit www.campbellsci.com to obtain contact information for your local US or international representative.