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Instruction Sheet

Subject: KCCM Board Relocation & MultiTech Modem Installation, Configuration Instructions

Models affected FilterQuick Touch and LOV-Touch and Fryers

Follow these instructions to relocate the KCCM board, install, and configure the MultiTech Modem.

In This Kit		
Part #	Description	Qty
1088894SP	MODEM, W/ BRACKET & MICRO SIM	1
130000372	PLATE, ASSY, SUI MOUNITING 30LB COMP BX	1
8076549	HARNESS FQ4000, SUI BOARD PWR/COM 72"	1
8076532	USB HARNESS (SHORT) 18"	1
	USB WITH BSP FILES	1
	USB WITH CONFIG FILES	1
8197972	INSTRUCTIONS	1

1. If the installation kit included two (2) USB's then proceed to next step. **If the kit did not include USB's, skip to step 13.**

2. Using the supplied USB drive labeled "BSP UPDATE", load the software files to the KCCM board using the KCCM USB port. The location may vary on the KCCM USB port extension. On some, the port is on the right side of the fryer (see Figure 1), on others it is located behind a protective cap, on the side of the FIB box (see Figure 2).

3. Insert USB drive with BSP UPDATE files (KCCM software) into the KCCM extension port (see Figures 3 & 4).

4. Remove power from the fryer for at least 30 seconds.

5. Reapply power to the fryer.

6. Wait 5 minutes for software to load.

7. Press 🏠 → ? → ⬇ → 📄(1.1) → ⬇ → ⬇
SOFTWARE VERSION

8. The GATEWAY SOFTWARE VERSION and other information is shown (see Figure 5).

9. If the gateway software version does NOT match the intended version (v00.02.006), repeat these steps above again.

10. Remove the USB drive.

11. Insert USB drive with config.ini files into the KCCM extension port (see Figures 3 & 4). Wait about 2 minutes for files to load.

12. Remove the USB drive.

13. Disconnect power from the fryer.

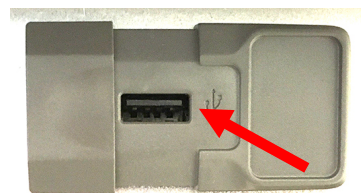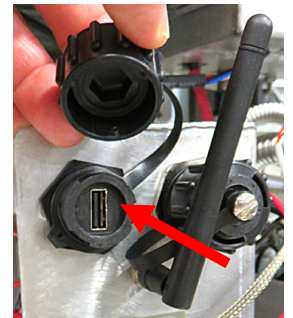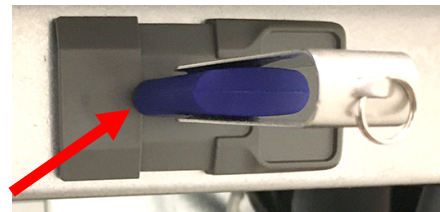14. Remove the JIB to access the FIB box (see Figure 6).

Figure 1

Figure 2

Figure 3

SOFTWARE VERSION

		ST OCCURANCE
9.	GATEWAY SOFTWARE VERSION	V00.09.000
10.	GATEWAY IP ADDRESS	192.168.18.122
11.	GATEWAY LINK QUALITY	25/40
12.	GATEWAY SIGNAL STRENGTH AND NOISE	-46dBm , -65dBm

Figure 5

Figure 4

Figure 6

8 1 9 7 9 7 2

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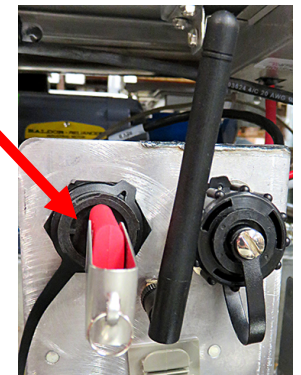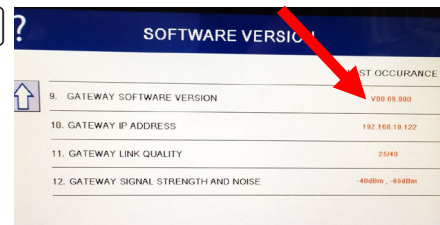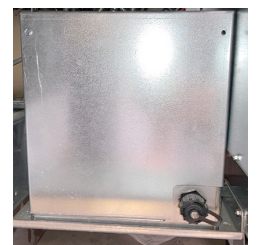
15. Remove the FIB box cover by removing the two (2) ¼″ screws attaching the cover (see Figure 7).
16. The KCCM board is located on the right side of the FIB box (see Figure 8).
17. Disconnect all harnesses and antenna from the KCCM board (see Figure 9).
18. Remove the four (4) nuts attaching the KCCM Board (see Figure 10).
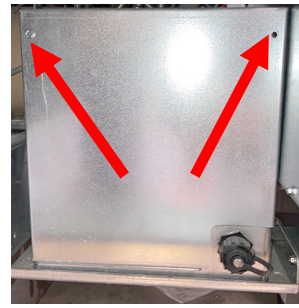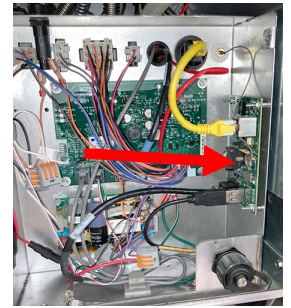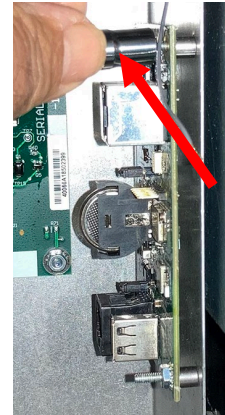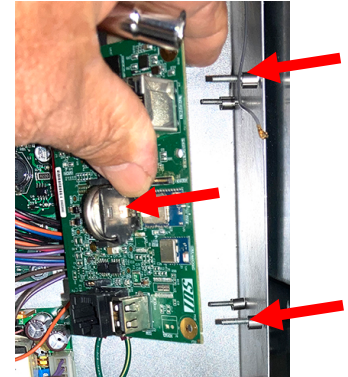19. Remove the KCCM board and the four (4) spacers behind board (see Figure 11).
20. Locate the harness with the RJ45 connector and other wires disconnected from the KCCM board in step 17 (see Figure 12).
21. Follow the red wire in Figure 12 to the Wago connector with the red wire and purple wires. Lift up on orange tab to unlock and remove the red wire from the Wago connector (see Figure 13).
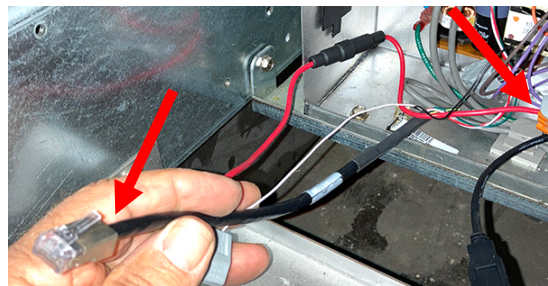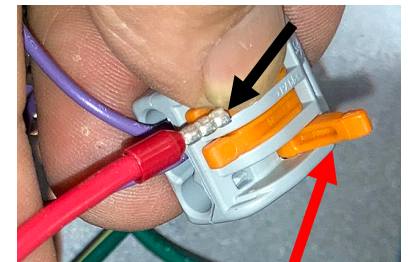22. Locate the **NEW** 72″ harness (PN 8076549) with the RJ45 connector and other wires.
23. Insert the white wire from the **NEW** harness into the Wago connector location where the red wire was removed in step 21 and lock the connector. Tug gently on the wire to ensure the wire is secured into the connector (see Figure 14).
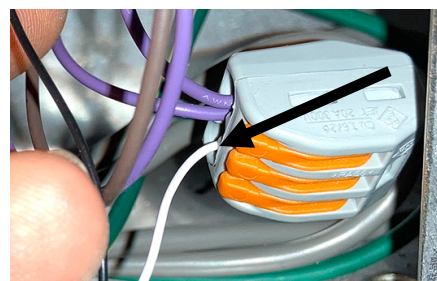24. Locate the other Wago with the brown and black wires (see Figure 15).
25. Lift up on orange tab to unlock and remove the black wire from the Wago connector (see Figure 16).
26. Insert the black wire from the **NEW** harness into the Wago connector location where the black wire was removed in step 25 and lock the connector. Tug gently on the wire to ensure the wire is secured into the connector (see Figure 17).
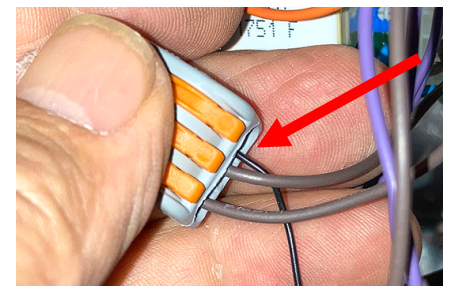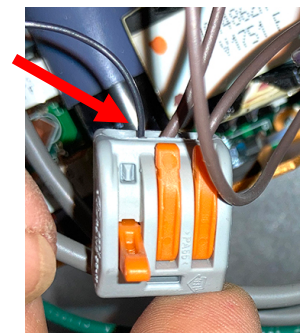
Figure 7

Figure 8

Figure 9

Figure 10

Figure 11

Figure 12

Figure 13

Figure 14

Figure 15

Figure 16

Figure 17

27. Remove the nut attaching the ground wire from the **OLD** harness and replace with the ground from the **NEW** harness (see Figure 18).

28. Disconnect the RJ11 CAN connector of the **OLD** harness from the FIB board and connect the RJ11 connector from the **NEW** harness to the FIB board (see Figure 19).

29. Discard the **OLD** harness.

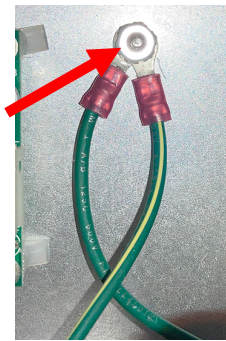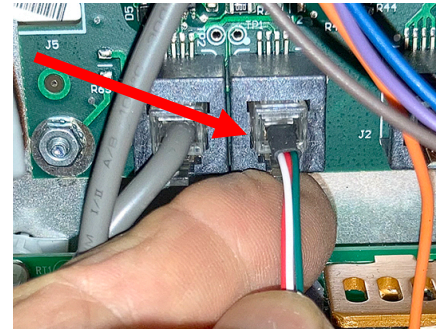30. Insert the RJ45 connector on the **NEW** harness from the inside of the FIB box through the Heico bushing in the rear of the FIB box (see Figure 20).
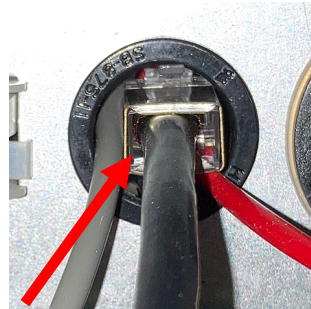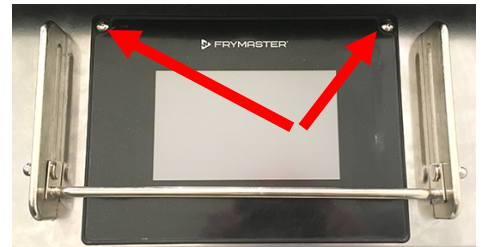
31. Remove the two Phillips head screws from the upper left and right corners of the controller above the JIB (see Figure 21).

32. Loosen the acorn nuts on both ends of the guard (see Figure 22).
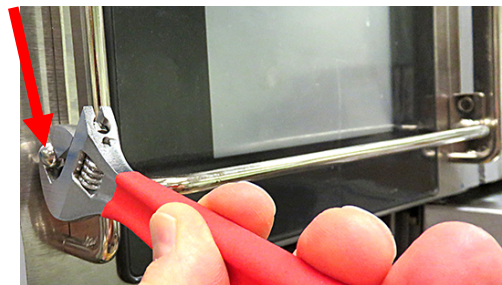
33. Slide the guard up to the top of the rails (see Figure 23).

34. Slide the controller up to disengage it from the bezel (see Figure 24).
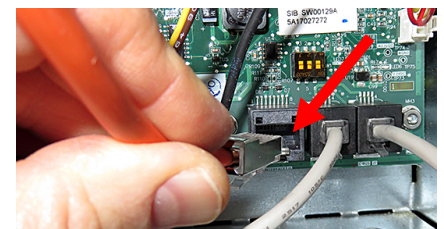
35. Lift the controller out from the bezel (see Figure 25).

36. Disconnect the orange controller cable from the SIB board (see Figure 26).

37. Lower the controller and rest it on the bottom of the control box (see Figure 27). The black tether on the right will support the controller.

38. Locate and disconnect the current vat locator, speaker wire and ground wire from the rear of the controller (see Figure 28).

Figure 18

Figure 19

Figure 20

Figure 21

Figure 22

Figure 23

Figure 24

Figure 25

Figure 26

Figure 27

Figure 28

39. Disconnect the lanyard tether (see Figure 29).
40. Remove the controller and set aside.
41. Remove the bezel by removing the two screws on the bottom of the bezel (see Figure 30) and tilting the bezel up from the bottom and lowering towards the front of the fryer (see Figure 31).
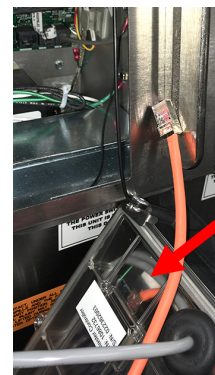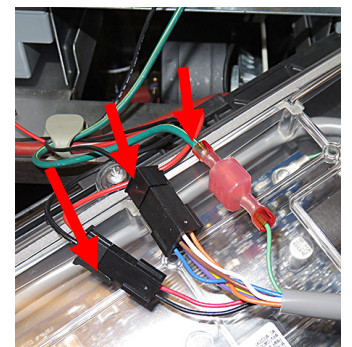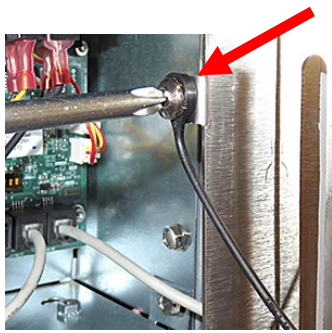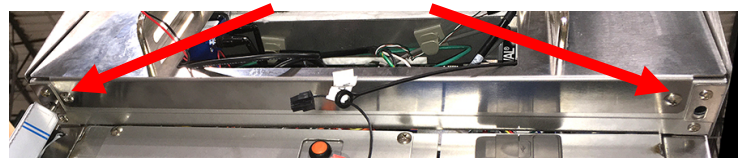42. Lay the bezel upside down with the screws facing up (see Figure 32).
43. Remove the screws on the left side of the bezel (see Figure 32).
44. Attach the bracket using the screws, removed from the previous step as shown (see Figure 33).
45. Slide the modem onto the bracket, inserting into the slot, on the bottom of the modem. Ensure the modem is completely fitted on the tab as far as possible (see Figures 34 and 35).
46. Attach the supplied cable to the rear of the modem (see Figure 36).
47. Route the harness in step 30, from the rear of the FIB box to the lower left corner of the control box. Insert the harness (RJ45) connector first through the bushing into the rear of the control box (see Figure 37).
48. Pull the harness into the control box.
49. Ensure the harness is routed away from the frypot and tied up and out of the way to avoid damage.
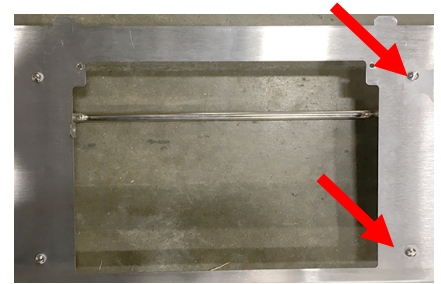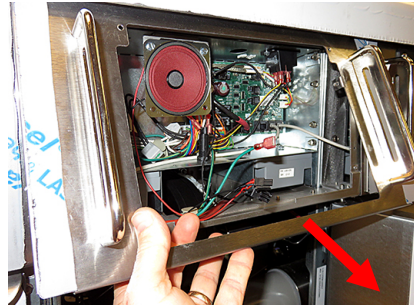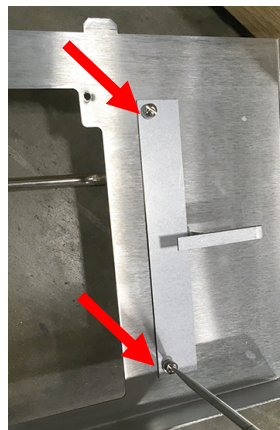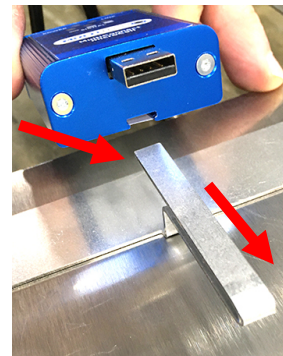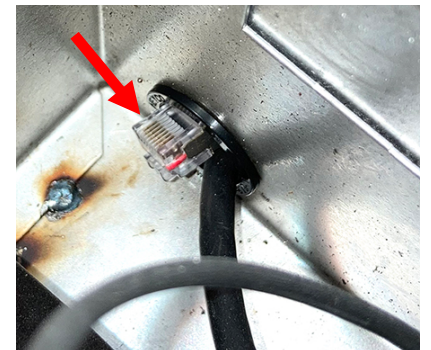
Figure 29

Figure 30

Figure 31

Figure 32

Figure 33

Figure 34

Figure 35

Figure 36

Figure 37

50. On the left side of the control box are six (6) studs (see Figure 38).
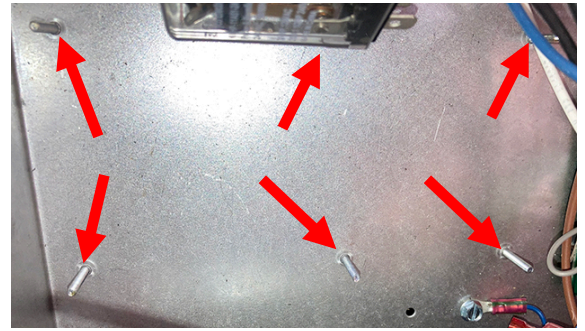
Figure 38

51. Using a nut driver, twist and break off the **lower center stud** (see Figures 39 and 40).

Figure 39

Figure 40
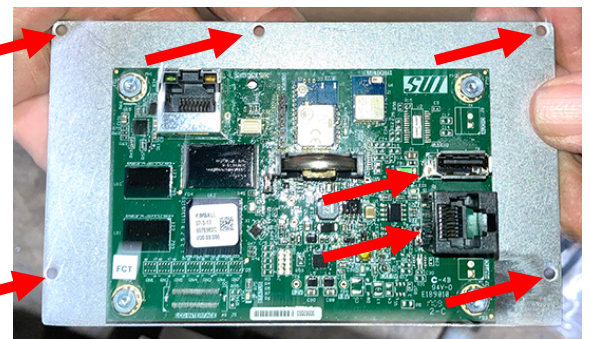
Figure 41

52. Using the KCCM board removed in step 19, mount to the KCCM adaptor plate. Secure using supplied nuts. Orient the board as shown (see Figure 41). The three (3) holes should be on the top. The USB port and the RJ45 port should be on the right side.

Figure 42

Figure 43

53. Slide the mounting plate onto the studs in the control box (see Figure 42) and secure with nuts.
54. Attach the **NEW** RJ45 harness to the KCCM board shown (see Figure 43).
55. Attach the USB end of cable from modem in step 46 to KCCM board (see Figure 44).
56. Reverse steps to reassemble fryer and return fryer to service.

Figure 44

Editing Config Files

If the modem didn't ship with correctly configured config_settings.ini settings file, the config_settings.ini file will need to be edited to operate properly.

1. On the initial installation, the service tech may have to configure the parameters listed in the config_settings.ini file on the USB drive by opening the file with Notepad++ utility available in Microsoft PC based machine. Right click on the file and Open with Notepad to edit the file (see Figure 1).

2. Enter the parameters listed below. The model number and serial number of the fryer can be located on the inside of the far-left door of the fryer on the rating plate.
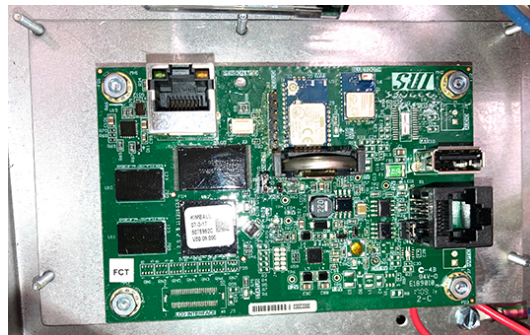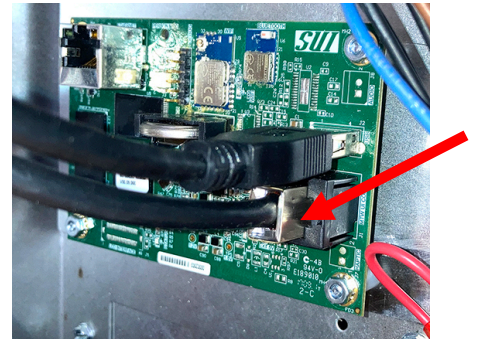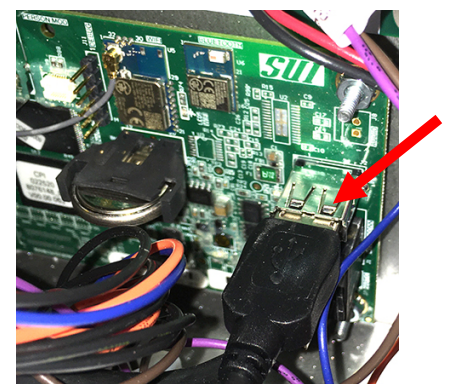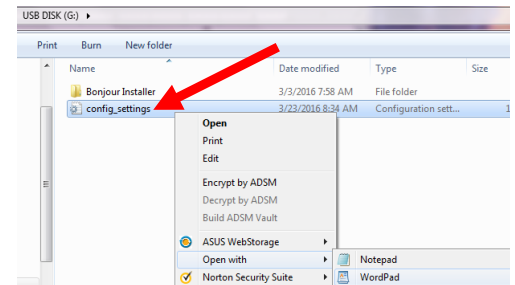

Figure 1

3. Below are the parameters listed in this file. Some of the parameters are **case sensitive**; enter these parameters **exactly** as they are displayed.
   [Network]
   DEVICE_TYPE: Should match energy type of fryer. (i.e. GAS)
   STOREID: Should match the Store ID in Kitchen Connect. Maximum 10 characters. ID of the store or unit number of the store
   SERIAL_NUMBER: Should match the Serial Number in Kitchen Connect. (i.e. 2020XX0001)
   NUMBER_OF_UI: Should match the number of frypots in Kitchen Connect. (i.e. 2 [Range 1-6]
   UI1TYPE: Vat type of vat #1 (i.e. FULL, SPLIT)
   UI2TYPE: Vat type of vat #2 (i.e. FULL, SPLIT)
   NETWORK_MODE: Type of network. (i.e. CELLULAR)
   APN: Connection address (i.e. welbilt-americas.telefonica.com)

4. Click on File and Save or Save the modified file on a blank USB stick that is formatted with FAT32 (see Figure 2).
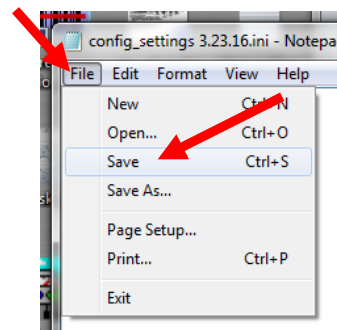
5. Click on Eject USB Flash Disk (see Figure 3).
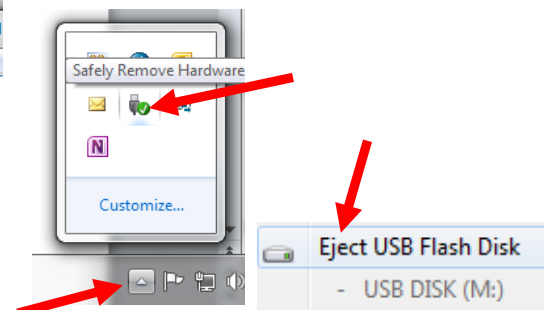
6. Remove USB drive from computer.

7. Ensure the fryer has completely power cycled.

Figure 2

Figure 3

8. Check that the gateway board has completely booted by checking the software in the information screen (see steps 7 and 8 in previous section). If Gateway software version is displayed, proceed to next step.

9. Follow steps 11 and 12 from previous section to load the config_settings.ini file to the KCCM board.

10. Completely power cycle the fryer, ensuring the fryer is off at least 30 seconds.

KCCM board BSP software upgrade process

Note – This process will erase/wipe out stored events and connectivity parameters. After this upgrade process, you will have to configure KCCM for connectivity parameters.

- Format a USB stick in FAT32 format.
- Place KCCM software (Rootfs.ubi*, u-boot.scr and uImage-3.10-ts-armv7l) on the USB stick.
- Remove the JIB if applicable and locate the USB port. Refer to Figures 1 and 2 on the first page for locating the USB port. **NOTE: If a modem is already attached to the KCCM board, disconnect the modem and insert the USB directly into the KCCM board**.
- Follow steps 3-10 on the first page to load the BSP software files.

KCCM board tar file upgrade process

Note – This process will upgrade application software, it will retain stored events and connectivity parameters.

- Format a USB stick in FAT32 format.
- Place KCCM tar file on the USB stick.
- Make sure that Fryer is powered up.
- If the Gateway board is booted completely it will display the software version in information screen (see steps 7 and 8 in first section).
- Remove the JIB if applicable and locate the USB port. Refer to Figures 1 and 2 on the first page for locating the USB port. **NOTE: If a modem is already attached to the KCCM board, disconnect the modem and insert the USB directly into the KCCM board otherwise insert into KCCM extension port (see Figures 3 and 4 on first page)**.
- Wait 5 minutes for software to load.
- Remove the USB drive.
- Wait approximately 3 minutes and check the Gateway software version (see steps 7- 9 in first section).

Debugging steps

- If the controller displays the software version, then the CAN bus cable is connected and operational. If the software version is all zeros (0), the Gateway is not connected or terminated. Otherwise, a service person will have to check CAN bus wiring and ensure that wiring is correct and there is CAN bus termination.
- The first number on gateway link quality (refer to Figure 12 and item #11(Gateway Link Quality) which is shown at 25/40) is the difference between received signal strength and background noise level. This number is called SNR.
  Below is breakdown of first number:
    o 40dB = Excellent signal; always associated; lightning fast.
    o 25dB to 40dB = Very good signal; always associated; very fast.
    o 15dB to 25dB = Low signal; always associated; usually fast.
    o 10dB - 15dB = Very low signal; mostly associated; mostly slow.
    o 5dB to 10dB = No signal; not associated; no go.
- Gateway signal strength and noise (refer to Figure 5 on first page and steps 7-9). Signal strength from -20 dbm to -65 dbm is good connection. Noise level should be below -70 dbm to -95dbm
  - If the IP address is not being displayed but the link quality and signal strength are good, then the modem or KitchenConnect has some issues and/or configuration file needs to be confirmed for accuracy and updated again.