



# SETUP AND SOFTWARE INSTALLATION INSTRUCTIONS FOR THE KTX WIRED SYSTEM

## SPECIAL NOTE

**READ THIS ENTIRE BOOKLET  
BEFORE PROCEEDING WITH  
THE INSTALLATION**

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The following instructions will explain how to set up the Digi Connect EZ on a computer and use it with the BCS Grain software.

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**1. THINGS YOU MUST DO FIRST**

- 1.1 You must be logged on to Windows as the Computer Administrator (see glossary below)
  - 1.1.1. To check this, open Control Panel.
  - 1.1.2. Open User Accounts, you will see a list of accounts that have Administrator privileges.
- 1.2 Make sure the computer is fully updated through Windows Update, Hardware, and Software. Also check for updates through the computer's manufacturer's website.
- 1.3 Close all other programs prior to installation.
- 1.4 When using a stand-alone computer, set the Local Area Connection to IP address: 169.254.1.50, with Subnet mask: 255.255.0.0.
- 1.5 The Digi Connect EZ uses UDP ports 7650 and 502. Verify with your IT administrator that this port is available on the network.

## **2. DIGI NAVIGATOR**

- 2.1 Insert the CD Disk/USB Drive into the Computer.
- 2.2 Browse the CD Disk/USB drive.
- 2.3 Double click the "Digi Navigator" folder.
- 2.4 Run the executable.

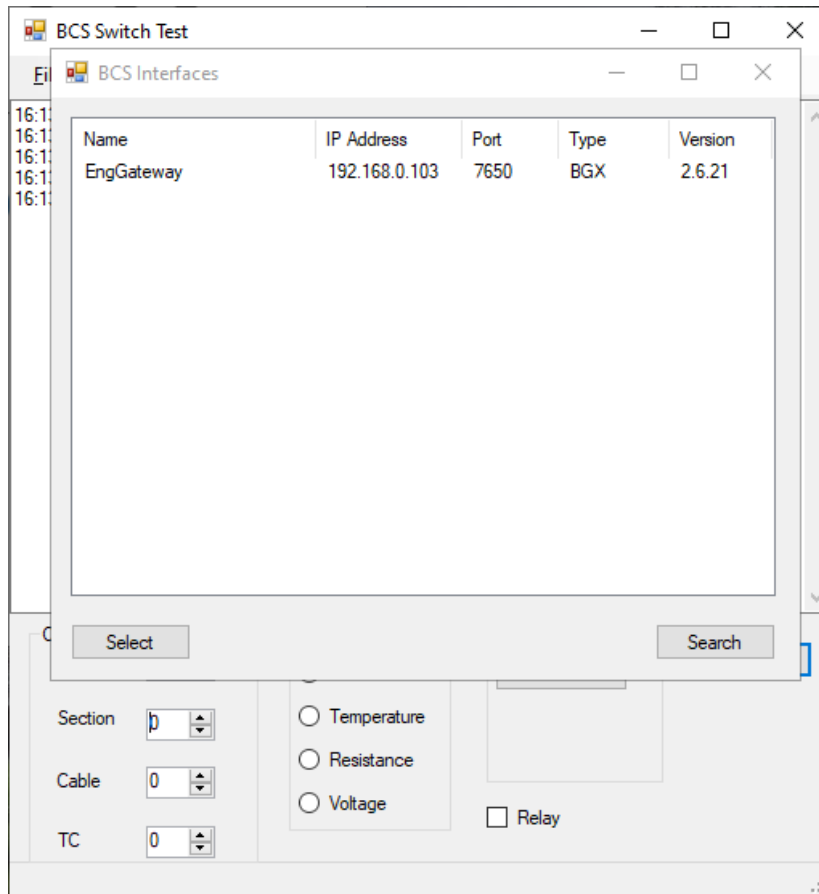
## **3. CONFIGURING THE DIGI CONNECT EZ**

The Digi Connect EZ uses DHCP to identify itself on the Network. It will create a random address available on the Network. If you wish to use your own IP address, you can change it afterwards.

- 3.1 Make sure the Digi Connect SP, and the KTX Mux(s) are hooked up and powered on.
- 3.2 When using a stand-alone computer, set the Local Area Connection to IP address: 169.254.1.50, with Subnet mask: 255.255.0.0.
- 3.3 Run the Digi Navigator utility and make sure the Digi Connect EZ shows up in the list with an IP address.
- 3.4 Select the up arrow right of the EZ # and click on 'Open'.
- 3.5 A browser opens with a connection message. Click below on 'Advanced' and select the 'proceed to IP address (unsafe)' option.
- 3.6 Enter the Username (admin) and Password (on the back of the unit or with the small decal which comes with the unit). Click on 'Login'.
- 3.7 By default, the Gateway is set to the 192.168.0.0./16 scheme. To change the scheme, go to: System -> Device Configuration -> Firewall -> Custom Rules.
- 3.8 Under the Rules, change the 192.168.0.0./16 parts to the preferred scheme. Click Apply in the top right corner.
- 3.9 To set a static IP address go to: System -> Device Configuration -> Network -> Interfaces -> ETH2 -> IPV4 and change the Type to Static IP Address. Put in a preferred address with /16 or /24. Click Apply and reboot the Gateway.

**4. SWITCH TEST**

- 4.1 Go back to the CD/USB Drive and run setup.exe from the Switch test folder.
- 4.2 The 2 Switch test windows will appear. The BCS Interfaces window will show the Digi Connect EZ device(s) with a (Facility)Name and IP address.



- 4.3 Highlight the Digi Connect EZ, listed under the Name, and click Select. The BCS interfaces will disappear.
- 4.4 To verify the system is working, set the Device output to the individual number of KT switches. Each number should show a two-line output:

```
[Timestamp] [IP address] [#]get
[Timestamp] [IP address] >[#]:MUX,K8X,[version#],Off
```

## 5. BCSGRAIN SOFTWARE INSTALLATION AND SETUP

- 5.1 Go back to the files on the CD /USB drive and run the main setup.exe.
- 5.2 Select "Install" when prompted.

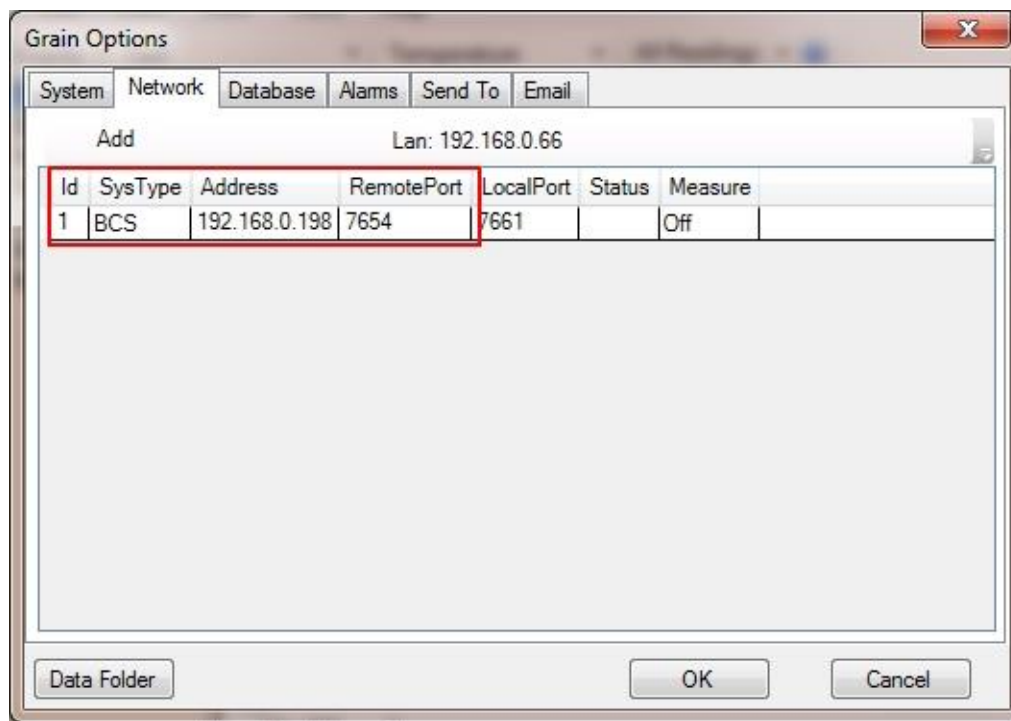


- 5.3 After the program installs it will ask for the Site file. Select "OK".

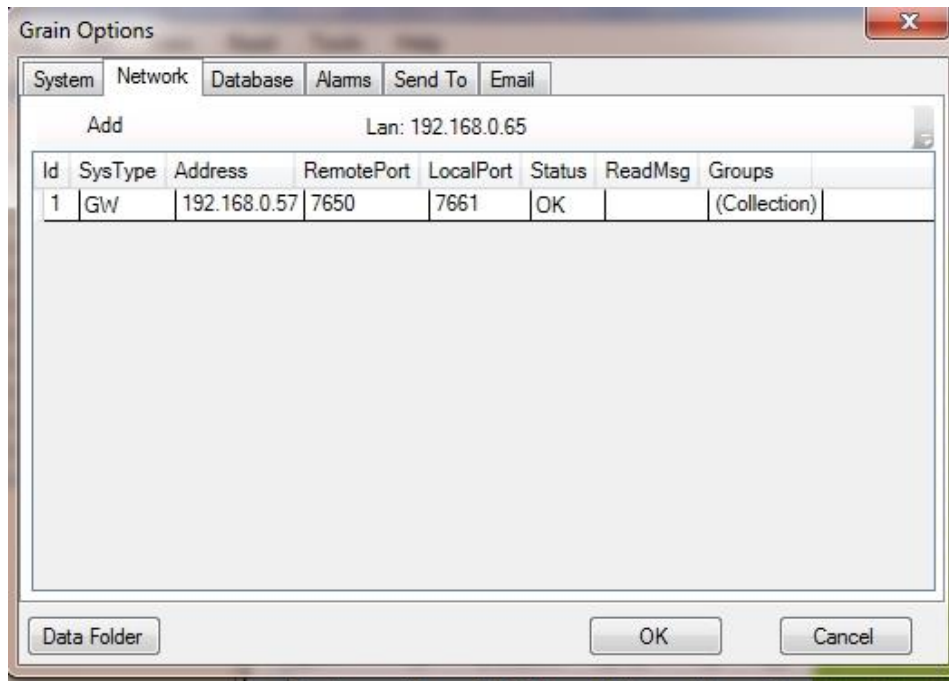


- 5.4 A new window will open. Make sure it's at the CD/USB location. If not, go directly to that location.
- 5.5 Double click the "Site" file or "GrainSite" file from the CD/USB. This will start the BCSGrain software.
- 5.6 Go to Tools -> Options and select the Network tab. The Lan Address is the Computer's IP address.

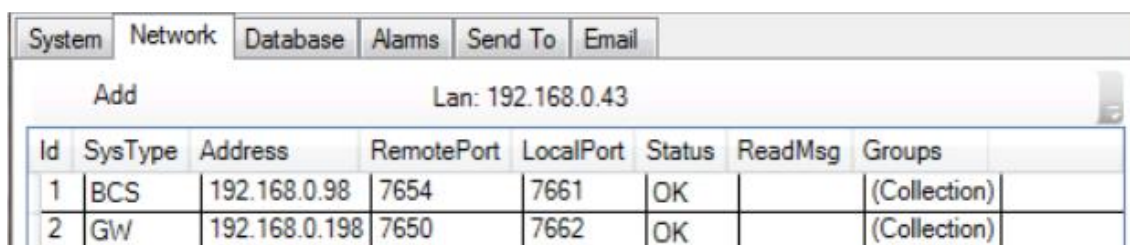
5.7 Click on “Add” in the top left corner, to add the Digi Connect EZ. **ID #1** will be added to the list with the default **SysType** (BCS), the default IP **Address** (192.168.0.198), default **RemotePort** (7654), and **LocalPort** (7661).



- 5.8 Change the **SysType** to “GW” by double clicking “BCS”. A drop-down arrow will appear to change it.
- 5.9 Change the **Address** from “192.168.0.198” to IP address of the Digi Connect EZ listed in Switch Test and/or Digi Navigator. Double click the address to change it.
- 5.10 Change the **RemotePort** from “7654” to “7650” as was listed in Switch Test. Double click to change it.



- 5.11 Check to make sure the **LocalPort** is set to “7661”.
- 5.12 If there is more than one Device for the system repeat steps 5.7 through 5.11. Change the IP address to the Device’s IP address and change the **LocalPort** to “7662” for device #2, “7663” for device #3, etc.
- 5.13 When it’s done, select “OK” and restart the BCSGrain program. Select Read and begin a read.
- 5.14 In the case where there is already a BCSE1000 instrument in place, set the BCS to ID 1 with its IP address, RemotePort to 7654, and LocalPort to 7661. The Gateway will be ID 2 with RemotePort 7650 and LocalPort 7662.



- 5.13 If there are problems installing this software or any other issues, please contact Boone Cable Works & Electronics at (515) 432-2010 or 1-800-265-2010 or visit our website: <http://www.rolfesatboone.com>.



## 6. DIGI CONNECT EZ DEFAULT SETTINGS

Following is an overview of the default settings on the Digi Connect EZ.

1. System -> Serial Configuration -> Port#

Enable	on
Mode:	Application
Signaling:	RS-485
Termination:	on
Full duplex:	off

2. System -> Device Configuration -> Central Management -> Disabled

3. System -> Device Configuration -> Network -> Interfaces:

- 3.1 ETH1 -> Disabled

- 3.2 ETH2 -> Enabled

- 3.2.1 Zone: Internal

- 3.2.2 IPV4: Type: DHCP Address

4. System -> Device Configuration -> Authentication -> Groups -> Admin:

- 4.1 Interactive Shell Access -> Enabled

5. System -> Device Configuration -> Firewall -> Custom Rules:

- 5.1 Enabled

- 5.2 iptables -I INPUT -s 192.168.0.0/16 -p udp --dport 7650 -j ACCEPT

- 5.3 iptables -I INPUT -s 192.168.0.0/16 -p tcp --dport 502 -j ACCEPT

6. System -> Device Configuration -> System -> Name

7. System -> Device Configuration -> System -> Scheduled tasks -> Custom Scripts:

- 7.1 Enabled

- 7.2 Run Mode -> On Boot

- 7.3 Commands:

- 7.3.1 cd/etc/config/scripts

- 7.3.2 python BxMain.py

- 7.4 Log Script Output: ON

- 7.5 Log Scrips Errors: ON

- 7.6 Sandbox: OFF

- 7.7 Exit Action: Restart Script