



## CNI4 Quick Start Guide

FD-601 | Version 1 | September 2017

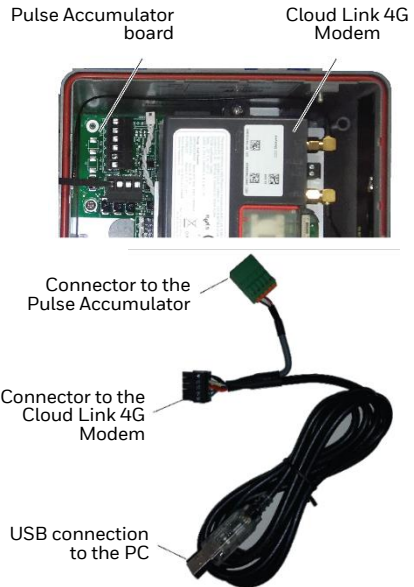
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## Introduction

The CNI4 has two components: The Pulse Accumulator and the Cloud Link 4G Modem.

This Quick Start Guide provides instructions for using the MasterLink Software (R510.1 or higher) to configure the Pulse Accumulator and the Cloud Link 4G Modem as two independent sites, using the USB-to-serial cable (40-6147-kit).

One end of the cable has a USB connector and the other end includes a male and female connector. The male (black) connector connects to the Cloud Link 4G Modem and the female (green) connector connects to the Pulse Accumulator.



### Steps to configure the CNI4:

- Step 1: [Open the door of the CNI4 and install the SIM Card.](#)
- Step 2: [Power-up the CNI4 - battery or external power supply.](#)
- Step 3: [Connect the external pulse inputs \(for wall mounted only\).](#)
- Step 4: [Disconnect the serial cable interfacing the Pulse Accumulator and the Cloud Link](#)
- Step 5: [Configure the Pulse Accumulator.](#)
- Step 6: [Configure the Cloud Link 4G Modem.](#)
- Step 7: [Restore the original serial cable connection.](#)
- Step 8: [Close and lock the door.](#)

#### Step 1: Open the door of the CNI4 and install the SIM Card

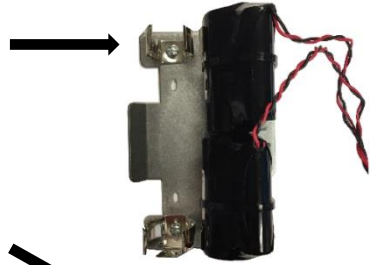
1. Lift the SIM card cover on the Cloud Link.
2. Slide the white SIM card holder to the right, then lift the left edge.
3. Insert a SIM card into the slot provided and close the card holder.
4. Slide the SIM card holder to the left until it snaps locks.
5. Close the cover.



## Step 2: Power-up the CNI4 - battery or external power supply

### To connect the battery packs to the Cloud Link 4G Modem

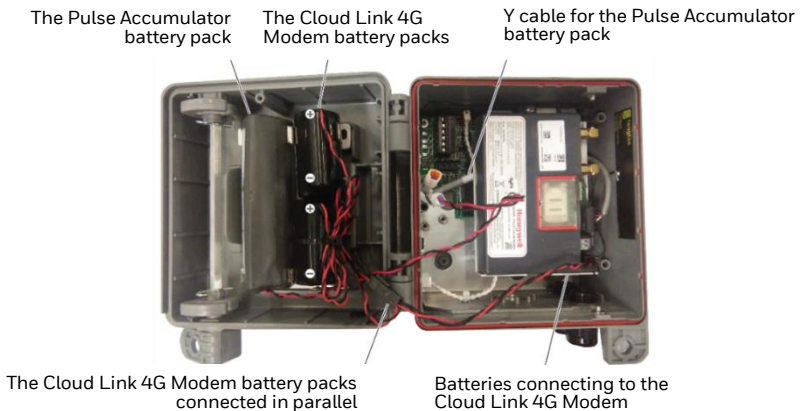
1. Install the Cloud Link battery packs with positive terminal on top.
2. Tie wrap the batteries to the metal plate.
3. Connect the female connector from the first battery to the male connector of the second battery.
4. Remove the warning label as shown in the picture, and then remove the dummy battery connector plug on the Cloud Link.
5. Attach the connector from second battery to the Cloud Link battery connector.
6. Wrap the extra wire using a cable tie.



Cloud Link 4G Modem battery connector

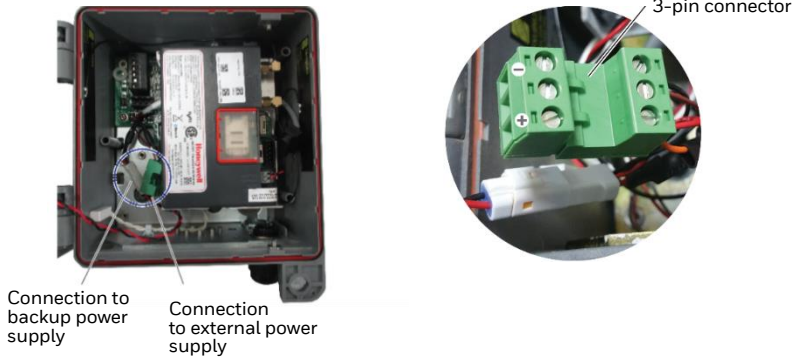
### To connect the battery pack to the Pulse Accumulator

1. Install the Pulse Accumulator battery pack on the left side of the battery plate.
2. Connect the Pulse Accumulator battery pack to the Y cable.
3. Wrap the extra wire using a cable tie



### To setup external power supply

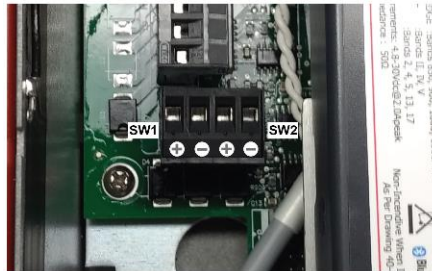
1. Remove the housing of the cable gland and route the power cable through it.
2. Connect the power cable to the 3-pin power connector on the Pulse Accumulator board.
3. Connect the other end of the power cable to an external power source (5V to 16V, 2A peak current).



### Step 3: Connect the external pulse inputs (for wall mount only)

It is possible to connect a maximum of two external pulse inputs at TB2 (Terminal Block 2) of the Pulse Accumulator.

A 3.5 volts DC wetting voltage is provided by each Pulse Accumulator input channel. If the pulse channel is to be wired to an active device, i.e. transistor-type output, then be sure to observe polarity.



### To connect the external pulse inputs

1. Remove the housing on the cable gland and route the pulse input(s) cable through it.
2. Unplug the male 4-pin terminal block connector.
3. Connect the external input pulse wires of the cable into appropriate slot on the 4-pin terminal block connector.
4. Reconnect the 4-pin terminal block connector.

**Step 4: Disconnect the serial cable interface connecting the Pulse Accumulator and the Cloud Link 4G Modem**



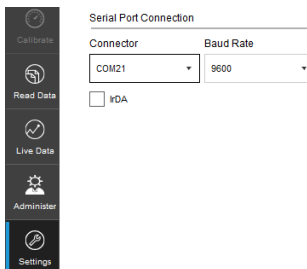
Disconnect the RS232 connector from the Cloud Link 4G Modem.

**Step 5: Configure the Pulse Accumulator**

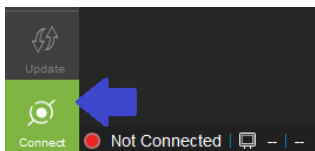
1. Insert the male connector of the Pulse Accumulator into the female connector of the USB-to-serial cable.



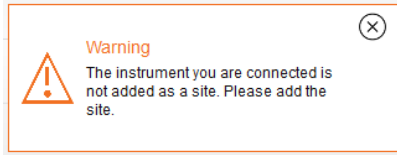
2. Connect the USB end of the serial cable to a PC.
3. Launch and login to the MasterLink desktop application.
4. Navigate to the Settings menu, set the baud rate to the recommended value (9600), and click OK.



5. Click Connect to connect to the Pulse Accumulator.



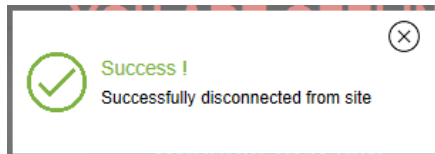
6. Close the warning pop-up, enter site name, and click Save.



7. Wait for the dashboard to load. Click the center of the Time Sync widget and perform a time synchronization between the Pulse Accumulator and the PC by clicking Sync.
8. Navigate to View/Edit > Configure by Group > Site Information and change the Site ID to the value required by Meter Data Management software.
9. Navigate to View/Edit > Configure by Group > Modem Call-in Configuration, and set the following parameters for call-in.

Item No.	Description	Recommended Value
333	Call-in Trigger	3 = Alarm & Scheduled Call-in
449	Switch Filtering	1 = Filter Both Channels
486	Modem AT-Command Enable	1=yes
334	Scheduled Call-In Date	Set the desired call-in date
335	Scheduled Call-In Time	Set the desired call-in time
336	Call-In Retry By	Instrument
339	Scheduled Call-In Phone number	<IP>/<Port> Example:192.168.1.1/50467
485	Call-Out Stop Time	00:00:00
490	Call-Out Start Time	00:00:00
493	Alarm Call-In Phone number	<IP>/<Port> Example: 192.168.1.1/50467
495	Modem Retry Interval A	5 minutes
496	Modem Retry Interval B	1440 minutes
497	Modem Retry A Count	3

10. Click Disconnect to disconnect MasterLink from the Pulse Accumulator. The following message is displayed upon a successful disconnection from the Pulse Accumulator. Close the pop-up.

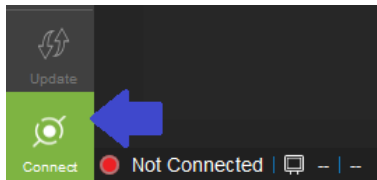


## Step 6: Configure the Cloud Link 4G Modem

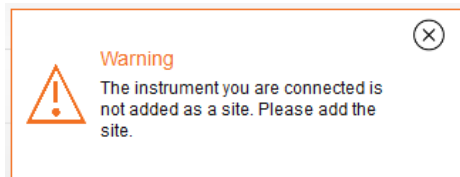
1. Disconnect the female connector of the USB-to-serial cable that was previously connected to the Pulse Accumulator.
2. Insert the male connector, so far unused, of the USB-to-serial cable into the female RS232 connector slot on the Cloud Link.



3. Click Connect to connect to the Cloud Link.



4. Close the warning pop-up, enter site name, and click Save.



5. Wait for the dashboard to load. Click the center of the Time Sync widget and perform a time synchronization between the Cloud Link and the PC by clicking Sync.

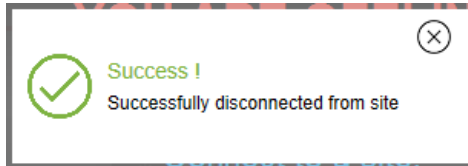
- Navigate to View/Edit > Configure by Group > Radio Configuration, and set the following parameters.

Item No.	Description	Verizon	Non-Verizon
3071	Verizon enable	1 = Enable	0 = Disable
3016	Fetch Radio Parameters	1 = Set	1 = Set
3021	ModemIPType	2 = IPv4v6	0 = IPv4
3022	Packet service Connection command	ATD*99***3#	ATD*99#
3064	Manual APN Enable	1 = Enable	1 = Enable
3023	APN Name	Provided by Verizon	Example for AT&T: 12221.mcs

- Cloud Link must be externally powered and modem session timeout must be configured to 180 seconds if *MiWireless* mode is enabled.

Item No.	Description	Recommended Value
3142	MiWireless Enable	1 = Enable
3028	Modem session timeout	180 seconds

- Disconnect MasterLink.



- Power cycle the CNI4.

**Step 7: Restore the original serial cable connection**

- Disconnect the USB to serial cable (40-6147-kit).
- Restore the original serial interface between the Pulse Accumulator and the Cloud Link 4G Modem.

**Step 8: Close and lock the door**