



**Where**

**Automation**

**Connects.**

# Technical Note

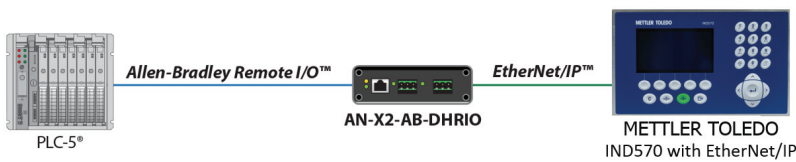


## Mettler Toledo Weighing Terminal to RIO with AN-X2-AB-DHRIO

Applicable products include:

- **AN-X2-AB-DHRIO**  
*With drive firmware*
- **AB PLC-5 with RIO Scanner**
- **SLC with 1747-SN RIO Scanner**
- **Mettler Toledo Weighing Terminal**  
*Weighing Terminal IND570*  
*With EtherNet/IP option module*

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# AN-X2-AB-DHRIO with drive firmware

This document describes the procedures to enable a PLC-5 or SLC to communicate with a Metter Toledo IND570 Weighing Terminal over Remote I/O. To utilize existing PLC-5 and SLC's Remote I/O systems, the AN-X2-AB-DHRIO will be used as a Remote I/O adapter that is controlled by the PLC-5 or SLC Remote I/O scanner.

The Metter Toledo IND570 is configured with an EtherNet/IP class 1 server that will be controlled by the AN-X2-AB-DHRIO EtherNet/IP class 1 scanner.

## 1. Configure the AN-X2-AB-DHRIO

Using your favorite Internet browser, Connect to the AN-X2 webpage. Consult the [DHRIO Drive user manual](#) for instructions on setting the IP address.

Click on AN-X Configuration

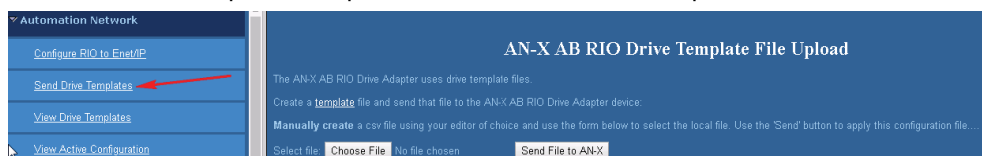


Assign the IP address settings for your AN-X2.  
 Select AN-X2-AB-DRV-04 for the Firmware Type.  
 Click SUBMIT.

Click the Continue button and wait 60 seconds for the firmware to update.



Once the AN-X2 is powered up, click on the Send Drive Templates link.



**Send the EthDef file:**

**\*\*The supplied EthDef\_MT\_IND570.csv file was constructed from information obtained from the IND570's EDS file. Consult the [TN171005-000 AN-X2-AB-DHRIO RIO to EIP Drives.pdf](#) technote file for information on how to construct or modify the templates.**

Click the Choose File button, and browse for and select the EthDef\_MT\_IND570.csv file.

Click the Send File to AN-X button. This will transfer the file to the AN-X2 internal storage.

**Send the RioDef file:**

Click the Choose File button, and browse for and select the RioDef\_MT\_IND570.csv file.

Click the Send File to AN-X button. This will transfer the file to the AN-X2 internal storage.

**Send the MainDef file:**

**\*\* Consult the [TN171005-000 AN-X2-AB-DHRIO RIO to EIP Drives.pdf](#) technote file for information on how to construct or modify the templates. The supplied AbRio\_Main\_MT\_IND570.csv file configures the ANX2 as follows:**

**Baud: 115k**

**Rack#: 10, quarter-rack**

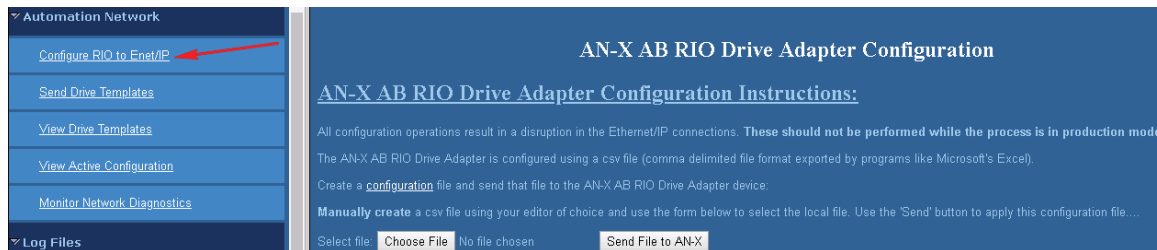
**RPI: 100**

**IP Address of IND570 EtherNet/IP interface: 192.168.22.207**

Click on the Configure RIO to Enet/IP link

Click the Choose File button, and browse for and select the AbRio\_Main\_MT\_IND570.csv file.

Click the Send File to AN-X



The RIO and EtherNet/IP networks use little endian format. Several options are available to swap the bytes so the IND570 and PLC-5/SLC use the same format. You can swap the bytes in PLC code, swap bytes in AN-X2, or swap the bytes in the IND570. In this technote, swapping was not needed.

**Consult the IND570 series user manual for information on how to modify the IP address.**

## 2. Configure the PLC-5 or SLC

The configuration used for this technote is configured as:

Baud: 115k

Rack#: 10, quarter-rack

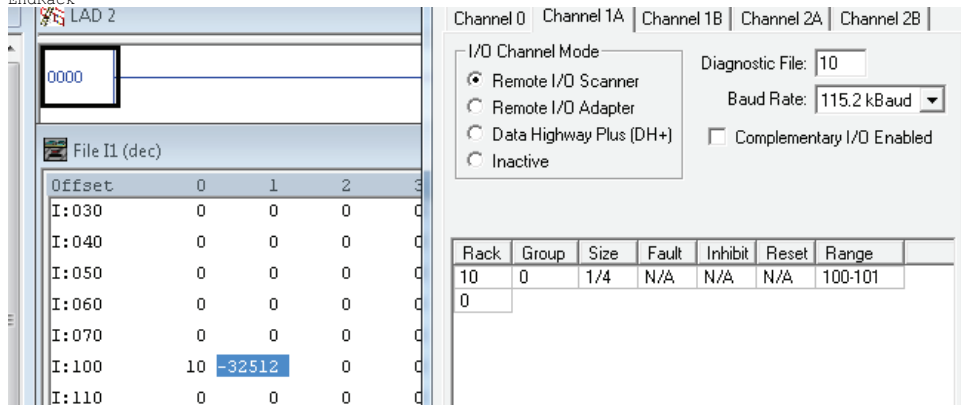
RPI: 100

IP Address of IND570 EtherNet/IP interface: 192.168.22.207

Verify the Main template file matches the configuration of the PLC-5/SLC.

```

Baud 115k                ; 57k, 115k or 230k
Rack, 0o10, 1, 1        ; Rack Number, Start Quarter, End Quarter
RPI 100                 ; RPI for the EtherNet IP connection to the Drive
Template, EthDef_MT_IND570 ; link to file that defines drive Ethernet tags
Template, RioDef_MT_IND570 ; link to file that maps Ethernet tags to RIO
IpAddr 192.168.22.207   ; Drive IP Address the IND570
Unicast
EndRack
  
```



The screenshot shows the software interface for configuring I/O channels. On the left, a table lists I/O words and their values:

Offset	0	1	2	3
I:030	0	0	0	0
I:040	0	0	0	0
I:050	0	0	0	0
I:060	0	0	0	0
I:070	0	0	0	0
I:100	10	-32512	0	0
I:110	0	0	0	0

On the right, the I/O Channel Mode is set to "Remote I/O Scanner". The Baud Rate is set to "115.2 kBaud". Below this, a table shows the rack configuration:

Rack	Group	Size	Fault	Inhibit	Reset	Range
10	0	1/4	N/A	N/A	N/A	100-101
0						

In the image above, notice the I/O words are 100 and 101. The value in I:100 is a value of 10, which corresponds to the display on the IND570, which is displaying 0.010.

