

# **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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PLC-5

Allen-Bradley Remote I/O™



METTLER TOLEDO





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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 <u>DHRIO Drive user manual</u> for instructions on setting the IP address.

Click on AN-X Configuration	
▼ Automation Network	AN-X2 Configuration
✓ Log Files	Serial Number: 1a001ce7
	MAC Address: 00:0C:1A:00:1c:e7
AN-X Configuration	Link-Local:
	Static : 💿
Archive Configuration	AN-X Hostname: ANX_AB_DRV
Update AN-X Firmware	AN-X IP Address: 10.12.1.66
	NET Mask: 255.255.2
Restart AN-X Module	Gateway Address: 10.12.1.1
	Firmware Type: AN-X2-AB-DRV-04 🔻
✓ Troubleshooting	SUBMIT

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. AN-X2 IP Configuration



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 <u>TN171005-000 AN-X2-AB-DHRIO RIO</u> 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 Ft

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

Automation Network										
Configure RIO to Enet/IP	AN-X AB RIO Drive Adapter Configuration									
Send Drive Templates	AN-X AB RIO Drive Adapter Configuration Instructions:									
<u>View Drive Templates</u>	All configuration operations result in a disruption in the Ethernet/IP connections. These should not be performed while the process is in production mode.									
View Active Configuration	The AN-X AB RIO Drive Adapter is configured using a csv file (comma delimited file format exported by programs like Microsoft's Excel).									
	Create a configuration file and send that file to the AN-X AB RIO Drive Adapter device:									
Monitor Network Diagnostics	Manually create a csv file using your editor of choice and use the form below to select the local file. Use the 'Send' button to apply this configuration file									
≫ Log Files	Select file: Choose File No file chosen Send File to ANX									

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	d 115k		;	57k, 1	15k or 2	230k								
Raci RPI Temp Temp IpAc Unic EndI	c, 0010, 1, 100 Dlate, EthDe Dlate, RioDe ddr 192.168 Cast Rack	ck Numbe I for th nk to fi nk to fi ive IP A	ber, Start Quarter, End Quarter the EtherNet IP connection to the Drive file that defines drive Ethernet tags file that maps Ethernet tags to RIO ? Address the IND570											
4	Kada 2					Channel (	Char	nnel 1A	Channe	el 1B   Cł	hannel 2/	A Channel	2B	
	0000					I/D Channel Mode				Diagnostic File: 10 Baud Rate: 115.2 kBaud 💌 Complementary I/O Enabled				
	Offset	0	1	2	З									
	I:030	0	0	0	q									
	I:040	0	0	0	d	Back	Group	Size	Eault	Inhihit	Beset	Bange		
	I:050	0	0	0	d	10 (	)	1/4	N/A	N/A	N/A	100-101		
_	1:060	0	0	0	d	0								
-	I:070	0	0	0	d									
	I:100	10 📑	2512	0	d									
	I:110	0	0	0	d									

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.

