## **Conversion M-class to I-class**

- 1. Close Acquity Console
- 2. In Inlet Editor, choose Tools->Instrument Configuration

Instr	ument Configuration				
RIOD	Status				
Status	Status Additional Status	Solvent Levels			
B	O Running	Pumps	0.00	ā	99.0 %
Inlet	Pump On Inject Cycle	Flow (μl/min):	0.50		1.0 %
Autosampler	<ul> <li>Ready</li> <li>OK</li> </ul>	Pressure (psi):	80	C	0.0 %
	Detector Scan:	Mode: Not Installed			

	Pump	Autosampler	Detector 1	Detector 2
atio	Waters Pump C	Waters ACQUI	Not Configured	Not Configured
	Selected Confi	guration Address	ses	
	Pump	Autosampler	Detector 1	Detector 2
	The second se			
	1	828	1	23
Inlet	2		Setup Instrument	Configure
Inlet Infiguration	Click a line in the li Click "Configure"	ist above to select a to configure current	Setup Instrument an inlet channel. tly selected inlet cha	Configure

1

4. Click Next



## 5. Select None for Pump

Choose a pump, a Waters 26 Waters 27 Waters 27 Waters AC Waters AC	and then pro 95 95 96 QUITY BSI QUITY Nar	ess Nexi	to cont	inue.		
Vaters 26 Waters 26 Waters 27 Waters 27 Waters AC Waters AC	95 95 96 QUITY BSI QUITY Nar	M				
Waters Ca Waters Pu External HP 1090 HP 1050 HP 1100 HP 1100 HP 6890 Jasco 900	QUITY QS pLC mp Control	no M			×	

Then click Next

6. Select None for Auto Sampler

i <b>pler</b> ipler.	-
utosampler device, and then press Next to continue.	
s 2700 s 2747 s 2767 s 2777 ASX500 ASX100 v200S v200SE val s GC PAL (A200SE Emulation Mode) 090	
al aC PAL (A200SE Emulation Mode) 190 150 00	

Then click Next

- 7. Click Next, then Finish, then Finish again to exit Inlet Configuration
- 8. Click No when asked if you want to save changes.



- 9. Close the Inlet Editor and exit Masslynx. Again, click No when asked to save changes.
- 10. Power off all M-class modules.

- Acrobat Reader DC WassLynx V4.2 Waters DHCP TeamViewe 12 Server Confi... Waters Engineer ACQUITY and nano/A... WBA0256 INSTALLATI... é 8 FC 100 т
- 11. Open Waters DHCP Server Configuration.exe on the desktop

Address	MAC Address	Туре	Name
92.168.0.2	00-00-C4-0A-E0-7A	ACQ-nBSM	H17NI8594N
92.168.0.3	00-30-64-19-0D-DC	XEVO-TQXS	WBA0256
92.168.0.5	00-00-C4-0A-F6-0C	ACQ-nBSM	K17NIB630N
192.168.0.6	00-00-C4-0A-86-53	ACQ-TVM	E17NIT395M
192.168.0.7	00-00-C4-0A-D4-99	ACQ-nSM	G17NIS432M
N.			

12. Select each module in turn and click Remove. Say Yes to the confirmation prompt.

13. When finished, the configuration should be empty:

IP Address	MAC Address	Туре	Name

14. Close Waters DHCP Server Configuration.exe



15. Move the Xevo TQ-XS Ethernet cable from the M-class switch to the I-class switch.

M-class



I-class 16. Reboot Masslynx PC.

17. Open the ACQUITY and nanoACQUITY Configuration.exe shortcut on the desktop



18. Choose ACQUITY UPLC and click Configure



- 19. Open Waters DHCP Server Configuration.exe
- 20. Turn on both I-class modules.

21. Run Teraterm on the desktop



22. Hit the enter key to get an arrow prompt (->), then type "reboot <enter>"

<u>w</u> c	OM1 -	Tera Te	rm VT					
<u>F</u> ile	<u>E</u> dit	<u>S</u> etup	C <u>o</u> ntrol	<u>W</u> indow	<u>H</u> elp			
-> 1	eboo	t						-
								-
			-					

23. Wait for the EPC to reboot. When it is done teraterm will display this:

COM1 - Tera Term VT
<u>File Edit Setup Control Window H</u> elp
value = 0 = 0x0 UpdateBoardDiagnosticsInfo<> [5335594599154] (tShell0): UpdateBoardDiagnosticsInfo called [5335594610278] (tShell0): CLancasterApp::UpdateBoardDiagnostics called
<pre>[5358856421038] (tShell0): ReadPCIRegisterWord read succesfully Addr = 0x180 - D ata = 0x4402 value = 1 = 0x1 SetParameterUpdateDelay 5 value = 5 = 0x5 taskDelay(10000) [5360512778882] (STAT_RBS): ERROR: No response from board ID:0xd1 [5362645360326] (STAT_RBS): ERROR: No response from board ID:0xd1 [5364782234594] (STAT_RBS): ERROR: No response from board ID:0xd1 [5366919110478] (STAT_RBS): ERROR: No response from board ID:0xd1 [5369055986054] (STAT_RBS] [STAT_RBS] [STAT_RB</pre>
value = 0 = 0x0 Done executing startup script 'script6_9.txt'. ->

This is a standard way to reboot the EPC.

- 24. Close teraterm.
- 25. The Waters DHCP Server Configuration.exe window should display both I-class modules and the Xevo TQ-XS:

P Address	MAC Address	Туре	Name
92.168.0.2	00-30-64-19-0D-DC	XEVO-TQXS	WBA0256
92.168.0.4	00-00-C4-0A-D0-80	ACQ-BSM	F17BUR634G
92.168.0.5	00-00-C4-0A-C9-F6	ACQ-SM	F17UFL062M

- 26. If so, close Waters DHCP Server Configuration.exe
- 27. Start Masslynx, go to the Inlet Editor and choose Tools->Instrument Configuration as above, then click Configure, then Next
- 28. For the pump, choose Waters ACQUITY BSM

Select Pump Choose a pumpin	g device.		
Choose a j	oump, and then press Next to co	ntinue.	
Nor   Wa   Wa   Wa   Wa   Wa   Wa   Gils   HP   HP   HP   Jas	e ers 2695 ers 2795 ers 2796 ers ACQUITY BSM ers ACQUITY Nano ers ACQUITY QSM ers CapLC ers Pump Control erral on 1090 1050 1100 6890 co 900		
		1	

29. For the pump, choose Waters ACQUITY Sample Manager

Select Auto 5	ampler			
Choose an autos	ampler.			
Choose ar	n autosampler de	vice, and then p	ress Next to con	tinue.
₩a ₩a ₩a	ters 2777 ters ACQUITY S ters ACQUITY S	ample Manager ampler Manager	FTN	

30. Click Next, Finish, Finish to exit the Inlet Editor, and OK at the setup prompt.



31. Open the console from the Masslynx Main window to ensure all the modules are present.

32. You are now ready to open a method in the inlet editor or use the console to control the I-class.

## **Conversion I-class to M-class:**

- 1. Close the console
- Open the Inlet Editor and deconfigure the inlet as described in the M-class to I-class section. Choose None for Pump and Autosampler. Then click through to exit Instrument Configuration, say no to the Save prompts, and exit the Inlet Editor.
- 3. Exit Masslynx
- 4. Power off both I-class Modules.
- 5. Open Waters DHCP Server Configuration.exe. Select each module in turn and click Remove. Then close Waters DHCP Server Configuration.exe
- 6. Move the Xevo TQ-XS Ethernet cable from the I-class switch to the M-class switch.
- 7. Reboot the Masslynx PC.
- 8. Run the ACQUITY and nanoACQUITY Configuration.exe shortcut from the desktop. Select "nanoACQUITY UPLC or ACQUITY M-Class" then click Configure



- 9. Open Waters DHCP Server Configuration.exe from the desktop
- 10. Power on all the M-class modules.
- 11. Open teraterm and reboot the EPC, as described in the M-class to I-Class conversion section

(P Address	MAC Address	Туре	Name
192.168.0.3	00-00-C4-0A-F6-0C	ACQ-nBSM	K17NIB630N
192.168.0.4	00-30-64-19-0D-DC	XEVO-TQXS	WBA0256
192.168.0.5	00-00-C4-0A-E0-7A	ACQ-nBSM	H17NIB594N
192.168.0.2	00-00-C4-0A-86-53	ACQ-TVM	E17NIT395M
192.168.0.6	00-00-C4-0A-D4-99	ACQ-nSM	G17NIS432M
( [	III		

12. Wait until all five modules are present and have their serial numbers displayed.

- 13. If so, then close Waters DHCP Server Configuration.exe and teraterm.
- 14. Start Masslynx
- 15. Open the Inlet Editor, and go to Tools->Instrument Configuration->Configure

Choo:	ct rump se a pumping device.	
	Choose a pump, and then press Next to continu	Je.
	None Waters 2695 Waters 2795 Waters 2796 Waters ACQUITY BSM Waters ACQUITY Nano Waters ACQUITY QSM Waters CapLC Waters Pump Control Extemal Gilson HP 1090 HP 1050 HP 1100 HP 6890 Jasco 900	
		(F)

16. For Pump, make sure that Waters Pump Control is selected

17. For Autosampler, select Waters ACQUITY Sample Manager

Selec	t Auto Sa	mpler			
Choos	e an autosa	ampler.			
	Choose an	autosampler dev	vice, and then p	ress Next to conti	nue.
	Non	e 2700			
	□ Wat	ers 2700 ers 2747			
	[ Wat	ers 2767			
	I Wat	ers 2777	omole Monager		
	☐ Wat	ers ACQUITY Sa	ampler Manager ampler Manager	FTN	
	Exte	mal			
		n .CTC			
	1.1				

18. Click through and exit.

19. Click Inlet in the Inlet Editor.

	14 Ha Ha A	• •			
100	Status				
Chabus	Status Additional Status	Solvent Levels			
B	Indicators Running	Pumps	0.00	A	100 %
Inlet	<ul> <li>Pump On</li> <li>Inject Cycle</li> </ul>	Flow (ml/min):	0.00	۵	0.0 %
Autosampler	🔵 Ready	-		C	0.0 %
	• ок	Pressure (psi):	0	6	0.0 %
	Scan:	Mode: Not Installed			

20. Click Cancel on the 2D Method Generator dialog that pops up

Project:	C:\MassLynx\Default.pro	Browse
put Template Method:	Default	Browse
2D Style:	High/Low pH with Online Dilution	•
Enzyme Type:	Trypsin	<u>•</u>
oop Volume:	5  Number of Fractions	: 5

 Ographic Mobile Pha	Pump	1 April 1			Run 1	`ime: [	1.00	min
Solvent A: (* B: (* Gradier	Selections A1 C A2 B1 C B2	Attaidg	t Names 1 2 o Only	• • s	] ] ]	Pressu Low: High Period	ure Limits 0 : 6000	psi psi minutes
	Time (min)	Flow (mL/min)	%A	%B	Curve	<u> </u>		
1	Initial	0.00	100.0	0.0	Initial			
2								
3								
4					-			
6		0.0.0.0.0.0.0.0						
						*		
Comment	t:							

21. On the Modify Instrument Method page that appears next, click Config

22. Click Scan to populate the instrument modules

Enable:	Module Name:	Associate with an instrument:	Configure
🔽 Pump (1)	Chromatographic Pump	ACQ-TVM SN E17NIT395M	
🔽 Pump (2)	Regeneration Pump	ACQ-TVM SN E17NIT395M	-
F Pump (3)	Regeneration Pump	ACQ-TVM SN E17NIT395M	
FO FO	Fluidics Organizer	Not Found>	]
Col Heater	Column Heater	<pre></pre>	3
🗔 515 (A)	[515 Pump (A)	<not found=""></not>	3
🗖 515 (B)	515 Pump (B)		
🗖 515 (C)	515 Pump (C)	—	

It will display a list of all the modules

Instrument Type	Serial Number	Version	Address
WPC	1234	a terrara	WPCip
Xevo TQ-XS Detector	WBA0256	1.00	192.168.
nanoACQUITY Binary Solvent Manager	H17NIB594N	1.56	192.168.
Trap Valve Manager	E17NIT395M	1.53	192.168.
nanoACQUITY Sample Manager	G17NIS432M	1.56	192,168,0
nanoACQUITY Binary Solvent Manager	K17NIB630N	1.56	192,168
·			•

Click Close

- 23. Optionally, rename "Chomatographic Pump" as "Gradient Pump" and "Regeneration Pump" and "Loading Pump"
- 24. In the dropdown next to Gradient Pump, select serial number H17NIB594N (this is the lower uBSM)

- 25. In the dropdown next to Loading Pump, select serial number K17NIB630N (this is the upper uBSM)
- 26. Click OK

Enable:	Module Name:	Associate with an instrument Configure
🔽 Pump (1)	Gradient Pump	ACQ-nBSM SN H17NIB594N
🔽 Pump (2)	Loading Pump	ACO-nBSM SN:K17NIB630N
F Pump (3)	Regeneration Pump	
FO FO	Fluidics Organizer	<not found=""></not>
Col Heater	Column Heater	<not found=""></not>
🗖 515 (A)	515 Pump (A)	<not found=""></not>
🗖 515 (B)	515 Pump (B)	
🗖 515 (C)	515 Pump (C)	

27. Click OK at the prompt, close the Modify Method screen, then choose LC->Reset Communications

<u>View</u> <u>T</u> ools <u>L</u> C	Acquity Sampler <u>H</u> elp			
Status	Flow On Lamp On Wash On Run Method			
(B) Inlet	Run Gradient (No Injection) Reset Injector Load Method	0.00	<b>A</b>	100 %
6	Reset Communications	): 0.00	6	0.0 %
Autosampler	OK Pressure (psi	i): O	6	0.0 %
	Detector Scan: Mode: Not Installed			

- 28. Click Inlet again, and Cancel at the Method Generator
- 29. In the Mode dropdown, click Trapping

Modify Instr	ument Me	thod (Unti	tled.bgm)		1	1		×	
Gradient Pu Waters Binory Binory Manager	ump Direct Direct Trappi	Injection Injection ng Data   Ana		ents		Run Time	e: 30.00	min	
Waters uBinary Solvent Manager	Solvent A1 B1 Gradie	s • • Water • • Aceto	r nitrile	•	Pressure   Low: 0 High: 10	Limits psi 0000 psi	Sea 30	al Wash: 0.0 min	1
		Time (min)	Flow (uL/min)	%A	%В	Curve	4		
	1	Initial	0.300	97.0	3.0	Initial			
	2								
	3								
	4						+		
	Comme	nt:		•			<u> </u>		
				Ac	lvanced	ОК		Cancel	-

30. Click Advanced to show the advanced options, and make sure that "Flow rate is ramped to zero..." is selected, then click OK to exit.

Gradient Pump (	CQ-nBSM#H17NIB594N	Y	
🔄 Loading Pump (/	CQ-nBSM#K17NIB630N)		
Specify a trapping	pump to enable multi	-load:	
<ul> <li>Disable Multi-Loa</li> </ul>	d	1000.	
🗇 Gradient Pump (	CQ-nBSM#H17NIB594N)	0	
🗇 Loading Pump (/	CQ-nBSM#K17NIB630N)		
Specify flow rate	pehavior when a valve	e changes p	Dation
<ul> <li>Flow rate is ramp flow rate is ramp</li> </ul>	ed to zero, valve position o	changes,	
	is applied immediately		

31. Click OK to exit, but leave the Inlet Editor running.

- W Console (Local) - [System] Interfactory and they bear and manufacture (1-1 System Control Configure Maintain Troubleshoot Help 🕀 Sample Manager System preferences... Xevo TQ-XS MS Detector Plots Arrange status panels... Sample Manager Maintenance Counters Flow Logs Configure instrument modules 22.2 °C Sample API Off Room 22.2 °C Xevo TQ-XS MS Detector Collision NanoFlow+ Camera Off. Flow Path LC System Status 80 °C Source Temperature NanoFlow Gas Pressure 0.00 bar Cone Gas O L/hr Purge Gas Flow 0 L/hr
- 32. Open the console from the Masslynx main window.

33. Check that the modules are listed as shown and click OK:

MCON	Gradient Pump	H17NIB594N 👻
µBSM-2	Loading Pump	K17NIB630N
TVM	Trap Valve Manager	E17NIT395M -
	÷	

34. You will see this screen: Do not click OK yet!



35. First, go to the Inlet Editor and choose LC->Reset Communications. Then return to the console and click OK. Wait for the console to come back up. It should look like this:

Console (Local) - [System]	The second se			
Console (Local) - [System]  System  Gradient Pump  Sample Manager  Xevo TQ-XS MS Detector  Trap Valve Manager  Plots Maintenance Counters Logs  System Status Yevo TQ-XS MS Detector:	Control Configure Maintain Troubleshoot He	Loading Pump 6 psi 0.000 uL/min <u>A1 100.0 %</u> <u>B1 0.0 %</u> Sample Manager Sample <u>22.4 °C</u> <u>Off</u>	Gradient Pump -14 psi <u>0.000</u> uL/min <u>A1 100.0</u> % <u>B1 0.0</u> %	2 Collision
System Status Xevo TQ-XS MS Detector: Instrument in standby		Off       Room     22.2 °C       Xevo TQ-X5 M5 Detector       NanoFlow+       Camera		
		Flow Path	LC	, <b>-</b>
				44

36. In the Inlet Editor, click Inlet. The Modify Instrument Method page should now look like this:

Modify In:	strument Me	thod (Unti	tled.bgm)					×
Loading F	Pump <sup>Mode:</sup> Direct	Injection	·			Run Tir	ie: 3	0.00 min
Solvent Manager Waters UBinary Solvent Manager Waters Trap Valve Manager	Analytical Solvents	Data Ana s • • • Water • • Aceto • • •	alog Out   Ev nitrile	ents	Pressure Low: 0 High: 10	Limits ps 1000 ps	i i	Seal Wash:
		Time (min)	Flow (µL/min)	%A	%В	Curve	-	
	1	Initial	0.300	97.0	3.0	Initial		
	2							
	3							
	4						-	
	) s Comme	nt:		Pereze 2010-10-				
-				Ac	lvanced	0	<	Cancel

You are now ready to open a method or control the M-class from the console.