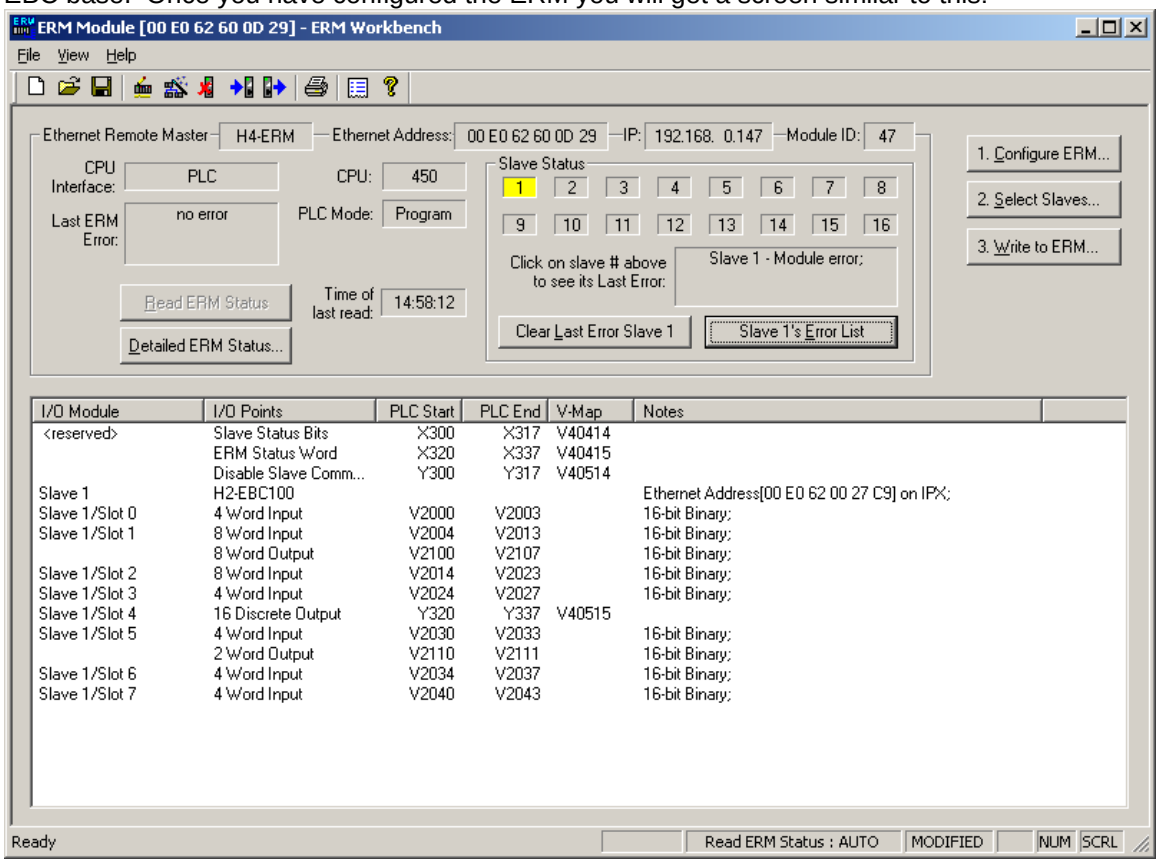
FACTS 205 Analog Modules with H2-EBC and ERM

The Host Engineering ERM (H2-ERM or H4-ERM) allows I/O in an H2-EBC base to act as remote I/O to the PLC that contains the ERM module. FACTS Analog module data in the H2-EBC base is mapped to V-memory or Discrete I/O.

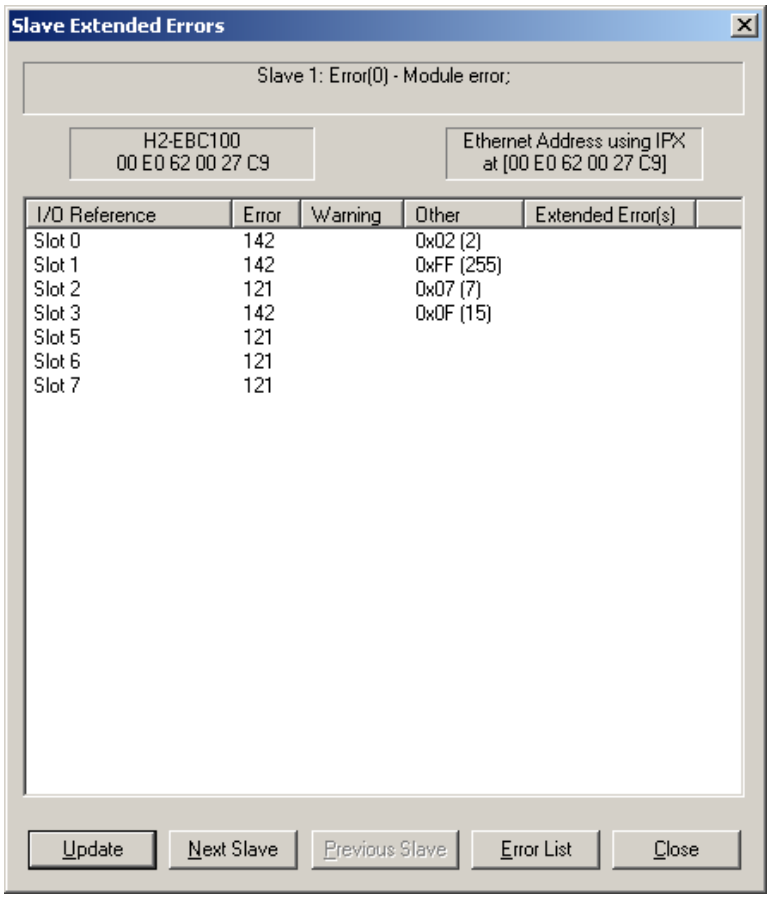
The ERM Workbench software will tell you what the mapping is for each I/O module in the H2-EBC base. Once you have configured the ERM you will get a screen similar to this:



The I/O Configuration for Slave 1 in the above screen shot is:
Slot 0 = F2-04THM
Slot 1 = F2-8AD4DA-1
Slot 2 = F2-08AD-1
Slot 3 = F2-04RTD
Slot 4 = D2-12TR
Slot 5 = F2-4AD2DA
Slot 6 = F2-04AD-2
Slot 7 = F2-04AD-1

Use the addresses shown in ERM Workbench along with the following table to read/write your analog I/O with your ERM master.

DIAGNOSTICS NOTE:
Click on 'Slave 1's Error List' to see any errors associated with that slave. It should look something like this, note the 'Error' column and the 'Other' column:



I/O Reference	Error	Warning	Other	Extended Error(s)
Slot 0	142		0x02 (2)	
Slot 1	142		0xFF (255)	
Slot 2	121		0x07 (7)	
Slot 3	142		0x0F (15)	
Slot 5	121			
Slot 6	121			
Slot 7	121			

Note that reading the error using ERM Workbench as shown above also clears the error if the error condition has been removed. In order to clear the error using ladder logic you would need to add logic as shown in Appendix B of the H24-ERM-M manual:
http://www.automationdirect.com/static/manuals/h24ermm/appxb.pdf

Part Number	Channel Data	Configuration Data	Diagnostics Data See DIAGNSOTICS NOTE above
F2-04AD-1 (L) F2-04AD-2 (L)	Word 1 = Ch1 Word 2 = Ch2 Word 3 = Ch3 Word 4 = Ch4	No software configuration	No Broken Transmitter Detection If No 24VDC or No Terminal Block: All channels = 0 counts ‘Error’ = 121 ‘Other’ cycles 1 thru 3
F2-08AD-1	Word 1 = Ch1 Word 2 = Ch2 Word 3 = Ch3 Word 4 = Ch4 Word 5 = Ch5 Word 6 = Ch6 Word 7 = Ch7 Word 8 = Ch8	No software configuration	Channels with broken transmitter: Channel = 0 counts ‘Error’ = 121 ‘Other’ = Channel Number If No 24VDC or No Terminal Block: All channels = 0 counts ‘Error’ = 121 ‘Other’ = Cycles 1 thru 7
F2-08AD-2	Word 1 = Ch1 Word 2 = Ch2 Word 3 = Ch3 Word 4 = Ch4 Word 5 = Ch5 Word 6 = Ch6 Word 7 = Ch7 Word 8 = Ch8	No software configuration	No Broken Transmitter Detection If No 24VDC or No Terminal Block: All channels = 0 counts ‘Error’ = 121 ‘Other’ = Cycles 1 thru 7
F2-4AD2DA	Word 1 = Ch1 Word 2 = Ch2 Word 3 = Ch3 Word 4 = Ch4 Word 1 = Ch1 Word 2 = Ch2	No software configuration	No Broken Transmitter Detection If No 24VDC or No Terminal Block: All channels = 0 counts ‘Error’ = 121 ‘Other’ = Cycles 1 thru 3
F2-8AD4DA-1	Word 1 = Ch1 Word 2 = Ch2 Word 3 = Ch3 Word 4 = Ch4 Word 5 = Ch5 Word 6 = Ch6 Word 7 = Ch7 Word 8 = Ch8 Word 1 = Ch1 Word 2 = Ch2 Word 3 = Ch3 Word 4 = Ch4	Word 5 = Input Resolution Word 6 = N/A Word 7 = Track and Hold Word 8 = Not Used See 15-15 of D2-ANLG-M	Channels with broken transmitter: Channel=0 counts ‘Error’ = 142 ‘Other’ = Bit On for Each Channel with Broken Transmitter If No 24VDC or No Terminal Block: All channels = 0 counts ‘Error’ = 142 ‘Other’ = 0xFF

F2-8AD4DA-2	Word 1 = Ch1 Word 2 = Ch2 Word 3 = Ch3 Word 4 = Ch4 Word 5 = Ch5 Word 6 = Ch6 Word 7 = Ch7 Word 8 = Ch8 Word 1 = Ch1 Word 2 = Ch2 Word 3 = Ch3 Word 4 = Ch4	Word 5 = Input Resolution Word 6 = Range Selection Word 7 = Track and Hold Word 8 = Not Used See 16-14 and 16-15 of D2-ANLG-M	No Broken Transmitter Detection If No 24VDC or No Terminal Block: All channels = 0 counts ‘Error’ = 121 ‘Other’ = 0xFF
F2-04THM F2-04RTD	Word 1 = Ch1 Word 2 = Ch2 Word 3 = Ch3 Word 4 = Ch4	No software configuration RTD or THM type is set jumpers.	Channels with broken transmitter: Channel=0 counts ‘Error’ = 142d ‘Other’ = Bit On for Each Channel with Broken Transmitter If No 24VDC or No Terminal Block: All channels = 0 counts ‘Error’ = 121 ‘Other’ = 0x0F
F2-02DA-1(L) F2-02DA-2(L)	Word 1 = Ch1 Word 2 = Ch2	No software configuration	None
F2-02DAS-1 F2-02DAS-2	Word 1 = Ch1 Word 2 = Ch2	No software configuration	None
F2-08DA-1 F2-08DA-2	Word 1 = Ch1 Word 2 = Ch2 Word 3 = Ch3 Word 4 = Ch4 Word 5 = Ch5 Word 6 = Ch6 Word 7 = Ch7 Word 8 = Ch8	No software configuration	None

Version History

11/13/2008 – Fixed typo in ‘Word Configuration Data’ for F2-8AD4DA-1 and 2. Changed 5,7,8,9 to 5,6,7,8.