

Experion PKS  
FMC722 on ACE Configuration Guide

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# 1 About this document

Provides guidelines and procedures to install and configure the FMC components.

**Revision history**

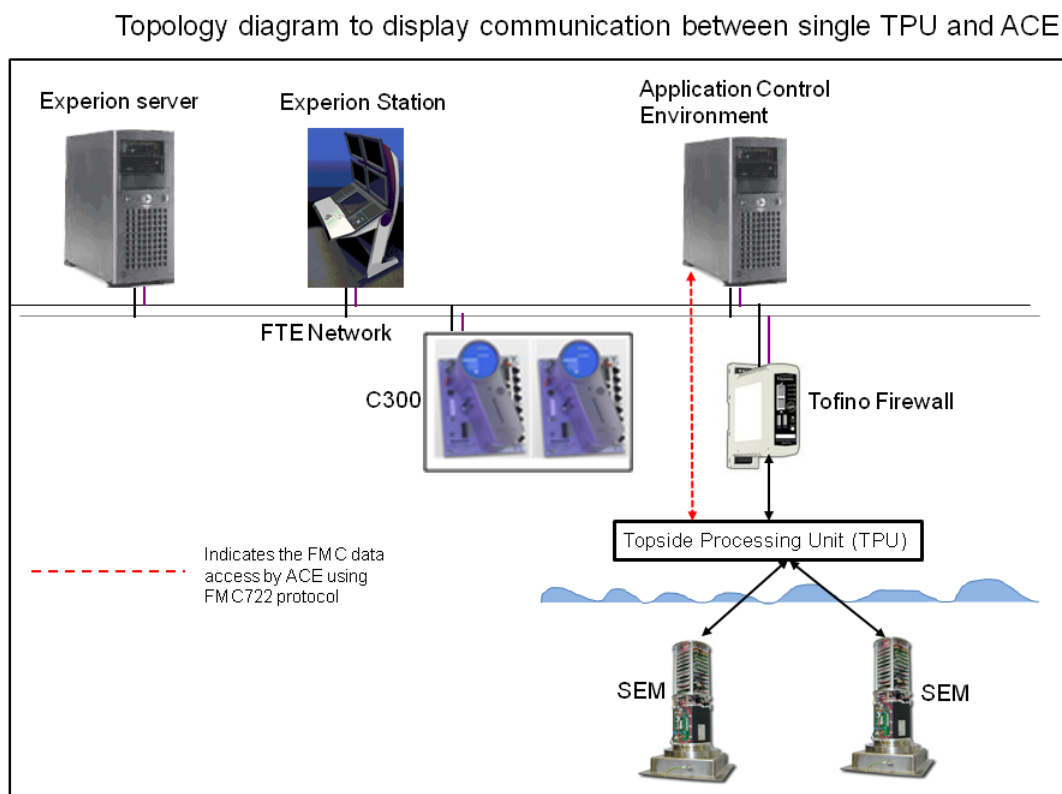
Revision	Date	Description
A	February 2015	Initial release of the document



## 2 Introduction to FMC722 on ACE solution

The FMC722 on ACE solution enables the Application Control Environment (ACE) to communicate securely with an FMC subsea system using the FMC722 protocol over TCP/IP.

The following topology diagram illustrates the communication between ACE and a single Topside Processing Unit (TPU).



**Figure 1: Communication topology between ACE and single TPU**

The following figure displays the blocks in ACE and its communication flow.

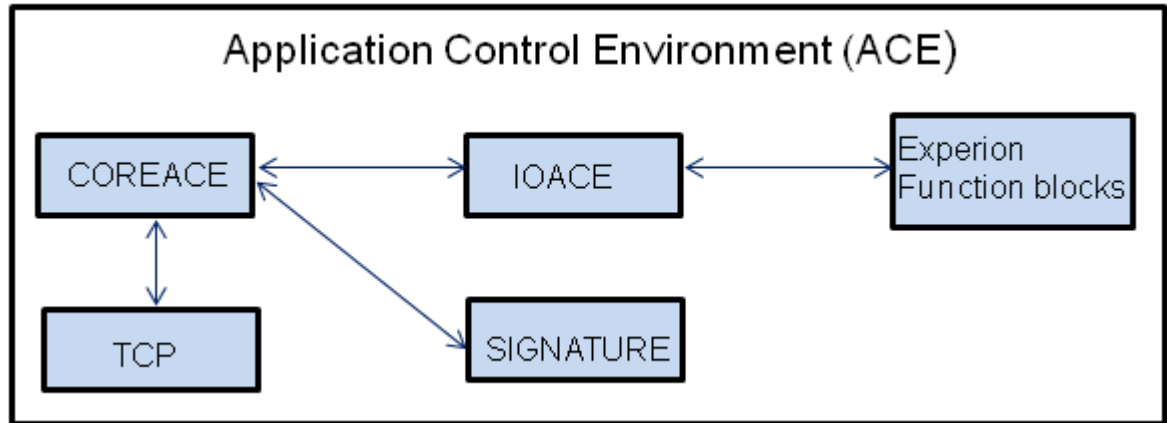


Figure 2: Communication flow between the blocks in ACE

**Attention**

- You can connect multiple TPUs to ACE using the respective COREACE and TCP blocks connected to their individual TPUs.

**Establishing communication between the Subsea Electronic Module (SEM) and ACE**

SEMs communicate with the TPU using the internal FMC722 protocol. TPU is present in the Topside Electronic Module (TEM) that acts as a router/gateway between the SEMs. ACE communicates with the TPUs over the TCP/IP through FMC722 protocol, which is implemented using the following Custom Algorithm Blocks (CAB).

- FMC COREACE block: This block interprets the incoming FMC722 messages and presents the values.
- FMC IOACE block: This block represents the input or output data of an IO device connected to a SEM.
- FMC SIGNATURE block: This block reads the signature data and saves in the file.
- FMC TCP block: This block performs TCP/IP communication with the TPUs.

**Attention**

- Each TPU has a dedicated COREACE and TCP block. Therefore, if you have multiple TPUs, then multiple COREACE and TCP blocks are required to communicate between each other.

**About the Firewall**

As FMC is an external system to Experion, all communications must pass through the Experion recommended firewall. For example, you can use the Tofino firewall.

The TCP/IP communication ports in Tofino firewall are restricted to the range of 6100-6104.

**Related topics**

- “About the FMC COREACE block” on page 9
- “About the FMC TCP block” on page 10
- “About the FMC IOACE block” on page 11
- “About the FMC SIGNATURE block” on page 12
- “About TPU redundancy” on page 15



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## 2.1 About the FMC COREACE block

The FMC COREACE block understands the FMC722 protocol, extracts information from the FMC722 raw stream data, and stores the required information in the COREACE block buffer.

The FMC COREACE block also encodes the control information from the COREACE block buffer to the FMC722 protocol for sending the information to the TPU over TCP.

The FMC COREACE block is responsible for processing the following:

- TPU connection startup sequence
- Synchronizing the time to the TPU
- Pinging messages
- Handling signature requests
- Buffering the most recent errors received
- Processing IO data

---

## 2.2 About the FMC TCP block

The FMC TCP block establishes direct TCP/IP socket communication with TPUs. This TCP block passes the FMC722 packets between the TPU and the FMC COREACE block.



### **Attention**

- Each TPU has one dedicated FMC TCP block.
-

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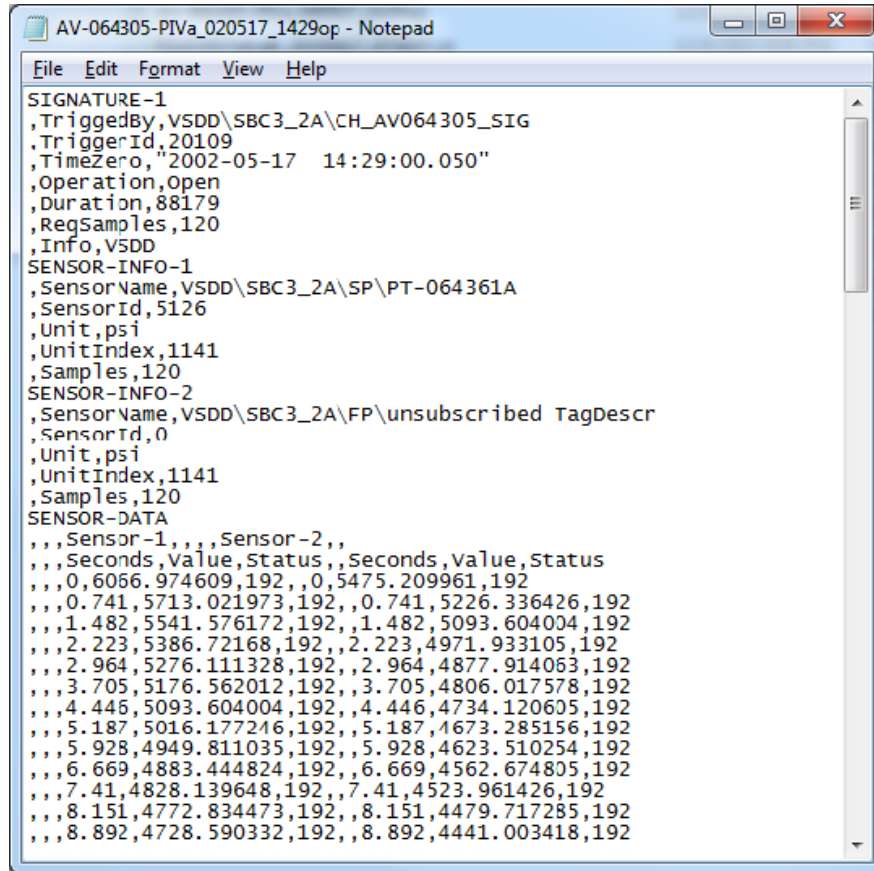
## 2.3 About the FMC IOACE block

The FMC IOACE block sends and receives FMC722 IO data from the FMC COREACE block. The FMC IOACE block can be configured to AI, AO, DI, and DO types. This block behaves similar to Experion IOCHANNEL function block.

## 2.4 About the FMC SIGNATURE block

The FMC SIGNATURE block reads signature data from COREACE block buffer and saves it to a file in the .csv format.

The following image is a sample of the contents of .csv file in text format.



```

SIGNATURE-1
,TriggerBy,VSD\SBC3_2A\CH_AV064305_SIG
,TriggerId,20109
,TimeZero,"2002-05-17 14:29:00.050"
,Operation,open
,Duration,88179
,ReqSamples,120
,Info,VSD
SENSOR-INFO-1
,SensorName,VSD\SBC3_2A\SP\PT-064361A
,SensorId,5126
,Unit,psi
,UnitIndex,1141
,Samples,120
SENSOR-INFO-2
,SensorName,VSD\SBC3_2A\FP\unsubscribed TagDescr
,SensorId,0
,Unit,psi
,UnitIndex,1141
,Samples,120
SENSOR-DATA
,,,Sensor-1,,,Sensor-2,,
,,,Seconds,Value,Status,,,Seconds,value,Status
,,,0,6066.974609,192,,,0,5475.209961,192
,,,0.741,5713.021973,192,,,0.741,5226.336426,192
,,,1.482,5541.576172,192,,,1.482,5093.604004,192
,,,2.223,5386.72168,192,,,2.223,4971.933105,192
,,,2.964,5276.111328,192,,,2.964,4877.914063,192
,,,3.705,5176.562012,192,,,3.705,4806.017578,192
,,,4.446,5093.604004,192,,,4.446,4734.120605,192
,,,5.187,5016.177246,192,,,5.187,4673.285156,192
,,,5.928,4949.811035,192,,,5.928,4623.510254,192
,,,6.669,4883.444824,192,,,6.669,4562.674805,192
,,,7.41,4828.139648,192,,,7.41,4523.961426,192
,,,8.151,4772.834473,192,,,8.151,4479.717285,192
,,,8.892,4728.590332,192,,,8.892,4441.003418,192

```

When you open the .csv file in Microsoft Excel, the comma separated file appears as displayed in the following figure.

A	B	C	D	E	F	G	H	I	J	K
SIGNATURE-1										
	TriggeredBy	VSDD\SBC3_2A\CH_AV064305_SIG								
	TriggerId	20109								
	TimeZero	29:00.0								
	Operation	Open								
	Duration	88179								
	ReqSampl	120								
	Info	VSDD								
SENSOR-INFO-1										
	SensorName	VSDD\SBC3_2A\SP\PT-064361A								
	SensorId	5126								
	Unit	psi								
	UnitIndex	1141								
	Samples	120								
SENSOR-INFO-2										
	SensorName	VSDD\SBC3_2A\FP\unsubscribed TagDescr								
	SensorId	0								
	Unit	psi								
	UnitIndex	1141								
	Samples	120								
SENSOR-DATA										
			Sensor-1				Sensor-2			
			Seconds	Value	Status		Seconds	Value	Status	
			0	6066.975	192		0	5475.21	192	
			0.741	5713.022	192		0.741	5226.336	192	
			1.482	5541.576	192		1.482	5093.604	192	
			2.223	5386.722	192		2.223	4971.933	192	
			2.964	5276.111	192		2.964	4877.914	192	
			3.705	5176.562	192		3.705	4806.018	192	

The file name of the .csv file is derived from the following attributes.

- Valve tag name
- Time stamp of the Signature
- Direction of movement to indicate “Op” for opening and “cl” for closing.

Example: If the tag name is “AV064305”, the time stamp is ”2002-05-1714:29:00.050” and the valve operation is “open”, then the file name will be “AV-064305-PIVa\_020517\_1429op.csv”.

When the COREACE block receives the signature response, then the SIGNATURE block saves the data in a specified folder.

You can receive signature data from the TPU in one of the following methods.

- Automatic signature: Based on the configuration in TPU, data is sent by the TPU to the FMC COREACE block without any request.
- Requested signature: This is based on the requests defined by some of the FMC IOACE block parameters, such as SDB\_FREQ, SDB\_TAGIDX, and SDB\_TIMEOUT.

The following signature types are supported.

- DO open signature
- DO close signature
- Sensor signature
- AO open signature “number one”
- AO close signature “number one”
- AO open signature “number two”
- AO close signature “number two”

As the signature files are saved in the Hard Disk Drive, ensure you have enough disk space for saving signature data. A failure to save the signatures due to reasons such as, access restrictions, lack of disk space, and so on is

indicated by the FMC COREACE block through the Boolean parameter SAVEFAIL. The reason is indicated by the PROGSTDDESC parameter. You can configure an alarm using the SAVEFAIL parameter.

#### **About the Disk Memory Alarm (DSKMEMALM) parameter**

The DSKMEMALM is a parameter set to ON when the HDD memory (in MB) reduces to a value less than DSKMEMCUTOFF (Disk Memory Cutoff). You can configure an alarm using this parameter. For more information about configuring alarms using the FLAG block, see *Control Builder Components Theory* in Experion documentation.



#### **Attention**

- Ensure that enough disk space is available when such an alarm is noted in the Experion Station.
-

## 2.5 About TPU redundancy

Although redundancy is not in-built, this solution can be engineered to support TPU redundancy.

ACE strategies are built to support two independent channels of communication to a pair of redundant TPUs.



**Tip**

Ensure you use IO redundancy logic to engineer the redundancy.

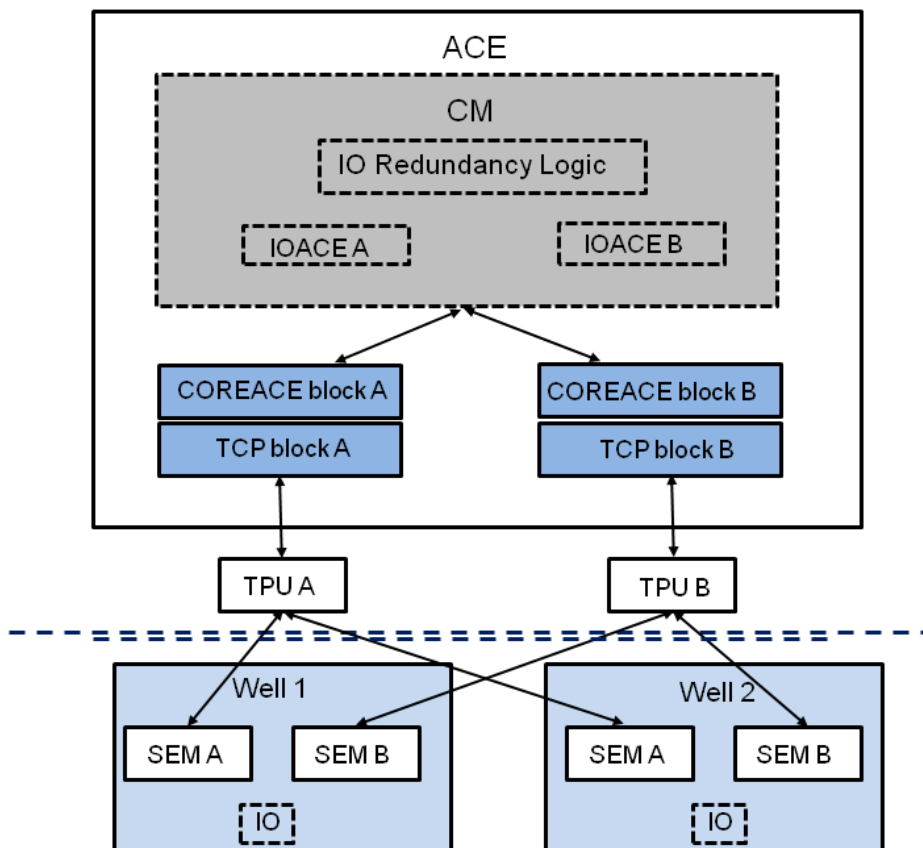


Figure 3: Topology diagram of TPU redundancy

Based on the topology, communication takes place in parallel between IOACEA and IOACEB. The two IOACE blocks communicate with their respective TPUs even though physical IOs may or may not be redundant. A redundant pair of SEMs services a single well.





# 3 Configuration of FMC722 on ACE solution

ACE communication with TPUs through the FMC722 protocol is established by configuring the following CAB blocks.

- FMC COREACE
- FMC TCP
- FMC IOACE
- FMC SIGNATURE

## **Related topics**

“Installing the FMC components” on page 18

“Importing the FMC CAB blocks” on page 20

“Configuring the FMC COREACE block” on page 22

“Configuring the FMC TCP block” on page 24

“Configuring the FMC IOACE block” on page 26

“Configuring the FMC SIGNATURE block” on page 29

## 3.1 Installing the FMC components

### Prerequisites

- Experion 430.1
- ACE
- Stop all Experion services manually using the **Experion PKS Start-Stop Services Control Panel** tool.
- Ensure to take backup of the data available in <Experion Custom Installation Path>\Honeywell\Experion PKS\Engineering Tools\System\bin. location.

### To install the FMC components

- 1 To replace ACE.exe on the ACE node.
  - a Insert the installation media into the DVD drive.
  - b From the DVD, open the ACE folder that contains the ACE installer.
  - c Copy the **ACE.exe** of version 430.1.92.5 and then paste to replace the existing ACE.exe file at the following path.  
 <Experion Custom Installation Path>\Honeywell\Experion PKS\Engineering Tools\System\bin.  
 The ACE.exe is replaced on the ACE node.
- 2 To install CAB .msi on the ACE node.
  - a Start the Command Prompt with the administrator privileges.
  - b Navigate to <Experion Custom Installation Path>\Honeywell\Experion PKS\Install path.
  - c Run the command `HWINSTALL_MAINTENANCE.EXE /u`.
  - d Use the Windows Add or remove program utility to uninstall the “Experion PKS-CAB”.  
 Note: Ensure you close the Add or remove program utility.
  - e From the Command Prompt, navigate to **Experion PKS — CAB.msi** of version 430.1–04.0, available in the CAB\_MSI folder.
  - f Run the command `msiexec /I "Experion PKS - CAB.msi" /qb- /L *V+ c:\ProgramData\Honeywell\install\CAB_install.txt PRODUCT_TYPE=ACE`.
  - g From the Command Prompt, navigate to <Experion Custom Installation Path>\Honeywell\Experion PKS\Install path.
  - h Run the command `HWINSTALL_MAINTENANCE.EXE /r`.

If you have the CAB Developer license, then you can install CAB msi on the Control Builder. For more information about CAB Developer license, see *Custom Algorithm Block and Custom Data Block Users Guide* in Experion documentation.

- 3 To install CAB .msi on the Control Builder.
  - a Start the Command Prompt with the administrator privileges.
  - b Navigate to <Experion Custom Installation Path>\Honeywell\Experion PKS\Install path.
  - c Run the command `HWINSTALL_MAINTENANCE.EXE /u`.
  - d Use the Windows Add or remove program utility to uninstall the “Experion PKS-CAB”.  
 Note: Ensure you close the Add or remove program utility.
  - e From the Command Prompt, navigate to **Experion PKS — CAB.msi** of version 430.1–04.0, available in the CAB\_MSI folder.
  - f Run the command `msiexec /I "Experion PKS - CAB.msi" /qb- /L *V+ c:\ProgramData\Honeywell\install\CAB_install.txt PRODUCT_TYPE=CB`.
  - g From the Command Prompt, navigate to <Experion Custom Installation Path>\Honeywell\Experion PKS\Install path.

- h Run the command *HWINSTALL\_MAINTENANCE.EXE /r*.



#### Attention

- For more information about Custom installation path, see *Software Installation User's Guide* in Experion documentation.

### To uninstall the FMC components

- 1 To restore the ACE.exe on the ACE node.
  - a Copy the ACE.exe from the folder, where you have taken the backup of the ACE data and then paste the ACE.exe file at the following path.  
     <Experion Custom Installation Path>\Honeywell\Experion PKS\Engineering Tools\System\bin.  
     The ACE.exe is replaced on the ACE node.
- 2 To uninstall CAB .msi on the ACE node.
  - a Start the Command Prompt with the administrator privileges.
  - b Navigate to <Experion Custom Installation Path>\Honeywell\Experion PKS\Install path.
  - c Run the command *HWINSTALL\_MAINTENANCE.EXE /u*.
  - d Use the Windows Add or remove program utility to uninstall the “Experion PKS-CAB”.  
     Note: Ensure you close the Add or remove program utility.
  - e From the Command Prompt, navigate to **Experion PKS — CAB.msi** of version 430.1–04.0 from the Experion R430.1 DVD.
  - f Run the command *msiexec /I "Experion PKS - CAB.msi" /qb- /L\*V+ c:\ProgramData\Honeywell\install\CAB\_install.txt PRODUCT\_TYPE=ACE*.
  - g From the Command Prompt, navigate to <Experion Custom Installation Path>\Honeywell\Experion PKS\Install path.
  - h Run the command *HWINSTALL\_MAINTENANCE.EXE /r*.

If you have the CAB Developer license, then you can install CAB msi on the Control Builder.

- 3 To uninstall CAB .msi on the Control Builder.
  - a Start the Command Prompt with the administrator privileges.
  - b Navigate to <Experion Custom Installation Path>\Honeywell\Experion PKS\Install path.
  - c Run the command *HWINSTALL\_MAINTENANCE.EXE /u*.
  - d Use the Windows Add or remove program utility to uninstall the “Experion PKS-CAB”.  
     Note: Ensure you close the Add or remove program utility.
  - e From the Command Prompt, navigate to **Experion PKS — CAB.msi** of version 430.1–04.0 from the Experion R430.1 DVD.
  - f Run the command *msiexec /I "Experion PKS - CAB.msi" /qb- /L\*V+ c:\ProgramData\Honeywell\install\CAB\_install.txt PRODUCT\_TYPE=CB*.
  - g From the Command Prompt, navigate to <Experion Custom Installation Path>\Honeywell\Experion PKS\Install path.
  - h Run the command *HWINSTALL\_MAINTENANCE.EXE /r*.



#### Attention

- For more information about Custom installation path, see *Software Installation User's Guide* in Experion documentation.

## 3.2 Importing the FMC CAB blocks

After installing the FMC components, you must import the FMC blocks to the Control Builder.

### To import the FMC CAB blocks into the Control Builder

1. In the Control Builder, click **File>Import**.
2. Click **Browse** to browse to “FMC\_CAB” folder and select the FMC CAB blocks.
3. Click **Import**.

After the FMC CAB blocks are imported successfully, you can view them in the Control Builder Library view.

The following figure displays a sample Library view in the Control Builder.

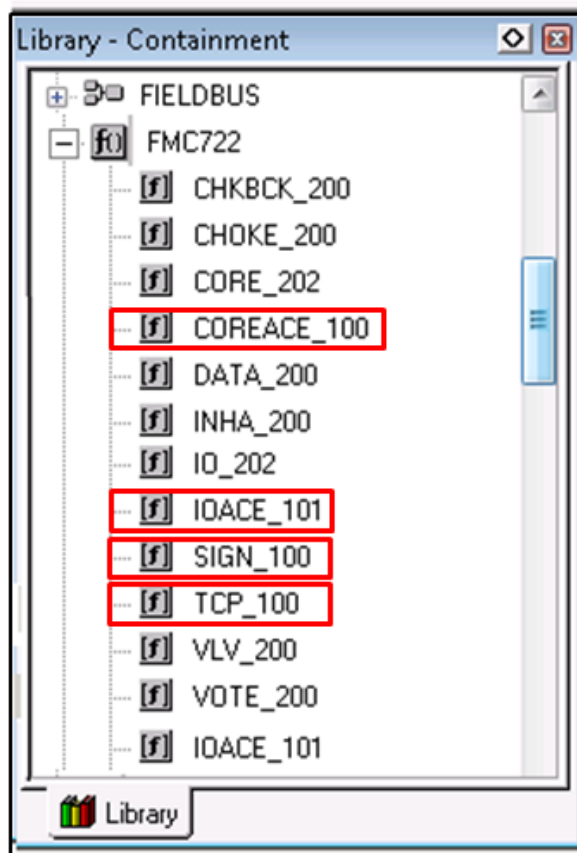


Figure 4: Library view in Control Builder



#### Attention

After the blocks are imported, you must configure the strategies by dragging and dropping the instances in the Control Module chart. For more information about configuring the strategies, see *Control Building User's Guide* in Experion documentation.

The version number of the block is indicated by the number after the underscore in the function block name. The three digits indicate the major/medium/minor version.

The FMC722 library includes the following:

- C300 specific blocks : CORE\_xxx, DATA\_xxx, and IO\_xxx
- ACE specific block, COREACE\_xxx, IOACE\_xxx, TCP\_xxx, and SIGNATURE\_xxx

- All other blocks are common to ACE and C300.

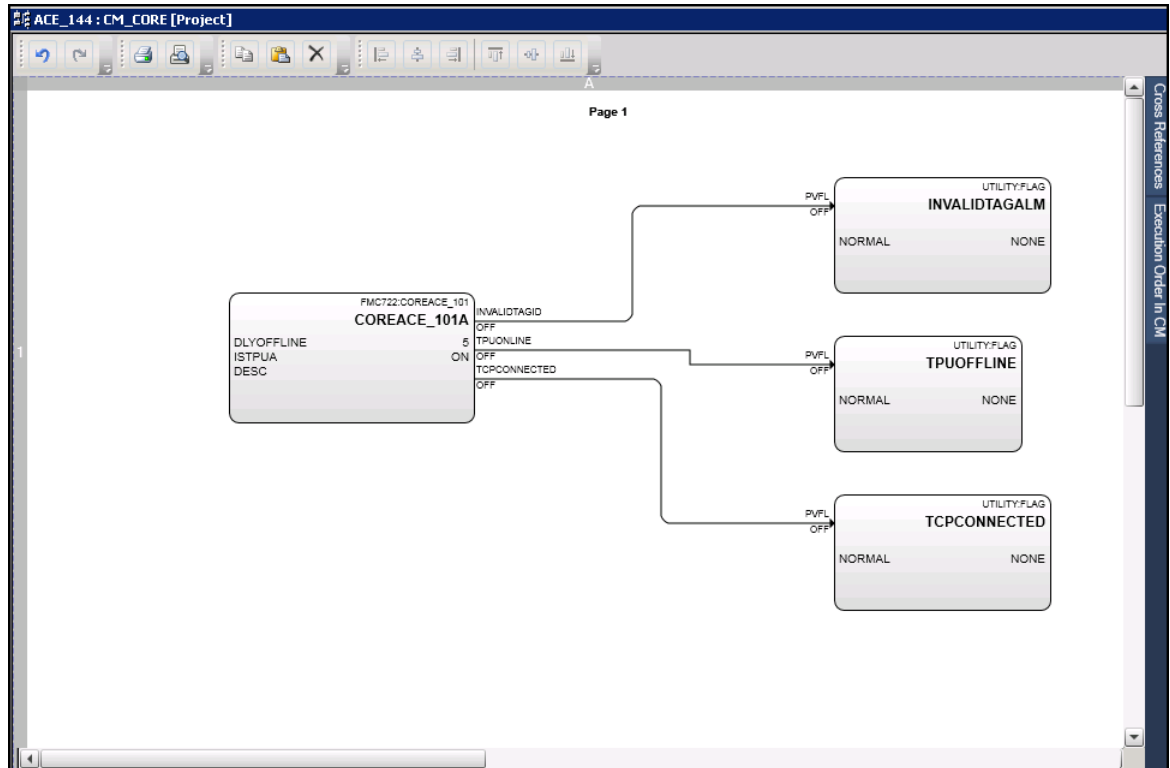
**Attention**

- If a new set of blocks are distributed, then you have to perform a Change Parent operation on the existing block type instance. For more information refer to *Custom Algorithm Block and Custom Data Block User's Guide* in Experion documentation.
-

### 3.3 Configuring the FMC COREACE block

Similar to Experion function blocks, you need to drag and drop one single instance to the Control Module chart to configure strategies. The FMC COREACE block configures a small number of Custom Data parameters.

The following figure displays a sample Control Module chart after instantiation of FMC COREACE block for alarming.



#### ! Attention

- To configure an alarm based on the COREACE block communication status, you can use the following:
  - UTILITY:FLAG block to annunciate alarm/events.
  - UTILITY:MESSAGE block to annunciate message.

For more information about configuring alarms using the FLAG block, see *Control Builder Components Theory* in Experion documentation.

#### To configure the value CDPs for the FMC COREACE block

- On the FMC COREACE block configuration page, click the **Value CDPs** tab.  
The following page appears.

**FMC722: COREACE\_101 Block, COREACE\_101A - Parameters [Project]**

Configuration Parameters		Monitoring Parameters		Block Preferences		Template Defining	
Main	Value CDPs	Source	Alarms	Identification	Dependencies	Block Pins	
<input checked="" type="checkbox"/> Perform Frame CRC							
Ping Interval	15			Missing Ping Resp Threshold	2		
<input checked="" type="checkbox"/> Enable Time Sync				Time Synch Interval	3600		
<input type="checkbox"/> Request Time Sync							
<input checked="" type="checkbox"/> Connected to TPU A				Delay Offline	5		
FMC tag index base	0			Signature Packet Counter	0		
Signature Request TimeOut	10						
Maximum Signature Samples	120			Auto Reset Diagnostics on Cou	100000		
<input type="checkbox"/> Reset Diagnostics				Cycle to wait before reconnect	100		
Hold Restart	5			Limit number of config requests	15		
Max frame length	1600			Performance Period	10		
Output Size Limit	1400			<input type="checkbox"/> Configure All I/O's			
<input type="checkbox"/> Flag errors received							
<input type="checkbox"/> Simulation Enabled							
Sent Bytes/Second	0			Received Bytes/Second	0		
<input type="checkbox"/> Show Parameter Names							
<input type="button" value="OK"/> <input type="button" value="Cancel"/> <input type="button" value="Help"/>							

2 Specify the following:

- **Connected to TPU A:** Indicates the parameter that must be set to TRUE for the FMC COREACE block that is connected to the TPUA.
- **Perform Frame CRC:** Indicates the parameter that must match the frame CRC setting on the TPU.



**Attention**

The FMC COREACE block configures a small number of Custom Data parameters. You can retain the default values for all other parameters. For more information on each of these parameters, see the *FMC722 on ACE Parameters Reference*.

3 Click **OK**.

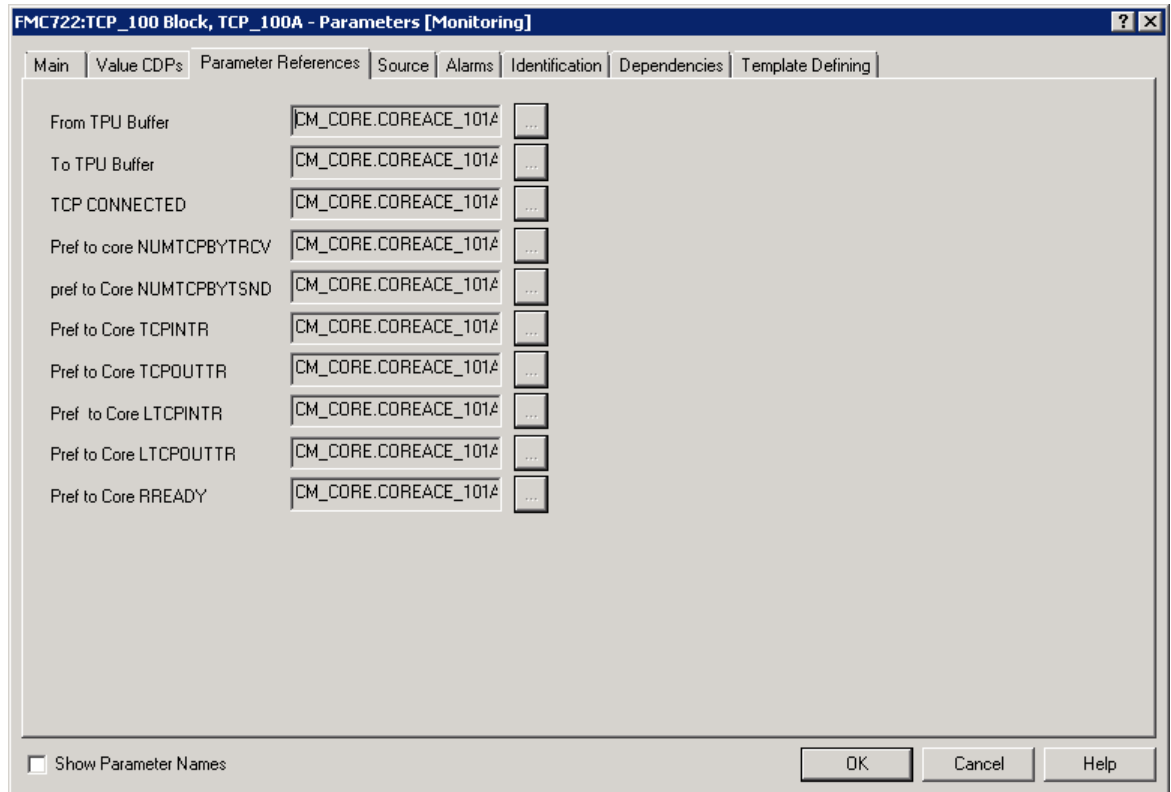
## 3.4 Configuring the FMC TCP block

The FMC TCP block helps in communicating over TCP/IP with TPUs. It passes the FMC722 packets between the TPU and the FMC COREACE block. The TCP block and COREACE block communicates using parameter references.

For more information about parameter references, see *Control Building User's Guide* in Experion documentation.

### To configure the parameter references for the FMC TCP block

- 1 On the FMC TCP block configuration page, click the **Parameters Reference** tab.  
The following page appears.



- 2 Specify the following:
  - **From TPU Buffer:** Specify the reference to the DATABUFRMTTPU parameter of the FMC COREACE block.
  - **To TPU Buffer:** Specify the reference to the DATABUTOTTPU parameter of the FMC COREACE block. It should always refer to the zero<sup>th</sup> index of the DATABUFRMTTPU parameter.
  - **TCP CONNECTED:** Specify the reference to the TCPCONNECTED parameter of the FMC COREACE block to indicate that the TCP block is connected to TPU.
  - **Pref to core NUMTCPBYTRCV:** Specify the reference to the NUMTCPBYTRCV parameters of the FMC COREACE block to indicate the number of bytes received from the TCP socket.
  - **Pref to core NUMTCPBYTSND:** Specify the reference to the NUMTCPBYTSND parameter of the FMC COREACE block to indicate the bytes sent to the TCP socket.
  - **Pref to core TCPINTR:** Specify the reference to the TCPINTR parameter of the FMC COREACE block to indicate the transaction counters between FMC COREACE and TCP blocks.
  - **Pref to core LTCPOUTTR:** Specify the reference to the LTCPOUTTR parameter of the COREACE block to indicate the transaction counters between FMC COREACE and TCP blocks.



- **Pref to core TCPOUTTR:** Specify the reference to the TCPOUTTR parameter of the COREACE block to indicate the transaction counters between the FMC COREACE and the TCP blocks.
- **Pref to core RREADY:** Specify the reference to the RREADY parameter of the COREACE block parameter to identify if the FMC COREACE block is ready to receive the next data buffer.
- **Pref to core LTCPINTR:** Specify the reference to the LTCPINTR parameter of the COREACE block to indicate the transaction counters between FMC COREACE and TCP blocks.

3 Click **OK**.

#### To configure the value CDPs in the FMC TCP block

1 On the FMC TCP block configuration page, click the **Value CDPs** tab.

The following page appears.

The screenshot shows a configuration window titled "FMC722:TCP\_100 Block, TCP\_100A - Parameters [Project]". It has a tabbed interface with "Value CDPs" selected. The "Value CDPs" tab contains four input fields: "IP Address" (empty), "TCP Port" (6100), "Socket Receive Timeout" (5), and "Socket Write Timeout" (5). Below these fields is a checkbox labeled "Show Parameter Names". At the bottom right are "OK", "Cancel", and "Help" buttons.

2 Specify the following:

- **IP Address:** Specify the TPU IP address.
- **TCP Port:** Specify the port number through which the TCP block communicates with the TPU.
- **Socket Receive Timeout:** Indicates the socket time out for receiving, in milliseconds. The default value is 5 milliseconds.
- **Socket Write Timeout:** Indicates the socket time out for a write operation, in milliseconds. The default value is 5 milliseconds.

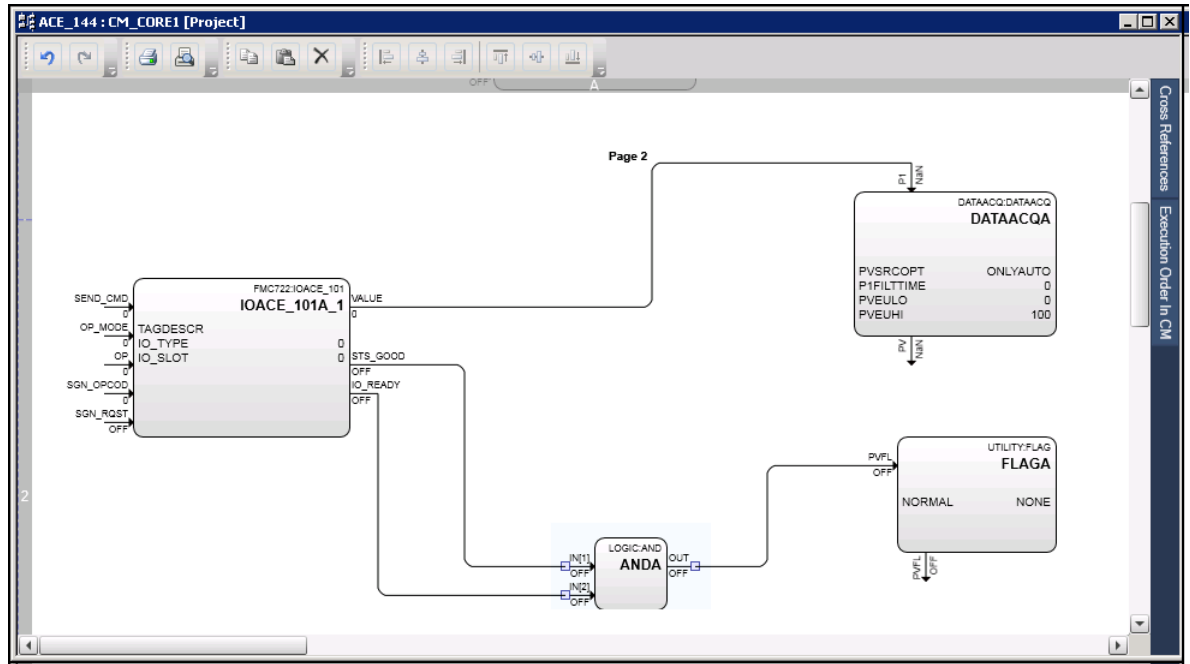
3 Click **OK**.

For more information about the parameters, see *FMC722 on ACE Parameter Reference*.

## 3.5 Configuring the FMC IOACE block

The FMC IOACE block consists of reference parameters to the FMC COREACE block.

The following figure displays a sample Control Module chart after instantiation of the FMC IOACE block.



To show a good status an AND block has been implemented that triggers a good output if both the IO\_READY and the STS\_GOOD parameters are good. The DACA block is used to process the input value, alarms, and so on.

### To configure the value CDPs for the FMC IOACE block

- 1 On the FMC IOACE block configuration page, click the **Value CDPs** tab.  
The following page appears.

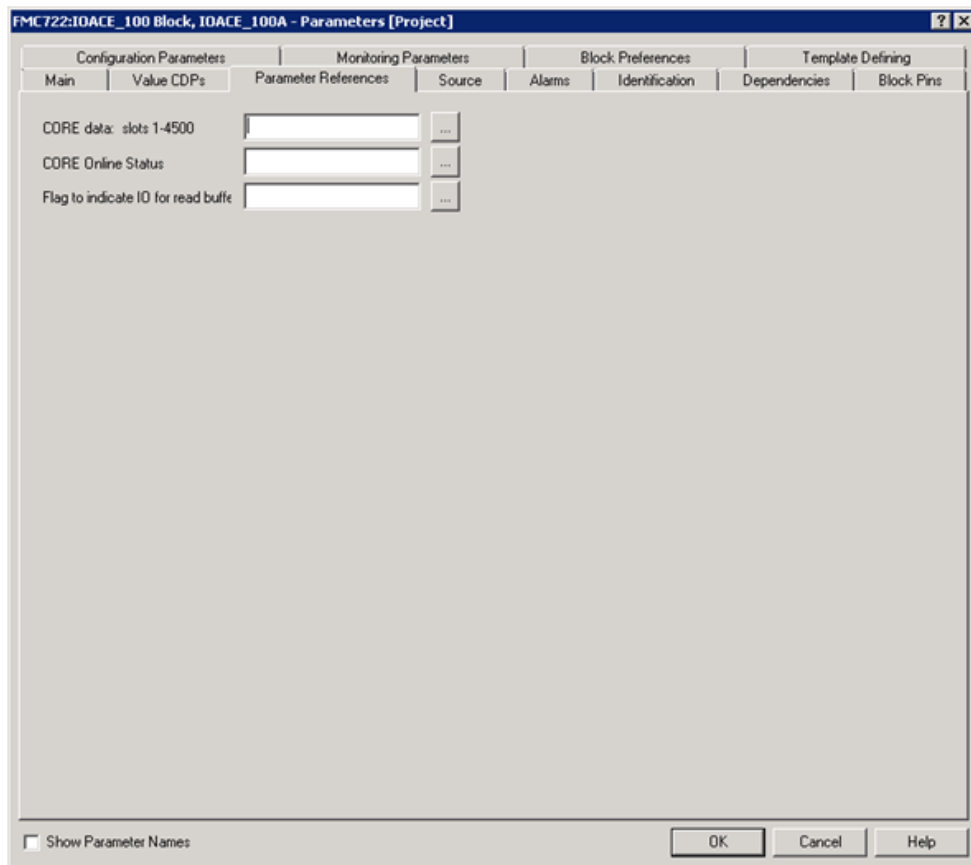
2 Specify the following:

- **Tag Descriptor:** Specify the tag description of the FMC IOACE block. This tag name must be same as the tag name provided during configuration of TPU.
- **Slot Number:** Specify the tag index of FMC IOACE block. This tag index must be unique across IOACE blocks configured to their respective COREACE block.
- **AI=1 AO=2 DI=3 DO=4:** Specify the following FMC IOACE types. The IO types must be same as the IO types provided during the configuration of TPU.
  - AI: 1
  - AO: 2
  - DI: 3
  - DO: 4

3 Click **OK**.

**To configure the parameter references for the FMC IOACE block**

- 1 On the FMC IOACE block configuration page, click the **Parameter References** tab.  
The following configuration page appears.



2 Specify the following:

- **CORE data slots 1–4500:** Specify the reference to DATABUF1- DATABUF23 parameter of the FMC COREACE block. This reference must be calculated based on IO\_SLOT value. One DATABUF can accommodate 200 IOs. Therefore, SLOT 1-200 is in DATABUF1. 201-400 in DATABUF2, 401-600 in DATABUF3, 601-800 in DATABUF4 and so on.
- **CORE Online Status:** Specify the reference to the COREWDC parameter of the FMC COREACE block.
- **Flag to indicate IO for read buffer:** Specify the reference to the RCVNEWIODATA parameter of the FMC COREACE block. The index of the array must match the IO Slot parameter value.

For more information about parameters, see *FMC722 on ACE Parameter Reference*.

3 Click **OK**.

**Attention**

- The IOACE block fails to execute in the following scenarios. Note that it is an intended behavior. To analyze and correct the error, see the PROGSTDDESC parameter.
  - Unknown tag name: If the tag name does not match with the tag name provided during the configuration of TPU.
  - IO type mismatch: If the IO type does not match with the IO type provided during the configuration of TPU.
  - Tag index already exists:
  - TPU fails while building the configuration response

For more details about PROGSTDDESC parameter, see *Custom Algorithm Block and Custom Data Block User's Guide* in Experion documentation.

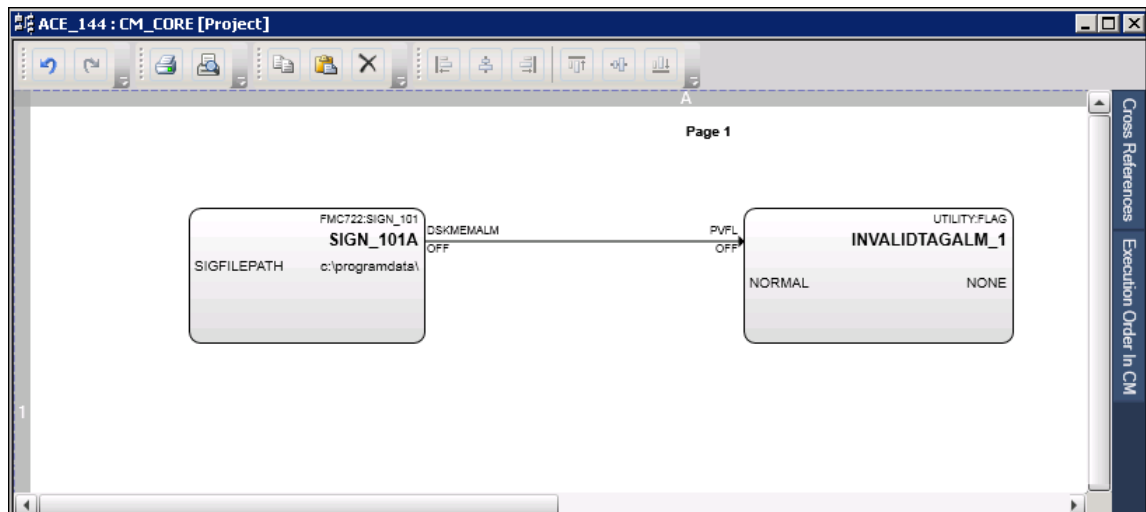
## 3.6 Configuring the FMC SIGNATURE block

The FMC SIGNATURE block has a path configuration parameter known as “SIGFILEPATH.” The path must point to a directory in ACE node where ACE application has read and write permissions.

### ! Attention

- If you configure the SIGFILEPATH parameter to a directory where you do not have write access, then the CAB block will go into exception state. Hence, the directory must be valid as the CAB block cannot validate the directory during the configuration.
- You can configure the alarm for DSKMEMALM parameter using Experion function blocks. Ensure enough disk space is available by deleting or archiving old signature files.

The following figure displays a sample Control Module chart after instantiation of the FMC SIGNATURE block.



To configure the value CDPs for the FMC SIGNATURE block

- 1 On the FMC SIGNATURE block configuration page, click the **Value CDPs** tab.  
The following page appears.

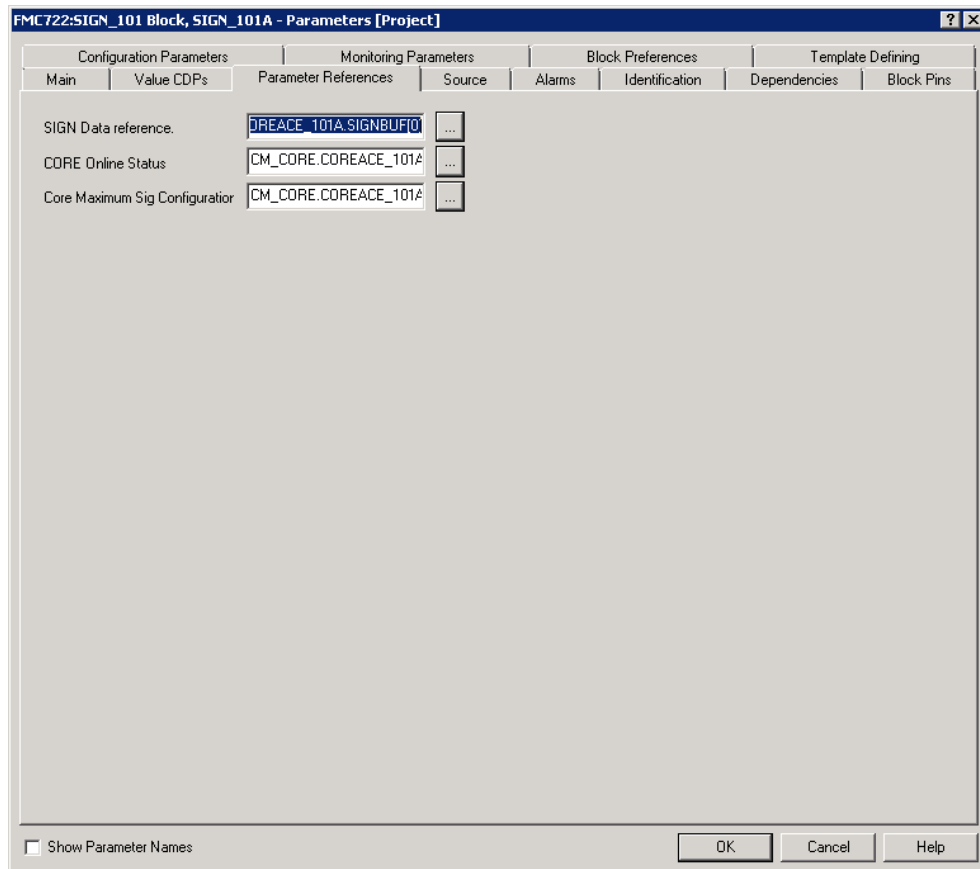
**FMC722-SIGN\_100 Block, SIGN\_100A - Parameters [Project]**

Configuration Parameters		Monitoring Parameters		Block Preferences		Template Defining																			
Main	Value CDPs	Parameter References	Source	Alarms	Identification	Dependencies	Block Pins																		
directory path where signatures																									
Disk Memory Cutoff (in MB)		100																							
String Representing TPU A or B		_A																							
<input type="checkbox"/> Signature Block Alarm																									
<input type="checkbox"/> Disk Memory Alarm																									
<input type="checkbox"/> Block configuration issue detected																									
<input type="checkbox"/> Maintenance mode																									
Core alive counter (wraparound)		0																							
Off-line state transitions		0																							
Count of signatures processed		0																							
last signature count(acts as wait)		0																							
CRC Check Failed Count		0																							
<table border="1"> <thead> <tr> <th colspan="2">Signature Operation Code Display String</th> </tr> </thead> <tbody> <tr><td>0</td><td>op</td></tr> <tr><td>1</td><td>cl</td></tr> <tr><td>2</td><td>sig</td></tr> <tr><td>3</td><td>sig</td></tr> <tr><td>4</td><td>op</td></tr> <tr><td>5</td><td>cl</td></tr> <tr><td>6</td><td>op</td></tr> <tr><td>7</td><td>cl</td></tr> </tbody> </table>								Signature Operation Code Display String		0	op	1	cl	2	sig	3	sig	4	op	5	cl	6	op	7	cl
Signature Operation Code Display String																									
0	op																								
1	cl																								
2	sig																								
3	sig																								
4	op																								
5	cl																								
6	op																								
7	cl																								
<input type="checkbox"/> Show Parameter Names																									
				OK		Cancel																			
				Help																					

- 2 In the **directory path where signatures** box, specify the path to save the signature file, which must have access to a local server.
- 3 Click **OK**.

**To configure the parameter references for the FMC SIGNATURE block**

- 1 On the FMC SIGNATURE block configuration page, click the **Parameter References** tab.  
The following page appears.



2 Type or select the following:

- **SIGN Data Reference:** Specify the reference to the SIGNBUF parameter of the FMC COREACE block.
- **CORE Online Status:** Specify the reference to the COREWDC parameter of the FMC COREACE block.
- **Core Maximum Sig Configurator:** Specify the reference to the MAXSIGSAM parameter of the FMC COREACE block.

3 Click **OK**.

For more information about the parameters, see the *FMC722 on ACE Parameter Reference*.





## 4 Notices

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## 4.1 Documentation feedback

You can find the most up-to-date documents on the Honeywell Process Solutions support website at:

<http://www.honeywellprocess.com/support>

If you have comments about Honeywell Process Solutions documentation, send your feedback to:

[hpsdocs@honeywell.com](mailto:hpsdocs@honeywell.com)

Use this email address to provide feedback, or to report errors and omissions in the documentation. For immediate help with a technical problem, contact your local Honeywell Process Solutions Customer Contact Center (CCC) or Honeywell Technical Assistance Center (TAC) listed in the “Support and other contacts” section of this document.

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## 4.2 How to report a security vulnerability

For the purpose of submission, a security vulnerability is defined as a software defect or weakness that can be exploited to reduce the operational or security capabilities of the software.

Honeywell investigates all reports of security vulnerabilities affecting Honeywell products and services.

To report a potential security vulnerability against any Honeywell product, please follow the instructions at:

<https://honeywell.com/pages/vulnerabilityreporting.aspx>

Submit the requested information to Honeywell using one of the following methods:

- Send an email to [security@honeywell.com](mailto:security@honeywell.com).
- or
- Contact your local Honeywell Process Solutions Customer Contact Center (CCC) or Honeywell Technical Assistance Center (TAC) listed in the “Support and other contacts” section of this document.

## 4.3 Support and other contacts

For support, contact your local Honeywell Process Solutions Customer Contact Center (CCC).

### North America

Country	Phone	Facsimile	Email
Canada and United States	800-822-7673	973-455-5000	askssc@honeywell.com

### Northern Europe

Country	Local Time Business Hours	Phone	Facsimile	Email
Denmark	07:00 – 18:00	80–252165	+45 6980 2349	hpscustomersupport@honeywell.com
Finland	08:00 – 19:00	0800–9–15938	+358 (0)9 2319 4396	hpscustomersupport@honeywell.com
Ireland	06:00 – 17:00	1800939488	+353 (0)1 686 4905	hpscustomersupport@honeywell.com
Netherlands	07:00 – 18:00	0800 020 3498	+31 (0)20 524 1609	hpscustomersupport@honeywell.com
Norway	07:00 – 18:00	800–11478	47–852–287–16	hpscustomersupport@honeywell.com
Sweden	07:00 – 18:00	0200883167	+46 (0)8 509 097 84	hpscustomersupport@honeywell.com
United Kingdom	06:00 – 17:00	08002797226	+44 (0)20 3031 1064	hpscustomersupport@honeywell.com

### Southern Europe

Country	Local Time Business Hours	Phone	Facsimile	Email
Belgium	07:00 – 18:00	080048580	+32 (0)2 791 96 02	hpscustomersupport@honeywell.com
France	07:00 – 18:00	0805100041	+33 (0)1 72 74 33 44	hpscustomersupport@honeywell.com
Luxembourg	07:00 – 18:00	8002–8524	+352 24611292	hpscustomersupport@honeywell.com
Spain	07:00 – 18:00	800099804	+34 91 791 56 25	hpscustomersupport@honeywell.com
Portugal	06:00 – 17:00	800–8–55994	+34 91 791 56 25	hpscustomersupport@honeywell.com

### Eastern Europe

Country	Local Time Business Hours	Phone	Facsimile	Email
Bulgaria	08:00 – 19:00	700 20771	+359 (0)2 489 7384	hpscustomersupport@honeywell.com
Croatia	07:00 – 18:00	0800 80 6392	+420 227 204 957	hpscustomersupport@honeywell.com
Czech Republic	07:00 – 18:00	800 142 784	+420 227 204 957	hpscustomersupport@honeywell.com
Hungary	07:00 – 18:00	06 800 20 699	+36 (06) 1 577 7371	hpscustomersupport@honeywell.com
Poland	07:00 – 18:00	00 800 121 50 46	+48 22 485 35 10	hpscustomersupport@honeywell.com
Romania	08:00 – 19:00	0 800 800 178	+40 (0)31 710 7590	hpscustomersupport@honeywell.com
Russia Federation	09:00 – 20:00	8.10.80 02-412 50 11	+7 495 796 98 94	hpscustomersupport@honeywell.com

Country	Local Time Business Hours	Phone	Facsimile	Email
Slovakia	07:00 – 18:00	0800 002 340	+421 (0)2 3301 0376	hpscusersupport@honeywell.com

### Central Europe

Country	Local Time Business Hours	Phone	Facsimile	Email
Austria	07:00 – 18:00	0800 006438	+43 (0)1 253 6722 4904	hpscusersupport@honeywell.com
Germany	07:00 – 18:00	0800 7239098	+49 (0)30 6908 8463	hpscusersupport@honeywell.com
Greece	08:00 – 19:00	00800 12 9493	+30 21 1 268 6973	hpscusersupport@honeywell.com
Israel	08:00 – 19:00	1 809 407 309	+972 (0)2 591 6148	hpscusersupport@honeywell.com
Italy	07:00 – 18:00	8000 35205	+39 06 96681356	hpscusersupport@honeywell.com
Switzerland	07:00 – 18:00	00 080 035	+41 (0)31 560 41 60	hpscusersupport@honeywell.com

### Middle East and South Africa

Country	Local Time Business Hours	Phone	Email
Bahrain	08:00 – 19:00	8008 1343	hpscusersupport@honeywell.com
Oman	08:00 – 19:00	8007 7595	hpscusersupport@honeywell.com
Qatar	08:00 – 19:00	800 5460	hpscusersupport@honeywell.com
Saudi Arabia	08:00 – 19:00	800 844 5309	hpscusersupport@honeywell.com
South Africa	07:00 – 18:00	0800 983 634	hpscusersupport@honeywell.com
Turkey	08:00 – 19:00	00800 448823587	hpscusersupport@honeywell.com
United Arab Emirates	09:00 – 20:00	8000 444 0300	hpscusersupport@honeywell.com

### Other regions

In other regions, contact your local Honeywell Technical Assistance Center (TAC) for support.

Region	Phone	Facsimile	Email
Pacific	1300-364-822 (toll free within Australia) +61-8-9362-9559 (outside Australia)	+61-8-9362-9564	GTAC@honeywell.com
India	+91-20-6603-2718 / 19 1800-233-5051	+91-20-6603-9800	Global-TAC-India@honeywell.com
Korea	+82-80-782-2255 (toll free within Korea)	+82-2-792-9015	Global-TAC-Korea@honeywell.com
People's Republic of China	+86-21-2219-6888 800-820-0237 400-820-0386		Global-TAC-China@honeywell.com
Singapore	+65-6823-2215	+65-6445-3033	GTAC-SEA@honeywell.com
Japan		+81-3-6730-7228	Global-TAC-JapanJA25@honeywell.com

**World Wide Web**

Honeywell Process Solutions support website:

<http://www.honeywellprocess.com/support>

**Elsewhere**

Contact your nearest Honeywell office.

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## 4.4 Training classes

Honeywell holds technical training classes on Experion PKS. These classes are taught by experts in the field of process control systems. For more information about these classes, contact your Honeywell representative, or see <http://www.automationcollege.com>.

