Honeywell

Experion PKS
FMC722 on ACE Parameter Reference

EPDOC-X333-en-431A
February 2015

Release 431

Honeywell

Document	Release	Issue	Date
EPDOC-X333-en-431A	431	0	February 2015

Disclaimer

Contents

1 About this document

Provides information about parameters associated with configuration forms for the following Custom Algorithm Blocks in Control Builder.

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

Revision history

Revision	Date	Description
A	February 2015	Initial release of the document

2 About TCP/IP statistics

The following are the TCP/IP network statistics parameters that are available in the COREACE block.

- RECVBPS
- SENTBPS

Related topics

“RECVBPS” on page 10
“SENTBPS” on page 11

2.1 RECVBPS

This is TCP/IP network statistics parameter available in the COREACE block.

Specific to blocks	COREACE
Description	Receive Bytes Per Second
Data type	INT32
Range	- (2,147,483,647 -1) to 2,147,483,647
Default value	0
Configuration Load	No
Access lock	View only
Residence	CEE
Related parameters	SENTBPS
Remarks	Indicates the number of received bytes per second from TPU.

2.2 SENTBPS

This is the TCP/IP network statistics parameter available in the COREACE block.

Specific to blocks	COREACE
Description	Sent Bytes Per Second
Data type	INT32
Range	- (2,147,483,647 -1) to 2,147,483,647
Default	0
Configuration Load	No
Access lock	View only
Residence	CEE
Related parameters	RECVBPS, NUMTCPBYTSND
Remarks	Indicates the number of bytes sent per second to TPU.

3 About Diagnostic parameters

The following table lists the diagnostics based on the input message.

Statistics Parameter Name	Description
INMSGCNT(0)	Number Good Frame received since startup
INMSGCNT(1)	Number of AI Configurations done since startup
INMSGCNT(2)	Number of AI data received from IOACE block
INMSGCNT(5)	Number of DI Configurations done since startup
INMSGCNT(6)	Number of DI data received from IOACE block
INMSGCNT(7)	Number of AO Configurations done since startup
INMSGCNT(9)	Number of AO data received from IOACE block
INMSGCNT(10)	Number of DO Configurations done since startup
INMSGCNT(12)	Number of DO data received from IOACE block
INMSGCNT(16)	Number of error data blocks received since startup
INMSGCNT(17)	Number of signature data received since startup
INMSGCNT(18)	Number of PING response received since startup
INMSGCNT(19)	Number of Ack messages received since startup
INMSGCNT(20)	Number of Nack messages received since startup
INMSGCNT(22)	Number of COREDATA parameter reference not configured/invalid
INMSGCNT(23)	Number of frames with invalid messages received since startup
INMSGCNT(24)	Number of time Expected frame header not received since startup
INMSGCNT(27)	CRC mismatches since startup
INMSGCNT(28)	Number of times the IOSLOT number is greater than supported count of 4500 since startup.
INMSGCNT(29)	Unexpected data

The following table lists the details of diagnostics based on output message.

Statistics Parameter Name	Description
OUTMSGCNT(0)	Number of set Tag index request sent since startup
OUTMSGCNT(1)	Number of configuration request sent since startup
OUTMSGCNT(2)	Number of signature request sent since startup
OUTMSGCNT(3)	Number of ping request sent since startup
OUTMSGCNT(4)	Number of time sync request sent since startup
OUTMSGCNT(5)	Number of DO to IO message count sent since startup

Statistics Parameter Name	Description
OUTMSGCNT(7)	Number of AO to IO message count sent since startup
OUTMSGCNT(9)	Set tag Index with configuration req count. New IO configuration

The following table lists the other diagnostics parameters that are supported.

RPTMSGRCVCNT	Report Message Receive Count (error code as in the error data block received from TPU)
FROMIOSEC	FROMIO messages per second
TOIOSEC	TOIO messages per second

4 Axxx parameters

Related topics

4.1 AL_INHIBIT

Specific to blocks	IOACE
Description	Inhibit Alarm
Data type	Boolean
Range	True/False
Default value	False
Configuration Load	No
Access lock	View only
Residence	CEE
Related parameters	ALENBST
Remarks	This parameter is set to true when the IO starts running . However, if an alarm appears, then this parameter is set to false.

4.2 ALARM_ENBL

Specific to blocks	IOACE
Description	Alarm Enable State Input
Data type	Boolean
Range	True/False
Default	True
Configuration Load	No
Access lock	Operator
Residence	CEE
Related parameters	ALENBST
Remarks	Input from the operator.

4.3 ALARMHYS

Specific to blocks	IOACE
Description	Alarm hysteresis
Data type	FLOAT64
Range	FLOAT62 range
Default	NaN
Configuration Load	No
Access lock	View only
Residence	CEE
Related parameters	IO_TYPE
Remarks	Displays the alarm hysteresis value from TPU. This value will get updated based on the AI IO type.

4.4 ALENBST

Specific to blocks	IOACE
Description	Alarm enable state
Data type	BOOLEAN
Range	On/Off
Default	Off
Configuration Load	No
Access lock	View only
Residence	CEE
Related parameters	ALARM_ENBL, IO_READY
Remarks	To set overall alarming state of the CM that contains the IOACE.

4.5 AUTRSTDIACNT

Specific to blocks	COREACE
Description	Auto Reset Diagnostics on Count
Data type	INT32
Range	- (2,147,483,647 -1) to 2,147,483,647
Default	100000
Configuration Load	Yes
Access lock	Engineer
Residence	CEE
Related parameters	INMSGCNT, OUTMSGCNT, RPTMSGRCVCNT, RNRCNT, SNRCNT, FROMIOSEC, and TOIOSEC.
Remarks	Specifies the count of FROMIO messages after which COREACE block will auto clear the diagnostic parameters.

5 Bxxx parameters

Related topics

“BLKVER” on page 22

5.1 BLKVER

Specific to blocks	COREACE, TCP
Description	COREACE block version
Data type	FLOAT64
Range	FLOAT64 range
Default	NaN
Configuration Load	No
Access lock	View only
Residence	CEE
Related parameters	NA
Remarks	Indicates major/medium/minor revision number of the COREACE and TCP blocks.

6 Cxxx parameters

Related topics

6.1 CHKBACK

Specific to blocks	IOACE
Description	AO checkback
Data type	INT32
Range	- (2,147,483,647 -1) to 2,147,483,647
Default	0
Configuration Load	No
Access lock	View only
Residence	CEE
Related parameters	IO_TPE of AI and AO.
Remarks	Indicates the IO config data from TPU.

6.2 CONFIG_CNT

Specific to blocks	IOACE
Description	Configuration messages received
Data type	INT32
Range	- (2,147,483,647 -1) to 2,147,483,647
Default	0
Configuration Load	No
Access lock	Engineer
Residence	CEE
Related parameters	NA
Remarks	Indicates the number of time the configuration data is received.

6.3 CONFIG_ERR

Specific to blocks	IOACE, SIGNATURE
Description	Configuration Error
Data type	Boolean
Range	True/False
Default	False
Configuration Load	No
Access lock	View only
Residence	CEE
Related parameters	STATE
Remarks	Indicates the configuration error is found. Value is false if the configuration is valid.

6.4 CONFIGALLIO

Specific to blocks	COREACE
Description	Configure All IO's
Data type	BOOLEAN
Range	On/Off
Default	Off
Configuration Load	No
Access lock	SUPERVISOR
Residence	CEE
Related parameters	TAGRSTINPROG
Remarks	Request configuration from all tags.

6.5 CONFRQ_CNT

Specific to blocks	IOACE
Description	Configuration requests sent count
Data type	INT32
Range	- (2,147,483,647 -1) to 2,147,483,647
Default	0
Configuration Load	No
Access lock	Engineer
Residence	CEE
Related parameters	RST_DIAGS
Remarks	Indicates the number of times the configuration request is sent.

6.6 CORESTBEGTM

Specific to blocks	COREACE
Description	Core State Begin Time
Data type	TIME
Range	NA
Default	NA
Configuration Load	No
Access lock	View only
Residence	CEE
Related parameters	STATE, CORESTATE
Remarks	Indicates the time when the state has changed to current state.

6.7 CORESTATE

Specific to blocks	COREACE
Description	Core Block State
Data type	INT32
Range	- (2,147,483,647 -1) to 2,147,483,647
Default	0
Configuration Load	No
Access lock	View only
Residence	CEE
Related parameters	STATE_TIME
Remarks	Indicates the state of the current state of the COREACE block. • 0 = START_UP (Initial status) • 1 = FORCE_RESTARTIO (notify IOs to re-register) • 2 = WAIT_FOR_CONNECT_SIGNAL (from TPU) • 3 = CONNECTED_WAIT_TPU (waiting for the "Welcome TPU" message) • 4 = TPU_CONNECTED (' TPU has responded - start the protocol) • 5 = READINGSTREAMOUT (ready to exchange IO data)

6.8 COREWDC

Specific to blocks	COREACE
Description	Core Watchdog Counter
Data type	INT32
Range	0 to 255
Default	0
Configuration Load	No
Access lock	View only
Residence	CEE
Related parameters	PINGSENTTICK
Remarks	Indicates whether COREACE is executing by increasing the value in each cycle from 0 -255.

6.9 CORE_MAXSIGSAM

Specific to blocks	SIGNATURE
Description	Core Maximum Signature Configuration.
Data type	Parameter Reference (INT)
Data Flow	INPUT
Configuration Load	Yes
Access lock	View only
Residence	CEE
Related parameters	MAXSIGSAM
Remarks	Indicates the maximum signature configuration data.

6.10 CORE_WDG

Specific to blocks	SIGNATURE, IOACE
Description	Core Watch Dog counter
Data type	INT32
Range	0 to 255
Default	0
Configuration Load	No
Access lock	View only
Residence	CEE
Related parameters	CORE_WDG_REF
Remarks	Indicates the Store current CORE_WDG_REF value. At start of every cycle this value is compared with CORE_WDG_REF value. This comparison is used to determine the core online status.

6.11 CONF_RTR_CNT

Specific to blocks	IOACE
Description	Configuration Retry Countdown
Data type	INT32
Range	- (2,147,483,647 -1) to 2,147,483,647
Default	0
Configuration Load	No
Access lock	View only
Residence	CEE
Related parameters	PERFPRD
Remarks	Indicates the configuration retry count.

6.12 CORE_DATA_IX

Specific to blocks	IOACE
Description	CORE Buffer index
Data type	INT32
Range	- (2,147,483,647 -1) to 2,147,483,647
Default	0
Configuration Load	No
Access lock	View only
Residence	CEE
Related parameters	IO_SLOT
Remarks	Indicates the buffer to which the IOACE belongs.

6.13 CONF_RTR_ENB

Specific to blocks	IOACE
Description	Retry Configuration Request
Data type	Boolean
Range	True/False
Default	True
Configuration Load	Yes
Access lock	Engineer
Residence	CEE
Related parameters	DLY_CONF_CNT
Remarks	Indicates the true value. It retries to send the configuration request if the response is not received.

6.14 CORE_WDG_REF

Specific to blocks	SIGNATURE, IOACE
Description	CORE Online Status
Data type	Parameter Reference (INT)
Data Flow	INPUT
Configuration Load	Yes
Access lock	View only
Residence	CEE
Related parameters	COREWDC
Remarks	Reference to COREWDC parameter of COREACE block.

6.15 CORE_HOLD

Specific to blocks	IOACE
Description	CORE On Hold
Data type	Boolean
Range	True/False
Default	False
Configuration Load	No
Access lock	View only
Residence	CEE
Related parameters	NA
Remarks	It indicates that the COREACE block is on hold.

6.16 CORE_DATA_REF

Specific to blocks	IOACE
Description	CORE data: slots 1-4500
Data type	Parameter Reference (INT)
Data Flow	IN/OUT
Configuration Load	Yes
Access lock	View only
Residence	CEE
Related parameters	IO_SLOT
Remarks	Reference to DATABUF1- DATABUF23 parameter of CORE block. This reference must be calculated based on the IO_SLOT value. Each DATABUF can accommodate 200 IO. Therefore, from SLOT 1-200 is in DATABUF1. 201-400 in DATABUF2,401-600 in DATABUF3,601-800 in DATABUF4 and so on.

6.17 CRCFAILCNT

Specific to blocks	SIGNATURE
Description	CRC Check Failed Count
Data type	STRING
Size	8 character length
Default	NA
Configuration Load	No
Access lock	View only
Residence	CEE
Related parameters	NA
Remarks	Indicates numbers of time CRC check failed.

7 Dxxx parameters

Related topics

7.1 DATABUF [1-23]

Specific to blocks	COREACE
Description	Data Buffer[1-23]
Data type	INT32
Range	- (2,147,483,647 -1) to 2,147,483,647
Size	10000 Array size
Default	0
Configuration Load	No
Access lock	View only
Residence	CEE
Related parameters	NA
Remarks	Indicates the buffer for storing the IO data.

7.2 DATABUFTOTPU

Specific to blocks	COREACE
Description	Data Buffer Sent To TPU
Data type	INT32
Range	- (2,147,483,647 -1) to 2,147,483,647
Size	10000 Array size
Default	0
Configuration Load	No
Access lock	View only
Residence	CEE
Related parameters	NUMTCPBYTSND
Remarks	Indicates the buffer for storing the data to be sent to the TPU.

7.3 DATABUFFRMTPU

Specific to blocks	COREACE
Description	Data Buffer received from TPU
Data type	INT32
Range	- (2,147,483,647 -1) to 2,147,483,647
Size	10000 Array size
Default	0
Configuration Load	No
Access lock	View only
Residence	CEE
Related parameters	NUMTCPBYTRCV
Remarks	Indicates the buffer for storing the data received from the TPU.

7.4 DLY_ALENBST

Specific to blocks	IOACE
Description	Delay Alarm Enable State Time
Data type	INT32
Range	- (2,147,483,647 -1) to 2,147,483,647
Default	0
Configuration Load	Yes
Access lock	Engineer
Residence	CEE
Related parameters	DLY_AEN_CNT
Remarks	Indicates the number of cycles to be delayed before raising an alarm.

7.5 DLYOFFLINE

Specific to blocks	COREACE
Description	Number of seconds to wait before announcing link offline condition to the IOACE blocks and alarm.
Data type	INT32
Range	- (2,147,483,647 -1) to 2,147,483,647
Default	5
Configuration Load	Yes
Access lock	Engineer
Residence	CEE
Related parameters	TPUOFFLNAL
Remarks	Specifies the time to wait before confirming the offline status to IOACE blocks at all instances.

7.6 DLY_OUTPUT

Specific to blocks	IOACE
Description	Delay Output Cycle Time
Data type	INT32
Range	- (2,147,483,647 -1) to 2,147,483,647
Default	0
Configuration Load	Yes
Access lock	Engineer
Residence	CEE
Related parameters	DLY_OUT_CNT
Remarks	Indicates the number of cycles to wait before sending the outputs.

7.7 DOFRAMECRC

Specific to blocks	COREACE
Description	Perform Frame CRC
Data type	BOOLEAN
Range	On/Off
Default	On
Configuration Load	Yes
Access lock	Engineer
Residence	CEE
Related parameters	INMSGCNT(27)
Remarks	Specifies whether CRC is supported or not.

7.8 DSKMEMALM

Specific to blocks	SIGNATURE
Description	Disk Memory Alarm
Data type	BOOLEAN
Range	True/False
Default	False
Configuration Load	No
Access lock	View only
Residence	CEE
Related parameters	DSKMEMCUTOFF
Remarks	Specifies the Disk Memory is less for saving the signature data.

7.9 DSKMEMCUTOFF

Specific to blocks	SIGNATURE
Description	Disk Memory Cutoff in MB
Data type	INT32
Range	- (2,147,483,647 -1) to 2,147,483,647
Default	100
Configuration Load	Yes
Access lock	Engineer
Residence	CEE
Related parameters	DSKMEMALM
Remarks	Specifies when the DSKMEMALM enables. If the available space is less than the DSKMEMCUTOFF value, then the DSKMEMALM enables.

8 Exxx parameters

Related topics

“ENBTMSYNC” on page 52

8.1 ENBTMSYNC

Specific to blocks	COREACE
Description	Enable time synchronization
Data type	BOOLEAN
Range	On/Off
Default	On
Configuration Load	Yes
Access lock	Engineer
Residence	CEE
Related parameters	REQTMSYNC
Remarks	Specifies whether TPU time synchronization is enabled or disabled.

9 Fxxx parameters

Related topics

9.1 FMC_INDEX

Specific to blocks	IOACE
Description	FMC722 IO tag index
Data type	INT32
Range	- (2,147,483,647 -1) to 2,147,483,647
Default	0
Configuration Load	No
Access lock	View only
Residence	CEE
Related parameters	IO_SLOT
Remarks	Indicates the FMC722 IO tag index.

9.2 FMCIDXBASE

Specific to blocks	COREACE
Description	FMC tag index base
Data type	INT32
Range	- (2,147,483,647 -1) to 2,147,483,647
Default	0
Configuration Load	Yes
Access lock	Engineer
Residence	CEE
Related parameters	FMC_INDEX, IO_SLOT in IOACE block
Remarks	Base Index for IO slot number. FMC tag index base - can be used to adjust IO slot # (fmc index = IO slot# + tag index base

9.3 FROMIO_CNT

Specific to blocks	IOACE, COREACE
Description	From IO message received
Data type	INT32
Range	- (2,147,483,647 -1) to 2,147,483,647
Default	0
Configuration Load	No
Access lock	Engineer
Residence	CEE
Related parameters	RST_DIAGS
Remarks	Indicates the number of From IO messages received.

9.4 FROM_TPU

Specific to blocks	TCP
Description	From TPU Buffer
Data type	Parameter Reference (INT)
Data Flow	IN/OUT
Configuration Load	Yes
Access lock	View only
Residence	CEE
Related parameters	DATABUFRMTPU
Remarks	Reference to DATABUFRMTPU parameter of CORE block. It must always refer to the 0ther index of DATABUFRMTPU.

9.5 FROMIOSEC

Specific to blocks	COREACE
Description	FROMIO messages per second
Data type	FLOAT64
Range	NaN
Default	
Configuration Load	No
Access lock	View only
Residence	CEE
Related parameters	PERFPRD, FROMIO_CNT of COREACE block
Remarks	Specifies the number of from messages received from IO per second (FROMIO Count/PERF_PRD).

10 Hxxx parameters

Related topics

“HIGHSCALE” on page 60
“HIHILIM” on page 61
“HLDRESTART” on page 62

10.1 HIGHSCALE

Specific to blocks	IOACE
Description	High scale
Data type	FLOAT64
Range	FLOAT64 range
Default	NaN
Configuration Load	No
Access lock	View only
Residence	CEE
Related parameters	
Remarks	Indicates the IO config data from TPU.

10.2 HIHILIM

Specific to blocks	IOACE
Description	High high limit
Data type	FLOAT64
Range	Yes/No
Default	No
Configuration Load	No
Access lock	View only
Residence	CEE
Related parameters	NA
Remarks	Indicates the IO config data from TPU.

10.3 HLDRESTART

Specific to blocks	COREACE
Description	Hold Restart
Data type	INT32
Range	- 2,147,483,647 to 2,147,483,647
Default	5
Configuration Load	Yes
Access lock	Engineer
Residence	CEE
Related parameters	NA
Remarks	Specifies the time (number of seconds) to wait before initializing a restart, so that all IO blocks notice the need to re-register.

11 Ixxx parameters

Related topics

11.1 INVALIDTAGID

Specific to blocks	COREACE
Description	Invalid Tag Index
Data type	BOOLEAN
Range	True/False
Default	False
Configuration Load	No
Access lock	Supervisor
Residence	CEE
Related parameters	RPTMSGRCVCNT
Remarks	Indicates configuration error during setting tag index.

11.2 IODATACRCERR

Specific to blocks	COREACE
Description	CRC error Count on IO Data
Data type	INT32
Range	- 2,147,483,647 to 2,147,483,647
Default	0
Configuration Load	No
Access lock	View only
Residence	CEE
Related parameters	NA
Remarks	Indicates Number of time TO_IO crc fail.

11.3 IO_RDY_TH

Specific to blocks	IOACE
Description	IOACE ready threshold
Data type	INT32
Range	- (2,147,483,647 -1) to 2,147,483,647
Default	0
Configuration Load	Yes
Access lock	Engineer
Residence	CEE
Related parameters	IO_READY, STATE
Remarks	IOACE configuration must be ready by the time IOACE reaches the IOACE state.

11.4 IO_READY

Specific to blocks	IOACE
Description	IO is ready
Data type	Boolean
Range	True/False
Default	False
Configuration Load	No
Access lock	View only
Residence	CEE
Related parameters	IO_RDY_TH, STATE, DLY_CONF_CNT
Remarks	Indicates true if the STATE.Value = EXECUTING.

11.5 IO_READ_FLAG

Specific to blocks	IOACE
Description	IO Read Flag
Data type	Parameter Reference (INT)
Data Flow	INPUT
Configuration Load	Yes
Access lock	View only
Residence	CEE
Related parameters	IO_SLOT, RCVNEWIODATA
Remarks	Reference to RCVNEWIODATA parameter of CORE block. RCVNEWIODATA is a arrayed parameter. The index of the array should match to IO_SLOT parameter value. If IO_SLOT value is set to 5 then this parameter should refer to RCVNEWIODATA[5].

11.6 IO_SLOT

Specific to blocks	IOACE
Description	Slot number
Data type	INT32
Range	- (2,147,483,647 -1) to 2,147,483,647
Default	0
Configuration Load	Yes
Access lock	Engineer
Residence	CEE
Related parameters	FMC_INDEX
Remarks	Indicates the tag index of the IOACE block. This tag index must be unique across the IOACE blocks configured in their respective COREACE block.

11.7 IO_TYPE

Specific to blocks	IOACE
Description	AI=1 AO=2 DI=3 DO=4
Data type	INT32
Range	1 to 4
Default	1
Configuration Load	Yes
Access lock	View only
Residence	CEE
Related parameters	NA
Remarks	Specifies the IO types for AI, AO, DI, and DO.

11.8 IPADDR

Specific to blocks	TCP
Description	IP address
Data type	STRING
Range	15 characters length
Default	NA
Configuration Load	Yes
Access lock	Engineer
Residence	CEE
Related parameters	TCPPORT
Remarks	Specifies the IP address of the TPU.

11.9 ISTPUA

Specific to blocks	COREACE
Description	Connected to TPU A
Data type	BOOLEAN
Range	On/Off
Default	On
Configuration Load	Yes
Access lock	Engineer
Residence	CEE
Related parameters	NA
Remarks	Specifies whether COREACE is connected to TPU A or B.

11.10 IV_FMC

Specific to blocks	IOACE
Description	Integer Value from TPU
Data type	INT32
Range	- (2,147,483,647 -1) to 2,147,483,647
Default	0
Configuration Load	No
Access lock	Operator
Residence	CEE
Related parameters	V_FMC, IVALUE
Remarks	Indicates the integer value from the TPU.

11.11 IV_MAN

Specific to blocks	IOACE
Description	Integer Manual value
Data type	INT32
Range	- (2,147,483,647 -1) to 2,147,483,647
Default	0
Configuration Load	No
Access lock	Operator
Residence	CEE
Related parameters	IVALUE
Remarks	Indicates the integer manual value.

11.12 IVALUE

Specific to blocks	IOACE
Description	Integer Value
Data type	INT32
Range	- (2,147,483,647 -1) to 2,147,483,647
Default	0
Configuration Load	No
Access lock	Engineer
Residence	CEE
Related parameters	IV_MAN, IV_FMC
Remarks	Stores the integer value of IV_FMC.

11.13 INMSGCNT

Specific to blocks	COREACE
Description	Input message counters
Data type	INT32 array of 30
Range	- (2,147,483,647 -1) to 2,147,483,647
Default	0
Configuration Load	No
Access lock	View only
Residence	CEE
Related parameters	
Remarks	Diagnostics of the input messages.

12 Lxxx parameters

Related topics

12.1 LAST_SEND

Specific to blocks	IOACE
Description	Last Send Output command
Data type	FLOAT64
Range	FLOAT64 range
Default	NaN
Configuration Load	No
Access lock	View only
Residence	CEE
Related parameters	SEND_CMD
Remarks	Indicates the last send output command.

12.2 LNKRSTCNT

Specific to blocks	COREACE
Description	Link restart counters
Data type	INT32 array of 10
Range	- (2,147,483,647 -1) to 2,147,483,647
Default	0
Configuration Load	No
Access lock	View only
Residence	CEE
Related parameters	NOPINGRSPCNT
Remarks	Specified the link restart counts.

12.3 LOLIM

Specific to blocks	IOACE
Description	Low limit
Data type	FLOAT64
Range	FLOAT64 range
Default	NaN
Configuration Load	No
Access lock	View only
Residence	CEE
Related parameters	NA
Remarks	Indicates the IO config data from TPU.

12.4 LOLOLIM

Specific to blocks	IOACE
Description	Low Low limit
Data type	FLOAT64
Range	FLOAT64 range
Default	NaN
Configuration Load	No
Access lock	View only
Residence	CEE
Related parameters	NA
Remarks	Indicates the IO config data from TPU.

12.5 LOWSCALE

Specific to blocks	IOACE
Description	Low scale
Data type	FLOAT64
Range	FLOAT64 range
Default	NaN
Configuration Load	No
Access lock	View only
Residence	CEE
Related parameters	NA
Remarks	Indicates the IO config data from TPU.

12.6 LSTRCVRPTCAT

Specific to blocks	COREACE
Description	Last received report/error index
Data type	INT32 array of 10
Range	- (2,147,483,647 -1) to 2,147,483,647
Default	0
Configuration Load	No
Access lock	View only
Residence	CEE
Related parameters	RPTNXTIDX
Remarks	Indicates the tag index in the report block.

12.7 LSTRCVRPTCOD

Specific to blocks	COREACE
Description	Last received report Code
Data type	INT32 array of 10
Range	- (2,147,483,647 -1) to 2,147,483,647
Default	0
Configuration Load	No
Access lock	View only
Residence	CEE
Related parameters	RPTNXTIDX
Remarks	Indicates one of the following codes from the Report message code(lower 16 bits). 0x01 = Operation rejected - unknown Tag in SetTagIndex DataBlock 0x02 = Operation rejected - not initialized TagIndex in Config DataBlock 0x04 = Operation rejected - TagIndex already set for object 0x07 = Operation rejected - command on wrong object type 0x09 = Operation rejected - TagIndex already exists 0x0A = Operation rejected - no operation before config data sent 0x0B = Operation rejected - no operation before all config data sent 0x0F = SCU-connection is accepted 0x11 = Operation rejected - system is in Maintenance mode 0x12 = Operation rejected - MaxBuf is insufficient 0x13 = Operation rejected - unknown signature operation code 0x14 = Operation rejected - unknown AO operation Mode 0x15 = Message rejected - DataBlock known but not implemented 0x16 = Operation rejected - operation disabled 0x17 = FMC722 Message dropped – CRC not correct 0x103 = Operation failed - general error 0x202 = Message rejected – unknown DataBlock type

12.8 LSTRCVRPTIDX

Specific to blocks	COREACE
Description	Last received report/error index
Data type	INT32 array of 10
Range	- (2,147,483,647 -1) to 2,147,483,647
Default	0
Configuration Load	No
Access lock	View only
Residence	CEE
Related parameters	RPTNXTIDX
Remarks	Indicates the tag index in the report block.

12.9 LSTRCVRPTTM

Specific to blocks	COREACE
Description	Last received report/error time
Data type	TIME array of 10
Range	NA
Default	NA
Configuration Load	No
Access lock	View only
Residence	CEE
Related parameters	RPTNXTIDX
Remarks	Indicates the time the report last received.

12.10 LTCPINTR

Specific to blocks	COREACE
Description	Last Receive Input Transaction Counter
Data type	Parameter Reference (INT)
Data Flow	IN/OUT
Configuration Load	Yes
Access lock	View only
Residence	CEE
Related parameters	TCPINTR and NUMTCPBYTRCV of COREACE
Remarks	Last Receive Input Transaction Counter

Specific to blocks	TCP
Description	Preference to LTCPINTR of COREACE
Data type	Parameter Reference (INT)
Data Flow	IN/OUT
Configuration Load	Yes
Access lock	View only
Residence	CEE
Related parameters	NUMTCPBYTRCV and TCPINTR of COREACE
Remarks	Reference to LTCPINTR parameter of COREACE block.

12.11 LTCPOUTTR

Specific to blocks	COREACE
Description	Last Sent output Transaction Counter
Data type	Parameter Reference (INT)
Data Flow	IN/OUT
Configuration Load	Yes
Access lock	View only
Residence	CEE
Related parameters	TCPOUTTR, NUMTCPBYTSND
Remarks	Last Sent output Transaction Counter.

Specific to blocks	TCP
Description	Preference to TCPOUTTR of COREACE
Data type	Parameter Reference (INT)
Data Flow	IN/OUT
Configuration Load	Yes
Access lock	View only
Residence	CEE
Related parameters	TCPOUTTR and NUMTCPBYTSND of COREACE
Remarks	Reference to LTCPOUTTR parameter of COREACE block.

13 Mxxx parameters

Related topics

13.1 MAINT

Specific to blocks	SIGNATURE, IOACE
Description	Maintenance mode
Data type	Boolean
Range	True/False
Default	False
Configuration Load	No
Access lock	View only
Residence	CEE
Related parameters	STATE
Remarks	Specifies the block to go to maintenance mode.

13.2 MAN_MODE

Specific to blocks	IOACE
Description	Manual mode
Data type	BOOLEAN
Range	True/False
Default	False
Configuration Load	No
Access lock	SUPERVISOR
Residence	CEE
Related parameters	S_MAN, V_MAN, VALUE, IVALUE, STATUS, IV_MAN
Remarks	Indicates the true value. Enables IOACE to go to manual mode.

13.3 MAX_CONF_RQ

Specific to blocks	COREACE
Description	Limit number of configuration requests at a time
Data type	INT32
Range	- (2,147,483,647 -1) to 2,147,483,647
Default	100
Configuration Load	Yes
Access lock	Engineer
Residence	CEE
Related parameters	NUMTCPBYTSND, OPSZLMT
Remarks	Specifies the maximum number of configuration request messages can be sent to TPU at a time.

13.4 MAXFRMELEN

Specific to blocks	COREACE
Description	Maximum frame length (also defined on the TPU)
Data type	INT32
Range	- (2,147,483,647 -1) to 2,147,483,647
Default	1600
Configuration Load	Yes
Access lock	Engineer
Residence	CEE
Related parameters	NA
Remarks	Specifies the maximum TPU frame length. This is similar to the parameter defined in TPU configuration.

13.5 MAXSIGSAM

Specific to blocks	COREACE
Description	Maximum Signature Samples
Data type	INT32
Range	- (2,147,483,647 -1) to 2,147,483,647
Size	Zero
Default	
Configuration Load	No
Access lock	View only
Residence	CEE
Related parameters	NA
Remarks	Maximum Signature Samples

14 Nxxx parameters

Related topics

14.1 NXTPINGTM

Specific to blocks	COREACE
Description	Next Ping send Time
Data type	TIME
Range	NA
Default	NA
Configuration Load	No
Access lock	View only
Residence	CEE
Related parameters	NOPINGRSPTH, NOPINGRSPCNT
Remarks	Indicates the time when the next ping message will be sent.

14.2 NOPINGRSPCNT

Specific to blocks	COREACE
Description	No Ping Response Count
Data type	INT32
Range	- (2,147,483,647 -1) to 2,147,483,647
Default	0
Configuration Load	No
Access lock	View only
Residence	CEE
Related parameters	NOPINGRSPTH
Remarks	Indicates the count of missing responses for ping request sent.

14.3 NOPINGRSPTH

Specific to blocks	COREACE
Description	Missing Ping Response Threshold
Data type	INT32
Range	- (2,147,483,647 -1) to 2,147,483,647
Default	2
Configuration Load	Yes
Access lock	Engineer
Residence	CEE
Related parameters	NOPINGRSPTH
Remarks	Specifies the count of missed ping messages before resetting the connection to TPU, if zero disables periodic pings.

14.4 NUMPFCYC

Specific to blocks	COREACE
Description	Number of Cycles Partial Frame received
Data type	INT32
Range	- (2,147,483,647 -1) to 2,147,483,647
Default	0
Configuration Load	No
Access lock	View only
Residence	CEE
Related parameters	UNPROCBYTCNT
Remarks	Number of partial frames received cycles.

14.5 NUMTCPBYTRCV

Specific to blocks	COREACE
Description	Number of TCP bytes received
Data type	Parameter Reference (INT)
Data Flow	IN/OUT
Configuration Load	Yes
Access lock	View only
Residence	CEE
Related parameters	TCPINTR, LTCPINTR
Remarks	Indicates the count of bytes received from TCP socket.

Specific to blocks	TCP
Description	Preference to core NUMTCPBYTRCV
Data type	Parameter Reference (INT)
Data Flow	IN/OUT
Configuration Load	Yes
Access lock	View only
Residence	CEE
Related parameters	TCPINTR, LTCPINTR
Remarks	Reference to NUMTCPBYTRCV parameter of COREACE block.

14.6 NUMTCPBYTSND

Specific to blocks	COREACE
Description	Number of TCP bytes sent
Data type	Parameter Reference (INT)
Data Flow	IN/OUT
Configuration Load	Yes
Access lock	View only
Residence	CEE
Related parameters	LTCPOUTTR, TCPOUTTR
Remarks	Indicates the count of bytes ready to be sent.

Specific to blocks	TCP
Description	Preference to Core NUMTCPBYTSND
Data type	Parameter Reference (INT)
Data Flow	IN/OUT
Configuration Load	Yes
Access lock	View only
Residence	CEE
Related parameters	LTCPOUTTR, TCPOUTTR
Remarks	Reference to NUMTCPBYTSND parameter of COREACE block.

14.7 NXTPINGTM

Specific to blocks	COREACE
Description	Next Ping send Time
Data type	TIME
Range	NA
Default	NA
Configuration Load	No
Access lock	View only
Residence	CEE
Related parameters	PINGINT
Remarks	Indicates the time when the next ping message will be sent.

14.8 NXTTMSYNTM

Specific to blocks	COREACE
Description	Next Time Sync Time
Data type	TIME
Range	NA
Default	NA
Configuration Load	No
Access lock	View only
Residence	CEE
Related parameters	TIMESYNCINT
Remarks	Indicates the time to send the next time synchronization message.

15 Oxxx parameters

Related topics

15.1 OFFLINE_CNT

Specific to blocks	SIGNATURE, IOACE
Description	Offline state transitions
Data type	INT32
Range	- (2,147,483,647 -1) to 2,147,483,647
Default	0
Configuration Load	No
Access lock	View only
Residence	CEE
Related parameters	NA
Remarks	Indicates the number of time the block goes to offline state.

15.2 OP

Specific to blocks	IOACE
Description	Set output value
Data type	FLOAT64
Range	FLOAT64 range
Default	NaN
Configuration Load	No
Access lock	Operator
Residence	CEE
Related parameters	SEND_CMD, OUTPUT_ENBL
Remarks	Indicates the set output value.

15.3 OP_MODE

Specific to blocks	IOACE
Description	AO operation mode
Data type	FlOAT64
Range	FlOAT64 range
Default	NaN
Configuration Load	No
Access lock	View only
Residence	CEE
Related parameters	OP
Remarks	If IO is of type AO, then the AO operation mode is set based on this parameter value. The type of requested operation. Not all the OperationModes are valid for every SmartObject of AO type. • 0 = Set calculated position to Value (in Unit Index) • 1 = Move to position defined by Value (in Unit Index) • 2 = Move number of steps as specified in Value – Value = 0 STOP actuator movement at the completion of current step – Value > 0 Move number of steps in open direction – Value < 0 Move number of step in close direction • 3 = Move for a given time period – Value > 0 Move for a time period in open direction – Value < 0 Move for a time period in close direction

15.4 OPSIZLMT

Specific to blocks	COREACE
Description	Output Size Limit (must be less than frame size)
Data type	INT32
Range	- (2,147,483,647 -1) to 2,147,483,647
Default	10000
Configuration Load	Yes
Access lock	Engineer
Residence	CEE
Related parameters	NUMTCPBYTSND
Remarks	Specifies the maximum size of the frame while sending the data to TPU.

15.5 OUTMSGCNT

Specific to blocks	COREACE
Description	Output message counters
Data type	INT32
Range	- (2,147,483,647 -1) to 2,147,483,647
Default	0
Configuration Load	No
Access lock	View only
Residence	CEE
Related parameters	STATE_TIME
Remarks	Diagnostics of the output messages from COREACE to TPU.

15.6 OUTPUT_ENBL

Specific to blocks	IOACE
Description	Output enable
Data type	BOOLEAN
Range	True/False
Default	False
Configuration Load	No
Access lock	Operator
Residence	CEE
Related parameters	LAST_SEND, SEND_CMD
Remarks	Indicates the true value. Enables the tag to send output.

16 Pxxx parameters

Related topics

16.1 PERFPRD

Specific to blocks	COREACE
Description	Performance Period (number of seconds)
Data type	INT32
Range	0 to 255
Default	10
Configuration Load	Yes
Access lock	Engineer
Residence	CEE
Related parameters	FROMIOSEC, TOIOSEC
Remarks	Performance parameters computation/average period.

16.2 PINGINT

Specific to blocks	COREACE
Description	Ping Interval
Data type	INT32
Range	- (2,147,483,647 -1) to 2,147,483,647
Default	15
Configuration Load	Yes
Access lock	Engineer
Residence	CEE
Related parameters	NOPINGRSPTH, NOPINGRSPCNT
Remarks	Specifies the time in seconds between successive ping packets.

16.3 PINGRTT

Specific to blocks	COREACE
Description	Ping round trip time (Second)
Data type	FLOAT64
Range	FLOAT64 range
Default	NaN
Configuration Load	No
Access lock	View only
Residence	CEE
Related parameters	PINGSENTTICK
Remarks	Time in seconds between Ping message sent from COREACE and response received in COREACE.

16.4 PINGSENTTICK

Specific to blocks	COREACE
Description	Ping Message Sent Tick
Data type	INT32
Range	- (2,147,483,647 -1) to 2,147,483,647
Default	0
Configuration Load	No
Access lock	View only
Residence	CEE
Related parameters	PINGRTT
Remarks	Execution period count from when the last ping request was sent.

16.5 PRTLFRAMSZ

Specific to blocks	COREACE
Description	Partial Frame size
Data type	INT32
Range	- (2,147,483,647 -1) to 2,147,483,647
Default	0
Configuration Load	No
Access lock	View only
Residence	CEE
Related parameters	UNPROCBYTCNT
Remarks	Indicates the number of bytes present in the Overflow buffer.

16.6 PV_GOOD

Specific to blocks	IOACE
Description	Last Good Value
Data type	FLOAT64
Range	FLOAT64 range
Default	NaN
Configuration Load	No
Access lock	View only
Residence	CEE
Related parameters	VALUE
Remarks	Stores the last good value the is received.

17 Rxxx parameters

Related topics

17.1 RCVNEWIODATA

Specific to blocks	COREACE
Description	Received New IO Data
Data type	BOOLEAN
Range	TRUE/FALSE
Size	4601 Array size
Default	False
Configuration Load	No
Access lock	View only
Residence	CEE
Related parameters	NA
Remarks	Indicates the received new IO data.

17.2 RECVBPS

This is TCP/IP network statistics parameter available in the COREACE block.

Specific to blocks	COREACE
Description	Receive Bytes Per Second
Data type	INT32
Range	- (2,147,483,647 -1) to 2,147,483,647
Default value	0
Configuration Load	No
Access lock	View only
Residence	CEE
Related parameters	SENTBPS
Remarks	Indicates the number of received bytes per second from TPU.

17.3 REQTMSYNC

Specific to blocks	COREACE
Description	Request Time Sync
Data type	BOOLEAN
Range	On/Off
Default	Off
Configuration Load	No
Access lock	Operator
Residence	CEE
Related parameters	ENBTMSYNC
Remarks	When set the COREACE will send time synchronization request in the next cycle.

17.4 RESETDIAG

Specific to blocks	COREACE
Description	Reset Diagnostics
Data type	BOOLEAN
Range	Yes/No
Default	No
Configuration Load	No
Access lock	Operator
Residence	CEE
Related parameters	INMSGCNT, OUTMSGCNT, RPTMSGRCVCNT, RNRCNT, SNRCNT, FROMIOSEC and TOIOSEC
Remarks	When set clears the diagnostic parameters.

17.5 REVISION_VER

Specific to blocks	SIGNATURE, IOACE
Description	Signature Block version
Data type	FLOAT64
Range	FLOAT64 range
Default	NaN
Configuration Load	No
Access lock	View only
Residence	CEE
Related parameters	NA
Remarks	Indicates the Major/Medium/Minor revision number of Signature and IOACE blocks.

17.6 RNRCNT

Specific to blocks	COREACE
Description	Receive Not Ready Count
Data type	INT32
Range	- (2,147,483,647 -1) to 2,147,483,647
Default	0
Configuration Load	No
Access lock	View only
Residence	CEE
Related parameters	NA
Remarks	Indicates the count of receive not ready cycles.

17.7 RPT_CAT

Specific to blocks	IOACE
Description	Last report (FMC722 error) category
Data type	INT32
Range	- (2,147,483,647 -1) to 2,147,483,647
Default	0
Configuration Load	No
Access lock	Operator
Residence	CEE
Related parameters	RPT_COD
Remarks	Indicates the last FMC722 error report.

17.8 RPTAGNAME

Specific to blocks	COREACE
Description	Tag name in the report
Data type	STRING
Size	32
Array	10
Range	
Default	
Configuration Load	No
Access lock	View only
Residence	CEE
Related parameters	RPT_NEXT_IX
Remarks	Indicates the report name from report block.

17.9 RPT_COD

Specific to blocks	IOACE
Description	Last report (FMC722 error) message code
Data type	INT32
Range	- (2,147,483,647 -1) to 2,147,483,647
Default	0
Configuration Load	No
Access lock	Operator
Residence	CEE
Related parameters	RPT_CAT
Remarks	Indicates the last report message code.

17.10 RPTNXTIDX

Specific to blocks	COREACE
Description	Next report index (0 to 9)
Data type	INT32
Range	0 to 9
Default	0
Configuration Load	No
Access lock	View only
Residence	CEE
Related parameters	RPT_IX, RPT_CAT, RPT_COD, RPT_TIME and RPT_NAME
Remarks	Indicates the current index of report/error messages.

17.11 RPT_TIME

Specific to blocks	IOACE
Description	Last report (FMC722 error) time
Data type	Time
Range	On/Off
Default	Off
Configuration Load	No
Access lock	Operator
Residence	CEE
Related parameters	RPT_CAT, RPT_COD
Remarks	Indicates the last report time.

17.12 RREADY

Specific to blocks	COREACE
Description	Receive Ready
Data type	Parameter Reference (INT)
Data Flow	IN/OUT
Configuration Load	Yes
Access lock	View only
Residence	CEE
Related parameters	TCPCONNECTED
Remarks	COREACE ready indicator

Specific to blocks	TCP
Description	Preference to COREACE RREADY
Data	Parameter Reference (INT)
Data Flow	IN/OUT
Configuration Load	Yes
Access lock	View only
Residence	CEE
Related parameters	TCPCONNECTED of COREACE
Remarks	Reference to RREADY parameter of COREACE block

17.13 RST_DIAGS

Specific to blocks	IOACE
Description	Reset Diagnostics
Data type	Boolean
Range	True/False
Default	False
Configuration Load	No
Access lock	Supervisor
Residence	CEE
Related parameters	FROMIO_CNT.Value CONFIG_CNT.Value RPT_CNT.Value TOIO_CNT.Value CONFRQ_CNT.Value OFFLINE_CNT.Value
Remarks	Resets the diagnostics counter.

17.14 RRPTMSGRCVCNT

Specific to blocks	COREACE
Description	Report counters
Data type	INT32 Array[20]
Range	- (2,147,483,647 -1) to 2,147,483,647
Default	0
Configuration Load	No
Access lock	View only
Residence	CEE
Related parameters	INVALIDTAGID
Remarks	Indicates the count of Report/Error messages. The array index indicates the Error/Report type.

17.15 RCVFLAGERR

Specific to blocks	COREACE
Description	Flag errors received
Data type	BOOLEAN
Range	True/False
Default	False
Configuration Load	No
Access lock	Operator
Residence	CEE
Related parameters	NA
Remarks	Indicates an error and generates an alarm.

18 Sxxx parameters

Related topics

18.1 S_FMC

Specific to blocks	IOACE
Description	Status from the TPU
Data type	INT32
Range	- (2,147,483,647 -1) to 2,147,483,647
Default	0
Configuration Load	No
Access lock	View only
Residence	CEE
Related parameters	VALUE, V_FMC, IVALUE, IV_FMC, STATUS, S_FMC
Remarks	Indicates the status from the TPU.

18.2 S_MAN

Specific to blocks	IOACE
Description	Manual status
Data type	INT32
Range	- (2,147,483,647 -1) to 2,147,483,647
Default	0
Configuration Load	No
Access lock	Operator
Residence	CEE
Related parameters	MAN_MODE
Remarks	Indicates the manual status of IO.

18.3 SEM_MAINT

Specific to blocks	IOACE
Description	DO SEM in maintenance
Data type	Boolean
Range	True/False
Default	False
Configuration Load	Yes
Access lock	Engineer
Residence	CEE
Related parameters	VALUE, STS_GOOD
Remarks	Indicates the DO SEM in maintenance mode.

18.4 SEND_CMD

Specific to blocks	IOACE
Description	Send output command
Data type	FLOAT64
Range	FLOAT64 range
Default	NaN
Configuration Load	No
Access lock	Operator
Residence	CEE
Related parameters	LAST_SEND, OP
Remarks	Indicates the send output command.

18.5 SENTBPS

This is the TCP/IP network statistics parameter available in the COREACE block.

Specific to blocks	COREACE
Description	Sent Bytes Per Second
Data type	INT32
Range	- (2,147,483,647 -1) to 2,147,483,647
Default	0
Configuration Load	No
Access lock	View only
Residence	CEE
Related parameters	RECVBPS, NUMTCPBYTSND
Remarks	Indicates the number of bytes sent per second to TPU.

18.6 SGN_CNT

Specific to blocks	IOACE
Description	Signatures Count
Data type	INT32
Range	- (2,147,483,647 -1) to 2,147,483,647
Default	0
Configuration Load	No
Access lock	Engineer
Residence	CEE
Related parameters	NA
Remarks	Indicates the signature counts.

18.7 SGN_OPCOD

Specific to blocks	IOACE
Description	Signature opcode requested
Data type	INT32
Range	- (2,147,483,647 -1) to 2,147,483,647
Default	0
Configuration Load	No
Access lock	Operator
Residence	CEE
Related parameters	SGN_RQST
Remarks	Indicates the signature Opcode requested.

18.8 SGN_RQST

Specific to blocks	IOACE
Description	Signature request
Data type	Boolean
Range	True/False
Default	False
Configuration Load	No
Access lock	Operator
Residence	CEE
Related parameters	OUTPUT_ENBL
Remarks	True value indicates that signature is requested for the tag. After the tag receives the requested signature, the value is indicated as false.

18.9 SGN_TIME_CL

Specific to blocks	IOACE
Description	Last Close Signature Collected Time
Data type	TIME
Range	NA
Default	NA
Configuration Load	No
Access lock	View only
Residence	CEE
Related parameters	SGN_TIME_OP
Remarks	Indicates the last closed signature collected time.

18.10 SGN_SAMPL

Specific to blocks	IOACE
Description	Signature Number Of Samples Requested
Data type	INT32
Range	- (2,147,483,647 -1) to 2,147,483,647
Default	0
Configuration Load	Yes
Access lock	Engineer
Residence	CEE
Related parameters	SGN_RQST
Remarks	Indicates the number of signature samples requested.

18.11 SGN_TIME_OP

Specific to blocks	IOACE
Description	Last Open Signature Collected Time
Data type	TIME
Range	NA
Default	NA
Configuration Load	No
Access lock	View only
Residence	CEE
Related parameters	SGN_TIME_CL
Remarks	Indicates the last open signature collected time.

18.12 SIG_CYC_CNT

Specific to blocks	SIGNATURE
Description	Count of signatures processed in last cycle.
Data type	INT32
Range	- (2,147,483,647 -1) to 2,147,483,647
Default	0
Configuration Load	No
Access lock	View only
Residence	CEE
Related parameters	NA
Remarks	Indicates the number of signatures processed in last execution cycle .

18.13 SIGERR

Specific to blocks	COREACE
Description	Signature Error
Data type	INT32
Range	- (2,147,483,647 -1) to 2,147,483,647
Default	0
Configuration Load	No
Access lock	View only
Residence	CEE
Related parameters	SIGPENDIX, SIGREQDONE
Remarks	Indicates error occurred while receiving the requested signature. Possible values • 0xF000 0001 = Operation rejected - unknown Tag in SetTagIndex DataBlock • 0xF000 0002 = Operation rejected - not initialized TagIndex in Config DataBlock • 0xF000 0004 = Operation rejected - TagIndex already set for object • 0xF000 0007 = Operation rejected - command on wrong object type • 0xF000 0009 = Operation rejected - TagIndex already exists • 0xF000 000A = Operation rejected - no operation before config data sent • 0xF000 000B = Operation rejected - no operation before all config data sent • 0xF000 0011 = Operation rejected - system is in Maintenance mode • 0xF000 0012 = Operation rejected - MaxBuf is insufficient • 0xF000 0013 = Operation rejected - unknown signature operation code • 0xF000 0014 = Operation rejected - unknown AO operation Mode • 0xF000 0103 = Operation failed - general error • 0xF000 000F = SCU-connection is accepted

18.14 SIGFILEPATH

Specific to blocks	SIGNATURE
Description	Directory where .csv files needs to be saved.
Data type	STRING
Range	256 character length
Default	
Configuration Load	Yes
Access lock	Engineer
Residence	CEE
Related parameters	SIGNALM
Remarks	Specifies the directory path where the csv files will be saved.

18.15 SIGNTAG_IDX

Specific to blocks	SIGNATURE
Description	Tag index of the current signature block.
Data type	INT32
Range	0 to 4500
Default	0
Configuration Load	No
Access lock	View only
Residence	CEE
Related parameters	NA
Remarks	Indicates the tag index of the signature stored in the buffer.

18.16 SIGN_DATA_REF

Specific to blocks	SIGNATURE
Description	SIGNATURE Data reference.
Data type	Parameter Reference (INT)
Data Flow	IN/OUT
Configuration Load	Yes
Access lock	View only
Residence	CEE
Related parameters	SIGNBUF
Remarks	Reference to SIGNBUF parameter of COREACE block.

18.17 SIGNCOUNTER

Specific to blocks	COREACE
Description	Signature Packet
Data type	INT32
Range	- (2,147,483,647 -1) to 2,147,483,647
Default	0
Configuration Load	No
Access lock	Operator
Residence	CEE
Related parameters	SDB_DONE
Remarks	Specifies the count of packets received for the requested signature.

18.18 SIGNBUF

Specific to blocks	COREACE
Description	Data Buffer for signature
Data type	INT32
Range	INT 32 range
Size	10000 Array size
Default	0
Configuration Load	No
Access lock	View only
Residence	CEE
Related parameters	
Remarks	Buffer for storing the signature data.

18.19 SIGNALM

Specific to blocks	SIGNATURE
Description	Signature Block Alarm
Data type	BOOLEAN
Range	True/False
Default	False
Configuration Load	No
Access lock	View only
Residence	CEE
Related parameters	SIGFILEPATH
Remarks	Alarm appears when you are not able to save signature data. Data save will fail during the following conditions. • If the specified directory does not exist. • If you do not have write access to the directory. • If you do not having enough space

18.20 SIGREQDONE

Specific to blocks	COREACE
Description	Signature Request Done (when = SIGNCOUNTER) (returned)
Data type	INT32
Range	- (2,147,483,647 -1) to 2,147,483,647
Default	0
Configuration Load	No
Access lock	View only
Residence	CEE
Related parameters	SIGNCOUNTER
Remarks	Indicates the SIGNCOUNTER value after signature processing is complete

18.21 SIGREQPENCNT

Specific to blocks	COREACE
Description	Signature Requests Pending Count
Data type	INT32 array of 10
Range	- (2,147,483,647 -1) to 2,147,483,647
Default	0
Configuration Load	No
Access lock	View only
Residence	CEE
Related parameters	NA
Remarks	Indicates the pending count of signature requests.

18.22 SIGREQTMOUT

Specific to blocks	COREACE
Description	Signature Request TimeOut
Data type	INT32
Range	- (2,147,483,647 -1) to 2,147,483,647
Default	10
Configuration Load	Yes
Access lock	Engineer
Residence	CEE
Related parameters	SIGREQPENCNT
Remarks	Specifies the maximum time out for receiving the requested signature.

18.23 SIGOPCODISP

Specific to blocks	SIGNATURE
Description	Signature Operation Code Display String.
Data type	STRING
Range	8 Character length
Default	
Configuration Load	Yes
Access lock	Engineer
Residence	CEE
Related parameters	NA
Remarks	Specifies types of signature to be fetched.

18.24 SIGPENDIX

Specific to blocks	COREACE
Description	Signature request for this tag is pending (client should not request new signature while this is non - 0)
Data type	INT32
Range	- (2,147,483,647 -1) to 2,147,483,647
Default	0
Configuration Load	No
Access lock	View only
Residence	CEE
Related parameters	SIGREQDONE
Remarks	Indicates the pending tag index. If there is no pending requests, then this will set to zero.

18.25 SIMENABLE

Specific to blocks	COREACE
Description	Simulation Enabled
Data type	BOOLEAN
Range	On/Off
Default	Off
Configuration Load	Yes
Access lock	Engineer
Residence	CEE
Related parameters	TCPCONNECTED
Remarks	Force online state true always (for test, if no connection to tpu exists) Specifies the Simulation mode and no need to be forcing restart the link.

18.26 SLOT_OFFSET

Specific to blocks	IOACE
Description	Slot offset in CORE_DATA
Data type	INT32
Range	- (2,147,483,647 -1) to 2,147,483,647
Default	0
Configuration Load	No
Access lock	View only
Residence	CEE
Related parameters	IO_SLOT, CORE_DATA_IX
Remarks	This is a calculated value representing the tag index in the Data buffer.

18.27 SOCKETWRTMOUT

Specific to blocks	TCP
Description	Preference to core NUMTCPBYTRCV
Data type	INT32
Size	- (2,147,483,647 -1) to 2,147,483,647
Data Flow	IN/OUT
Default	5
Configuration Load	Yes
Access lock	Engineer
Residence	CEE
Related parameters	NUMTCPBYTRCV
Remarks	Reference to NUMTCPBYTRCV parameter of the COREACE block.

18.28 SOCKETRCVTMOUT

Specific to blocks	TCP
Description	Socket Receive Timeout
Data type	INT32
Range	- (2,147,483,647 -1) to 2,147,483,647
Default	5
Configuration Load	Yes
Access lock	Engineer
Residence	CEE
Related parameters	NA
Remarks	Specifies the maximum time out for receiving data.

18.29 SNRCNT

Specific to blocks	COREACE
Description	Send Not Ready Count
Data type	INT32
Range	- (2,147,483,647 -1) to 2,147,483,647
Default	0
Configuration Load	No
Access lock	View only
Residence	CEE
Related parameters	LTCPOUTTR, TCPOUTTR
Remarks	Indicates the count of Socket not ready to Send message to TPU.

18.30 STATE

Specific to blocks	SIGNATURE, IOACE
Description	Current state of SIGNATURE or IOACE.
Data type	INT32
Range	- (2,147,483,647 -1) to 2,147,483,647
Default	0
Configuration Load	No
Access lock	View only
Residence	CEE
Related parameters	CONFIG_ERROR
Remarks	Indicates the state of the current state of the SIGN block. • 0: MAINTENANCE • 1: OFF LINE • 2: START UP (Initializing) • 3: EXECUTING

18.31 STATE_DESC

Specific to blocks	SIGNATURE
Description	Current state of the Signature block.
Data type	String
Range	16 characters length
Default	
Configuration Load	No
Access lock	View only
Residence	CEE
Related parameters	STATE
Remarks	Indicates the current state description of the SIGNATURE block.

Specific to blocks	IOACE
Description	Current state of the IOACE block.
Data type	String
Range	16 characters length
Default	
Configuration Load	No
Access lock	View only
Residence	CEE
Related parameters	STATE
Remarks	Displays the current state description for the IOACE block.

18.32 STATE_TIME

Specific to blocks	SIGNATURE
Description	State Begin Time
Data type	TIME
Range	
Default	
Configuration Load	No
Access lock	View only
Residence	CEE
Related parameters	STATE
Remarks	Indicates the time when the state of the internal block has changed.

Specific to blocks	IOACE
Description	State Begin Time
Data type	TIME
Range	
Default	
Configuration Load	No
Access lock	View only
Residence	CEE
Related parameters	STATE
Remarks	Indicates the time when the state of the internal block has changed.

18.33 STATUS

Specific to blocks	IOACE
Description	Value status
Data type	INT32
Range	- (2,147,483,647 -1) to 2,147,483,647
Default	0
Configuration Load	No
Access lock	View only
Residence	CEE
Related parameters	S_MAN
Remarks	Indicates the status value read from the TPU for the tag.

18.34 STEPS

Specific to blocks	IOACE
Description	AO readback step
Data type	FLOAT64
Range	On/Off
Default	Off
Configuration Load	No
Access lock	View only
Residence	CEE
Related parameters	NA
Remarks	Indicates the step value reading from the TPU for the tag.

18.35 STRISTPUA

Specific to blocks	SIGNATURE
Description	String Representing TPU A or B.
Data type	STRING
Range	8 character length
Default	NA
Configuration Load	Yes
Access lock	Engineer
Residence	CEE
Related parameters	NA
Remarks	This parameter is for naming convention of the .csv file. This parameter specifies whether the .csv file information is from TPU A or TPU B.

18.36 STS_GOOD

Specific to blocks	IOACE
Description	Value status Flag
Data type	Boolean
Range	True/False
Default	False
Configuration Load	No
Access lock	View only
Residence	CEE
Related parameters	STATUS
Remarks	This value is true when the Status value is good.

19 Txxx parameters

Related topics

19.1 TAGDESCR

Specific to blocks	IOACE
Description	Tag Descriptor
Data type	String
Range	32
Default	NA
Configuration Load	Yes
Access lock	Engineer
Residence	CEE
Related parameters	IO_TYPE, IO_SLOT
Remarks	Indicates the description of the tag. The description must match with the tag name assigned in the TPU for IO.

19.2 TAGRSTINPROG

Specific to blocks	COREACE
Description	Tag Restart In Progress
Data type	BOOLEAN
Range	On/Off
Default	Off
Configuration Load	No
Access lock	View only
Residence	CEE
Related parameters	CONFIGALLIO
Remarks	Indicates if the tag restart is in progress.

19.3 TCPCONNECTED

Specific to blocks	COREACE
Description	Connected to TPU
Data type	BOOLEAN
Range	TRUE/FALSE
Default	FALSE
Configuration Load	Yes
Access lock	Engineer
Residence	CEE
Related parameters	CORESTATE
Remarks	Indicates if the TPU is connected to the COREACE or not.

19.4 TCP_CONNECTED

Specific to blocks	TCP
Description	TCP_CONNECTED
Data type	Parameter Reference (Boolean)
Data Flow	IN/OUT
Configuration Load	Yes
Access lock	View only
Residence	CEE
Related parameters	TCPCONNECTED
Remarks	Reference to TCPCONNECTED parameter of the COREACE block.

19.5 TCPINTR

Specific to blocks	COREACE
Description	TCP Input Transaction
Data type	Parameter Reference (INT)
Data Flow	IN/OUT
Configuration Load	Yes
Access lock	View only
Residence	CEE
Related parameters	LTCPINTR
Remarks	Indicates the TCP transaction input.

19.6 TCPOUTTR

Specific to blocks	COREACE
Description	Transaction counter to TCP
Data type	Parameter Reference (INT)
Data Flow	IN/OUT
Configuration Load	Yes
Access lock	View only
Residence	CEE
Related parameters	LTCPOUTTR, NUMTCPBYTSND
Remarks	Indicates the transaction counter information to TCP.

Specific to blocks	TCP
Description	Preference to Core TCPOUTTR
Data type	Parameter Reference (INT)
Data Flow	IN/OUT
Configuration Load	Yes
Access lock	View only
Residence	CEE
Related parameters	TCPOUTTR
Remarks	Reference to TCPOUTTR parameter of COREACE block.

19.7 TCPPORT

Specific to blocks	TCP
Description	TCP Port
Data type	INT32
Range	- (2,147,483,647 -1) to 2,147,483,647
Default	6100
Configuration Load	Yes
Access lock	Engineer
Residence	CEE
Related parameters	IPADDR
Remarks	Specifies the port number of the TPU.

19.8 TIME

Specific to blocks	IOACE
Description	Value timestamp
Data type	Time
Range	NA
Default	NA
Configuration Load	No
Access lock	View only
Residence	CEE
Related parameters	NA
Remarks	Indicates the value timestamp.

19.9 TIMESYNCHINT

Specific to blocks	COREACE
Description	Time Synch Interval
Data type	INT32
Range	- (2,147,483,647 -1) to 2,147,483,647
Default	3600
Configuration Load	Yes
Access lock	Engineer
Residence	CEE
Related parameters	ENBTMSYNC, NXTTMSYNTM
Remarks	Specifies the time in seconds between successive time sync with TPUs.

19.10 TO_TPU

Specific to blocks	TCP
Description	TO TPU Buffer
Data type	Parameter Reference (INT)
Data Flow	IN/OUT
Configuration Load	Yes
Access lock	View only
Residence	CEE
Related parameters	DATABUTOTPU
Remarks	Reference to DATABUTOTPU parameter of COREACE block. It muat always refer to the 0ther index of DATABUFRMTPU.

19.11 TOIO_CNT

Specific to blocks	IOACE
Description	ToIO commands sent
Data type	INT32
Range	- (2,147,483,647 -1) to 2,147,483,647
Default	0
Configuration Load	No
Access lock	Engineer
Residence	CEE
Related parameters	SEND_CMD
Remarks	Indicates the number of ToIo commands that are sent.

19.12 TOIOSEC

Specific to blocks	COREACE
Description	TOIO messages per second
Data type	FLOAT64
Range	FLOAT64 range
Default	0.0
Configuration Load	No
Access lock	View only
Residence	CEE
Related parameters	PERFPRD
Remarks	Indicates the number of messages sent to IO per second(TOIO count/ PERF_PRD).

19.13 TPUONLINE

Specific to blocks	COREACE
Description	TPU is Online
Data type	BOOLEAN
Range	On/Off
Default	Off
Configuration Load	No
Access lock	View only
Residence	CEE
Related parameters	NOPINGRSPTH
Remarks	Indicates whether COREACE is taking to TPU or not.

19.14 TPUOFFLNAL

Specific to blocks	COREACE
Description	TPU Offline Alarm
Data type	BOOLEAN
Range	TRUE/FALSE
Default	15
Configuration Load	No
Access lock	program
Residence	CEE
Related parameters	DLY_OFF_CNT
Remarks	Alarm to indicate TPU is offline.

20 Uxxx parameters

Related topics

“UNITINDEX” on page 192
“UNPROCBYTCNT” on page 193

20.1 UNITINDEX

Specific to blocks	IOACE
Description	Unit index
Data type	INT32
Range	- (2,147,483,647 -1) to 2,147,483,647
Default	0
Configuration Load	No
Access lock	View only
Residence	CEE
Related parameters	NA
Remarks	Indicates the Engineering Unit Code configured in TPU.

20.2 UNPROCBYTCNT

Specific to blocks	COREACE
Description	Unprocessed Bytes Count
Data type	INT32
Range	- (2,147,483,647 -1) to 2,147,483,647
Default	0
Configuration Load	No
Access lock	View only
Residence	CEE
Related parameters	PRTLFRAMESZ, NUMTCPBYTRCV
Remarks	Indicates the count of bytes yet to be process from the current TCP buffer.

21 Vxxx parameters

Related topics

“V_FMC” on page 196
“V_MAN” on page 197
“VALUE” on page 198

21.1 V_FMC

Specific to blocks	IOACE
Description	Float Value from TPU
Data type	FLOAT64
Range	FLOAT64 range
Default	NaN
Configuration Load	No
Access lock	View only
Residence	CEE
Related parameters	VALUE
Remarks	Indicates the float value from the TPU.

21.2 V_MAN

Specific to blocks	IOACE
Description	Float Manual value
Data type	FLOAT64
Range	FLOAT64 range
Default	NaN
Configuration Load	No
Access lock	Operator
Residence	CEE
Related parameters	MAN_MODE
Remarks	Indicates the floating manual value.

21.3 VALUE

Specific to blocks	IOACE
Description	Float Value
Data type	FLOAT64
Range	FLOAT64 range
Default	NaN
Configuration Load	No
Access lock	View only
Residence	CEE
Related parameters	V_FMC, V_MAN
Remarks	Indicates the floating value.

22 Wxxx parameters

Related topics

“WAITCYCLECNT” on page 200
“WAIT_CONFIG” on page 201

22.1 WAITCYCLECNT

Specific to blocks	COREACE
Description	Cycle to wait before reconnect/connect.
Data type	INT32
Range	- (2,147,483,647 -1) to 2,147,483,647
Default	0
Configuration Load	No
Access lock	View only
Residence	CEE
Related parameters	TAGRSTINPROG
Remarks	Indicates the time to wait for connection for “Welcome TPU” message.

22.2 WAIT_CONFIG

Specific to blocks	IOACE
Description	Wait for Configuration Time
Data type	INT32
Range	- (2,147,483,647 -1) to 2,147,483,647
Default	0
Configuration Load	Yes
Access lock	Engineer
Residence	CEE
Related parameters	PERIOD
Remarks	Indicates the number of cycles to wait before displaying the tag registration error.

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- Send an email to security@honeywell.com.

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For support, contact your local Honeywell Process Solutions Customer Contact Center (CCC). To find your local CCC visit the website, https://www.honeywellprocess.com/en-US/contact-us/customer-support-contacts/Pages/default.aspx.

23.4 Training classes

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