1 Overview

PC APIs of HostAPI are exported for application code to exchange data with CV2x.

2 PC APIs

This document lists the syntax of all APIs.

- AmbaEth_Init
- AmbaEth_TxRxTest
- AmbaEth_GetSize
- AmbaEth_Recv
- AmbaEth_Send

3 API: AmbaEth_Init

Syntax:

int32_t AmbaEth_Init(const char *pAddr, uint32_t *pCh)

Description:

Create a client socket to reach out to the server socket.

Parameters:

Type	Parameter	Description	Valid Range
char *	pAddr	The server's IP address	Valid memory address
uint32_t *	pCh	The communication channel id	Valid memory address

Returns:

Return	Description
AMBA_ETH_ERR_OK	Success
AMBA_ETH_ERR_NG	Error

4 API: AmbaEth_TxRxTest

Syntax:

int32_t AmbaEth_TxRxTest(uint32_t ch, char *pBuff, uint32_t size)

Description:

Tx/Rx throughput test. Before exchanging data between PC and CV2x, user could use this to test connection speed. There will be a warning message if TX/RX speed below to 500Mbps.

Parameters:

Type	Parameter	Description	Valid Range
uint32_t	ch	The channel id	0~63
char *	pBuff	Test buffer	Valid memory address
uint32_t	size	Test buffer size	Must be larger than 10M

Returns:

Return	Description
AMBA_ETH_ERR_OK	Success
AMBA_ETH_ERR_NG	Error

5 API: AmbaEth_GetSize

Syntax:

int32_t AmbaEth_GetSize(uint32_t ch, AMBA_ETH_SIZE_INFO_s *pSizeInfo)

Description:

Get the size information from board side, CV2x. Before receiving data, invoke this to get the number and size of data. Then allocate the memory space for it.

Parameters:

Type	Parameter	Description	Valid Range
uint32_t	ch	The channel id	0~63
AMBA_ETH_SIZE_INFO_s *	pSizeInfo	The size info buffer	Valid memory address

AMBA_ETH_SIZE_INFO_s

Type	Parameter	Description
uint32_t	num	Number of data
uint32_t	size[AMBA_ETH_MAX_IO]	Size of data

Returns:

Return	Description
AMBA_ETH_ERR_OK	Success
AMBA_ETH_ERR_NG	Error

6 API: AmbaEth_Recv

Syntax:

int32_t AmbaEth_Recv(uint32_t ch, const AMBA_ETH_SIZE_INFO_s *pSizeInfo, AMBA_ETH_DATA_INFO_s *pDataInfo)

Description:

Receive data from board side, CV2x.

Parameters:

Type	Parameter	Description	Valid Range
uint32_t	ch	The channel id	0~63
AMBA_ETH_SIZE_INFO_s *	pSizeInfo	The size info buffer	Valid memory address
AMBA_ETH_DATA_INFO_s *	pDataInfo	The data info buffer	Valid memory address

AMBA_ETH_SIZE_INFO_s

Type	Parameter	Description
uint32_t	num	Number of data
uint32_t	size[AMBA_ETH_MAX_IO]	Size of data

AMBA_ETH_DATA_INFO_s

Type	Parameter	Description
uint32_t	seqNum	Sequence number of receiving data
uint64_t	timeStamp	Time stamp of receiving data
char *	pBuf[AMBA_ETH_MAX_IO]	Data buffer

Returns:

Return	Description
AMBA_ETH_ERR_OK	Success
AMBA_ETH_ERR_NG	Error

7 API: AmbaEth_Send

Syntax:

int32_t AmbaEth_Send(uint32_t ch, const AMBA_ETH_SIZE_INFO_s *pSizeInfo, const AMBA_ETH_DATA_INFO_s *pDataInfo)

Description:

Send size info and data to board side, CV2x.

Parameters:

Type	Parameter	Description	Valid Range
uint32_t	ch	The channel id	0~63
AMBA_ETH_SIZE_INFO_s *	pSizeInfo	The size info buffer	Valid memory address
AMBA_ETH_DATA_INFO_s *	pDataInfo	The data info buffer	Valid memory address

AMBA_ETH_SIZE_INFO_s

Type	Parameter	Description
uint32_t	num	Number of data
uint32_t	size[AMBA_ETH_MAX_IO]	Size of data

AMBA_ETH_DATA_INFO_s

Type	Parameter	Description
uint32_t	seqNum	Sequence number of transmitting data; ***user doesn't need to assign it***. It has been maintained in HostAPI library.
uint64_t	timeStamp	Time stamp of transmitting data. (Optional)
char *	pBuf[AMBA_ETH_MAX_IO]	Data buffer

Returns:

Return	Description
AMBA_ETH_ERR_OK	Success
AMBA_ETH_ERR_NG	Error