NG CAPWAP IRAM Package Alpha Release 108_x_8

General

This IRAM package of Next Generation CAPWAP includes the following main features: CAPWAP new features on top of the existing Legacy IP offloading features which includes: Coarse Classification (CC), Independent-Mode (IM), Host-Commands (HC), IPv4/6 Fragmentation (IPF), IPv4/6 Reassembly (IPR), IPsec and Header Manipulation (HM).

Availability

The package is currently available for the following devices.

Table 1. Package Availability by Device

Device	Version Number	Compiler version	Loader file name (.h .bin)
T1024 rev 1.0	108_4_8	—	t1024_r1.0.h fsl_fman_ucode_t1024_r1.0_108_4_8.bin
B4860 rev 2.0 B4860 rev 2.2	108_4_8	—	b4860_r2.0.h b4860_r2.2.h fsl_fman_ucode_b4860_r2.0_108_4_8.bin fsl_fman_ucode_b4860_r2.2_108_4_8.bin

Table 1. Package Availability by Device

T4240 rev 1.0 T4240 rev 2.0	108_4_8	—	t4240_r1.0.h fsl_fman_ucode_t4240_r1.0_108_4_8.bin t4240_r2.0.h fsl_fman_ucode_t4240_r2.0_108_4_8.bin
T2080 rev 1.0 T2080 rev 1.1	108_4_8	—	t2080_r1.0.h t2080_r1.1.h fsl_fman_ucode_t2080_r1.0_108_4_8.bin fsl_fman_ucode_t2080_r1.1_108_4_8.bin
LS1043 rev 1.0	108_4_8	—	ls1043_r1.0.h fsl_fman_ucode_ls1043_r1.0_108_4_8.bin

Table 2. Package Availability by Device

Device	Version Number	Compiler version	Loader file name (.h .bin)
T1024 rev 1.0	108_4_7	—	t1024_r1.0.h fsl_fman_ucode_t1024_r1.0_108_4_7.bin
B4860 rev 2.0 B4860 rev 2.2	108_4_7	—	b4860_r2.0.h b4860_r2.2.h fsl_fman_ucode_b4860_r2.0_108_4_7.bin fsl_fman_ucode_b4860_r2.2_108_4_7.bin
T4240 rev 1.0 T4240 rev 2.0	108_4_7	—	t4240_r1.0.h fsl_fman_ucode_t4240_r1.0_108_4_7.bin t4240_r2.0.h fsl_fman_ucode_t4240_r2.0_108_4_7.bin
T2080 rev 1.0 T2080 rev 1.1	108_4_7	—	t2080_r1.0.h t2080_r1.1.h fsl_fman_ucode_t2080_r1.0_108_4_7.bin fsl_fman_ucode_t2080_r1.1_108_4_7.bin
LS1043 rev 1.0	108_4_7	—	ls1043_r1.0.h fsl_fman_ucode_ls1043_r1.0_108_4_7.bin

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Revision History

Table 3. Revision History for Alpha Release 108.x.8

Release Date: Feb 13, 2016	
New Features	Support change MTU on the fly for IPF and NextGeneration CAPWAP fragmentation.User can access IPF manipulation table descriptor and modify MTU field even when traffic is on.
New Features (Not in spec)	
Spec Un-Supported Features	
Bug Fixes/CCB	None.
Known Issues	None.
Restrictions	Same as IPACC package restrictions. (as IPACC_106_x_18 release notes for example)

Table 4. Revision History for Alpha Release 108.x.7

Release Date: Jan 10, 2016	
New Features	1. Added feature which is complementary to the MBMS (Multimedia Broadcast Multicast Services) CRC error detection feature in SEC descriptor (opcode=13 in Pre/Post BMI Fetch NIAs section). 2. Added PPPoE header manipulation.
New Features (Not in spec)	
Spec Un-Supported Features	
Bug Fixes/CCB	1. Fixed ERR IPR18: IPR timeout with mode enqueue may result with port stuck. Although this errata is fixed it is recommanded not using this mode of to-fqid<>0 (maybe only for debug purposes as described in the spec) and only use to-fqid=0 mode. 2. Fixed ERR IPR19: IPR timeout disable host command should flush all timeout entries.
Known Issues	None.
Restrictions	Same as IPACC package restrictions. (as IPACC_106_x_18 release notes for example)

Table 5. Revision History for Alpha Release 108.x.6

Release Date: October 25, 2015	
New Features	1. Anti-Replay window software support. 2. Implement work-around for ERR008975: FMan btcam support of 0 entries lookup (table_size = 0). 3. Added dynamic table update host-command when aging is enabled (host command opcode=0x13).
New Features (Not in spec)	
Spec Un-Supported Features	PPPoE header manipulation is not supported.
Bug Fixes/CCB	Fixed IPR17: IPR issue when last fragment is less than 60 bytes ethernet and fragment size is odd. When last IPv4 fragment is less than 60 bytes ethernet, and ip total length is odd, parser after reassembly completes reports L4 checksum error even if checksum is correct.
Known Issues	None.
Restrictions	Same as IPACC package restrictions. (as IPACC_106_x_17 release notes for example)

Table 6. Revision History for Alpha Release 108.x.5

Release Date: April 21 2015	
New Features	Next Generation CAPWAP features. For more information refer to specification of FMan controller chapter.
New Features (Not in spec)	Support IPsec manipulation and IP fragmentation on egress OP when frame statrs with IP header (no L2) and no parser.
Spec Un-Supported Features	The image for T1040 is not supporting independent mode (IM). The reason for this is the reduced IRAM size of this silicon which is 32K bytes. Assuming user requires in uboot to run IM then for uboot it is required to use other image which supports IM (as IPACC_106_x_14 for example) and only after uboot load this image.
Bug Fixes/CCB	1. Support IP fragmentation when frame starts with IP header and no L2. 2. IPsec Manip for frame w/o L2 was not functional (FD length was incorrect). 3. OPCode 2 was not functional for this package due to previous changes. 4. Soft parser: Handle situation that UDP lite header does not exist and GRE header exists.
Known Issues	None.
Restrictions	Same as IPACC package restrictions. (as IPACC_106_x_15 release notes for example)

Table 7. Revision History for Alpha Release 108.x.4

Release Date: March 22 2015	
New Features	Next Generation CAPWAP features. For more information refer to specification of FMan controller chapter.
New Features (Not in spec)	Support no parser in IPsec manipulation on encryption.
Spec Un-Supported Features	The image for T1040 is not supporting independent mode (IM). The reason for this is the reduced IRAM size of this silicon which is 32K bytes. Assuming user requires in uboot to run IM then for uboot it is required to use other image which supports IM (as IPACC_106_x_14 for example) and only after uboot load this image.
Bug Fixes/CCB	None
Known Issues	None.
Restrictions	Same as IPACC package restrictions. (as IPACC_106_x_15 release notes for example)

Table 8. Revision History for Alpha Release 108.x.3

Release Date: Feb. 1 2015	
New Features	Next Generation CAPWAP features. For more information refer to specification of FMan controller chapter.
New Features (Not in spec)	HM new command: replace field header command.
Spec Un-Supported Features	The image for T1040 is not supporting independent mode (IM). The reason for this is the reduced IRAM size of this silicon which is 32K bytes. Assuming user requires in uboot to run IM then for uboot it is required to use other image which supports IM (as IPACC_106_x_14 for example) and only after uboot load this image.
Bug Fixes/CCB	HM L3 insert: - IPv6 routing headre in L4 checksum was not correct. - Feature copy TOS was not functional together with checksum calculation. Fixed Errata HM2 (FManV3): HM on OP when input frame is SG and VSPE=1 may result with frame data corruption.
Known Issues	None.
Restrictions	Same as IPACC package restrictions. (as IPACC_106_x_15 release notes for example)

Table 9. Revision History for Alpha Release 108.x.2

Release Date: Sep. 17, 2014	
New Features	Next Generation CAPWAP features. For more information refer to specification of FMan controller chapter.
New Features (Not in spec)	None.
Spec Un-Supported Features	The image for T1040 is not supporting independent mode (IM). The reason for this is the reduced IRAM size of this silicon which is 32K bytes. Assuming user requires in uboot to run IM then for uboot it is required to use other image which supports IM (as IPACC_106_x_14 for example) and only after uboot load this image.
Bug Fixes/CCB	None.
Known Issues	None.
Restrictions	Same as IPACC package restrictions. (as IPACC_106_x_14 release notes for example)

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