

NG CAPWAP IRAM Package Alpha

Release 108_x_9

1 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).

2 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_9	—	t1024_r1.0.h fsl_fman_ucode_t1024_r1.0_108_4_9.bin
B4860 rev 2.0 B4860 rev 2.2	108_4_9	—	b4860_r2.0.h b4860_r2.2.h fsl_fman_ucode_b4860_r2.0_108_4_9.bin fsl_fman_ucode_b4860_r2.2_108_4_9.bin
T4240 rev 1.0 T4240 rev 2.0	108_4_9	—	t4240_r1.0.h fsl_fman_ucode_t4240_r1.0_108_4_9.bin t4240_r2.0.h fsl_fman_ucode_t4240_r2.0_108_4_9.bin

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Table 1. Package Availability by Device (continued)

T2080 rev 1.0 T2080 rev 1.1	108_4_9	—	t2080_r1.0.h t2080_r1.1.h fsl_fman_ucode_t2080_r1.0_108_4_9.bin fsl_fman_ucode_t2080_r1.1_108_4_9.bin
LS1043 rev 1.1	108_4_9	—	ls1043_r1.1.h fsl_fman_ucode_ls1043_r1.1_108_4_9.bin
LS1046 rev 1.0	108_4_9	—	ls1046_r1.0.h fsl_fman_ucode_ls1046_r1.0_108_4_9.bin
T1040 rev 1.0 T1040 rev 1.1	108_5_9* (* reduced version w/o IM)	—	t1040_r1.0.h t1040_r1.1.h fsl_fman_ucode_t1040_r1.0_108_5_9.bin fsl_fman_ucode_t1040_r1.1_108_5_9.bin

3 Revision History

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

Release Date: March 21 2016	
New Features	Next Generation CAPWAP features. For more information refer to specification of FMan controller chapter.
New Features(Not in spec)	Support Semaphore to protect updating Depletion Counter.
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	<ol style="list-style-type: none"> 1. Fix a FE bug when checking end of internal buffer. 2. Semaphore to protect updating Depletion Counter. 3. Fix a bug that ucode will stuck when HM returns to FE_HM. 4. Update checksum to subtract 0xff and add new DSCP factor for ALU.
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Table 2. Revision History for Alpha Release 108.x.9 (continued)

Known Issues	None.
Restrictions	Same as IPACC package restrictions. (as IPACC_106_x_18 release notes for example).

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

Release Date: March 20 2016	
New Features	Next Generation CAPWAP features. For more information refer to specification of FMan controller chapter.
New Features(Not in spec)	Support for dynamic change MTU.
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	<ol style="list-style-type: none"> 1. Add support for dynamic change MTU. 2. Save MTU of capwap/IPF to internal context before manip TD check. 3. Added Trace buffer script to analyze output files. 4. Script for creating HW sky blue verilog risc monitor file.
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: January 10 2016	
New Features	Next Generation CAPWAP features. For more information refer to specification of FMan controller chapter.
New Features(Not in spec)	Support FE (Functional Element), FE parameters, port page parameters, support for TOS/TC propagation.
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.

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Table 4. Revision History for Alpha Release 108.x.7 (continued)

Bug Fixes/CCB	<ol style="list-style-type: none"> 1. Added support for TOS/TC propagation when replacing IPv4 ->IPv6 header and viceversa. 2. Fixed a stack usage for NGCAPWAP project. 3. Added port page parameters 4. Added FE support and FE parameters. 5. Added FE_Enter 6. Added FE HM
Known Issues	None.
Restrictions	Same as IPACC package restrictions. (as IPACC_106_x_16 release notes for example).

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

Release Date: October 26 2015	
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	<ol style="list-style-type: none"> 1. Updated NextGenCapwap_Parser. 2. Split the IPv6 label into two labels. 3. Soft parser: Updated udp lite soft parser: Soft parser jumps to UDP HXS instead of ending parse needed for setting UDP bit in LCV.
Known Issues	None.
Restrictions	Same as IPACC package restrictions. (as IPACC_106_x_15 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.
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Table 6. Revision History for Alpha Release 108.x.5 (continued)

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	<ol style="list-style-type: none"> 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.
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Table 8. Revision History for Alpha Release 108.x.3 (continued)

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	<p>HM L3 insert:</p> <ul style="list-style-type: none"> • IPv6 routing headre in L4 checksum was not correct. • Feature copy TOS was not functional together with checksum calculation. <p>Fixed Errata HM2 (FManV3): HM on OP when input frame is SG and VSPE=1 may result with frame data corruption.</p>
Known Issues	None.
Restrictions	Same as IPACC package restrictions. (as IPACC_106_x_15 release notes for example) Release Date:

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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NG_CAPWAP_108_x_9

Rev. 1

10 Feb 2017

