

NG CAPWAP IRAM Package Alpha Release 108_x_7

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_7	—	t1024_r1.0.h fsl_fman_ucose_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_ucose_b4860_r2.0_108_4_7 .bin fsl_fman_ucose_b4860_r2.2_108_4_7 .bin

Table 1. Package Availability by Device

T4240 rev 1.0 T4240 rev 2.0	108_4_7	—	t4240_r1.0.h fsl_fman_ucose_t4240_r1.0_108_4_7. bin t4240_r2.0.h fsl_fman_ucose_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_ucose_t2080_r1.0_108_4_7. bin fsl_fman_ucose_t2080_r1.1_108_4_7. bin
LS1043 rev 1.0	108_4_7	—	ls1043_r1.0.h fsl_fman_ucose_ls1043_r1.0_108_4_ 7.bin

Revision History

Table 2. 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 recommended 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 3. 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 4. 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 starts 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 5. 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 6. 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 7. 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)





How to Reach Us:

Home Page:

www.freescale.com

Web Support:

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

USA/Europe or Locations Not Listed:

Freescale Semiconductor, Inc.
Technical Information Center, EL516
2100 East Elliot Road
Tempe, Arizona 85284
1-800-521-6274 or
+1-480-768-2130
www.freescale.com/support

Europe, Middle East, and Africa:

Freescale Halbleiter Deutschland GmbH
Technical Information Center
Schatzbogen 7
81829 Muenchen, Germany
+44 1296 380 456 (English)
+46 8 52200080 (English)
+49 89 92103 559 (German)
+33 1 69 35 48 48 (French)
www.freescale.com/support

Japan:

Freescale Semiconductor Japan Ltd.
Headquarters
ARCO Tower 15F
1-8-1, Shimo-Meguro, Meguro-ku
Tokyo 153-0064
Japan
0120 191014 or
+81 3 5437 9125
support.japan@freescale.com

Asia/Pacific:

Freescale Semiconductor China Ltd.
Exchange Building 23F
No. 118 Jianguo Road
Chaoyang District
Beijing 100022
China
+86 10 5879 8000
support.asia@freescale.com

For Literature Requests Only:

Freescale Semiconductor
Literature Distribution Center
1-800 441-2447 or
+1-303-675-2140
Fax: +1-303-675-2150
LDCForFreescaleSemiconductor@hibbertgroup.com

Information in this document is provided solely to enable system and software implementers to use Freescale Semiconductor products. There are no express or implied copyright licenses granted hereunder to design or fabricate any integrated circuits or integrated circuits based on the information in this document.

Freescale Semiconductor reserves the right to make changes without further notice to any products herein. Freescale Semiconductor makes no warranty, representation or guarantee regarding the suitability of its products for any particular purpose, nor does Freescale Semiconductor assume any liability arising out of the application or use of any product or circuit, and specifically disclaims any and all liability, including without limitation consequential or incidental damages. "Typical" parameters which may be provided in Freescale Semiconductor data sheets and/or specifications can and do vary in different applications and actual performance may vary over time. All operating parameters, including "Typicals" must be validated for each customer application by customer's technical experts. Freescale Semiconductor does not convey any license under its patent rights nor the rights of others. Freescale Semiconductor products are not designed, intended, or authorized for use as components in systems intended for surgical implant into the body, or other applications intended to support or sustain life, or for any other application in which the failure of the Freescale Semiconductor product could create a situation where personal injury or death may occur. Should Buyer purchase or use Freescale Semiconductor products for any such unintended or unauthorized application, Buyer shall indemnify and hold Freescale Semiconductor and its officers, employees, subsidiaries, affiliates, and distributors harmless against all claims, costs, damages, and expenses, and reasonable attorney fees arising out of, directly or indirectly, any claim of personal injury or death associated with such unintended or unauthorized use, even if such claim alleges that Freescale Semiconductor was negligent regarding the design or manufacture of the part.

Freescale are trademarks or registered trademarks of Freescale Semiconductor, Inc. in the U.S. and other countries. All other product or service names are the property of their respective owners.

© Freescale Semiconductor, Inc., 2008, 2009. All rights reserved.