

# MPC8569E Instruction RAM Microcode Package Release 8569Rev2\_IRAM\_1.5.0

## **General**

This release note reflects differences between the *QUICC Engine Block Reference Manual with Protocol Interworking*, QEIWRM Rev. 3.0.1, and the features which are available for this device using the provided microcode Instruction RAM (IRAM) packages. The following release note reveals any exceptions to the features which are specified in this release of the specification. The notes also describe any addition to the specification or any missing functionality in comparison to the specification.

The user should follow tightly the instructions specified in the QE\_Ucode\_Loader file provided in the package in relation to the header files containing the code. These instructions assure proper operation and activation of the right features in the code.

Refer to the *QUICC Engine Microcode Errata* for all known issues related to this and other microcode packages.

## **Availability**

The package is currently available for the following devices.

**Table 1. Package Availability by Device**

Device	Loader file name (.h)
<a href="#">MPC8569 rev 2.0</a>	iram_mpc8569_r2.0.h

## Package content

**Figure 1. Features Supported in the Package**

Release Name	8569Rev2_IRAM_1.5.0
Release Date	Sept 13, 2010
Ethernet Termination	
Ethernet Hierarchical Scheduler	
ATM Termination	
ML/MC PPP Termination	
PPPMux	
ESS7 Termination	
POS Termination	
IMA	
A2E IW	
P2E IW	
E2E IW	
P2P IW	
HC/Hdec IW	
HC/Hdec IW IP only	
IP Reassembly FULL	
IP Fragmentation	
Virtual Port IW	
Longest Prefix Match	
IP Security	
Burst Tolerance	
Virtual Port Thread Pool	
Destination Port Queue Select	
IW to 2 MCCs	
PQRL	
PPP Enhanced Statistics	
IEEE1588 Tx Acceleration	
IEEE1588 IW	
AAL0 AVCF	

The tables below designate the content of this package. The baseline is the *QUICC Engine Block Reference Manual with Protocol Interworking*, QEIWRM Rev. 3.0.1. The tables below show additional features and features which are not supported. For the specification of additional features, which are not described in the *QUICC Engine Block Reference Manual with Protocol Interworking*, QEIWRM Rev. 3.0.1, please contact Freescale support. Contact information may be found at [www.freescale.com](http://www.freescale.com).

### NOTE

In order to have a correct behavior of the package the CAS bit in the SDMR register should be set as mentioned in 3.1.8.2 Serial DMA Mode Register (SDMR).

**Table 2. New Features (Which are Not Described in QEIWRM Rev. 3.0.1)**

Feature	Comments
IEEE1588 Tx Acceleration	
IEEE1588 Interworking	
PPP2PPP Interworking	
AAL0 AVCON for ATM-to-ATM data forwarding mode	

**Table 3. Removed Features (Described in QEIWRM Rev. 3.0.1 but Not Supported)**

Feature	Comments	QEIWRM Rev. 3.0.1
IP Reassembly 2 Fragments	This feature is not supported and will be replaced in future releases with IP Reassembly FULL.	
Hash LookUp Set Description	The hash lookup set description is changed (see in Table 3).	
ATM MSP	ATM MSP	

## Revision History

**Table 4. Revision History for Release 8569Rev2\_IRAM\_1.5.0**

Release Date: Sept 15, 2010 Revision Register Number: 0xD2010500	
<b>New Features</b>	IEEE1588 Tx Acceleration
	IEEE1588 Interworking Acceleration
	PPP2PPP Interworking
	AAL0 AVCON for ATM-to-ATM data forwarding mode
<b>Removed Features</b>	N/A
<b>Bug Fixes</b>	En-queue synchronization problem in case of Header Decompress mode. (Errata ID PPPIW2)
	Virtual Port distributor assigns two threads to handle the same frame. (Errata ID VP3)
	After enqueue busy, RxBD data pointer is not returned to its original value. (Errata ID IWF7)

**Table 5. Revision History for Release 8569Rev2\_IRAM\_1.4.0**

Release Date: August 20, 2010 Revision Register Number: 0xD2010400	
<b>New Features</b>	Ethernet Transmitter RMON per Q statistics
<b>Removed Features</b>	N/A
<b>Bug Fixes</b>	N/A

**Table 6. Revision History for Release 8569Rev2\_IRAM\_1.3.0**

Release Date: June 30, 2010 Revision Register Number: 0xD2010300	
<b>New Features</b>	IWAD After Last PCD in IP Reassembly Full Flow.
<b>Removed Features</b>	N/A
<b>Bug Fixes</b>	N/A

**Table 7. Revision History for Release 8569Rev2\_IRAM\_1.2.0**

Release Date: Apr 8, 2010 Revision Register Number: 0xD2010200	
<b>New Features</b>	PPP Class Extended Statistics.
<b>Removed Features</b>	N/A
<b>Bug Fixes</b>	ExtractSPI in GenerateLookupKey_Eth cause chained PCD not to work correctly. (Errata ID IWF8)
	PWFQ does not work with low priority. (Errata ID PPP2)

**Table 8. Revision History for Release 8569Rev2\_IRAM\_1.1.2**

Release Date: Mar. 24, 2010 Revision Register Number: 0xD2010102	
<b>New Features</b>	N/A
<b>Removed Features</b>	N/A
<b>Bug Fixes</b>	<p>After enqueue busy, RxBD data pointer is not returned to its original value. The issue appears only in the BT and IPSec use-case In high traffic when the Encrypted frames exceed the wire bandwidth (1G).</p> <p>In case of enqueue busy after the IPSec encryption flow (+ HM), the RxBD data pointer is not returned to its original value. In this case [BT + IPSec(HM) + enqueue busy] there is no code that cares for the shifted RxBD data pointer. In the Eth2VP use case, this job is done by the Rx2Rx routine. The problem is solved by adding this feature to the "drop frames" routine. (Errata ID IWF7)</p>

**Table 9. Revision History for Release 8569Rev2\_IRAM\_1.1.1**

Release Date: Jan. 31, 2010 Revision Register Number: 0xD2010000	
<b>New Features</b>	IP Reassembly FULL reassemble IP fragments into IP Packets. The fragments may be received in order or out of order.
	32 IMA Links Support. This features enable to allocate 32 IMA links per IMA root.
<b>Removed Features</b>	N/A
<b>Bug Fixes</b>	N/A

**Table 10. Revision History for Release 8569Rev2\_IRAM\_1.1.0**

Release Date: Jan. 31, 2010 Revision Register Number: 0xD2010000	
<b>New Features</b>	IP Reassembly FULL reassemble IP fragments into IP Packets. The fragments may be received in order or out of order.
	32 IMA Links Support. This features enable to allocate 32 IMA links per IMA root.
<b>Removed Features</b>	N/A
<b>Bug Fixes</b>	N/A
<b>Known Issues</b>	IP Reassembly FULL does not work under heavy load when number of fragments is above 6 fragments per frame.

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