

1. MPC89L(E)51/52/53 Flash Configuration

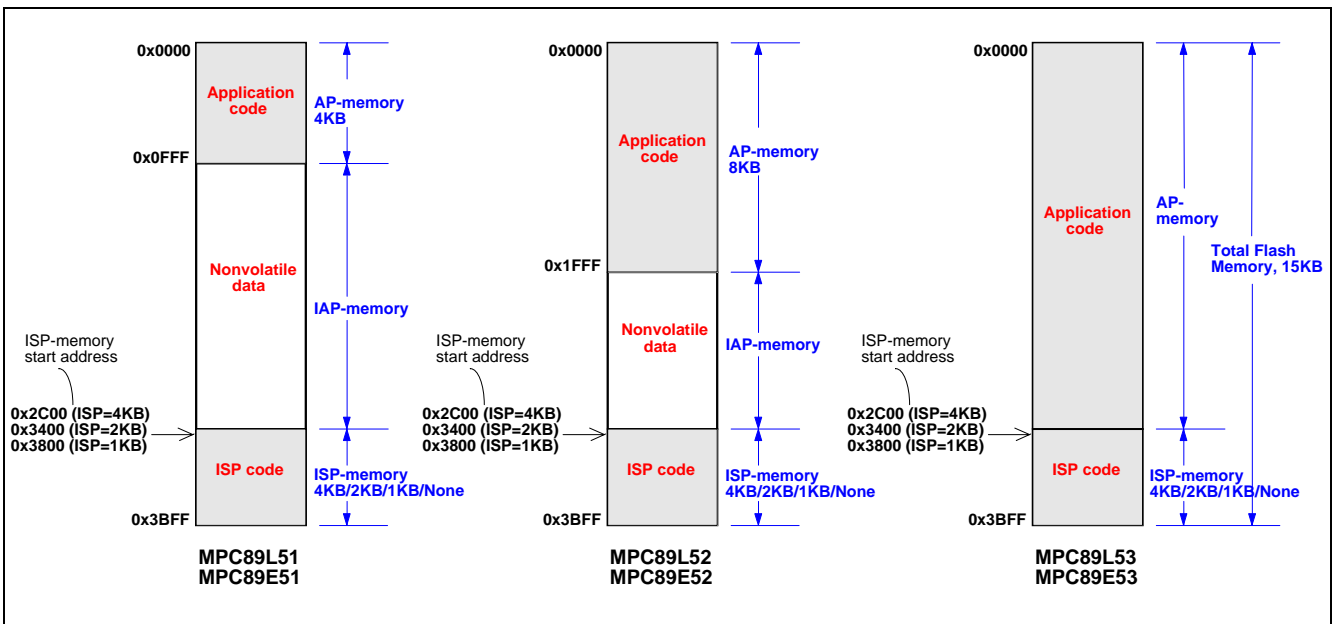
Figure 1 shows the configuration of the Flash memory of MPC89L(E)51/52/53. The total memory size is 15K bytes, and the ISP-memory is user-configured by using the Writer.

For MPC89L(E)51/52, there is an IAP-memory if the ISP-memory has been configured at least 1K bytes.

For MPC89L(E)53, there is always no IAP-memory.

Table 1 shows the relation between IAP-memory and ISP-memory.

Figure 1: Flash Memory Configuration



!!! Note: For MPC89L(E)53, there is no IAP-memory.

Table 1: IAP-memory Range and Size for MPC89L(E)51/52

Part No.	IAP-memory Range (Size)			
	ISP_size =0KB	ISP_size =1KB	ISP_size =2KB	ISP_size=4KB
MPC89L(E)51	(NA)	0x1000~0x37FF (10KB)	0x1000~0x33FF (9KB)	0x1000~0x2BFF (7KB)
MPC89L(E)52	(NA)	0x2000~0x37FF (6KB)	0x2000~0x33FF (5KB)	0x2000~0x2BFF (3KB)

2. MPC89L(E)54/58/515 Flash Configuration

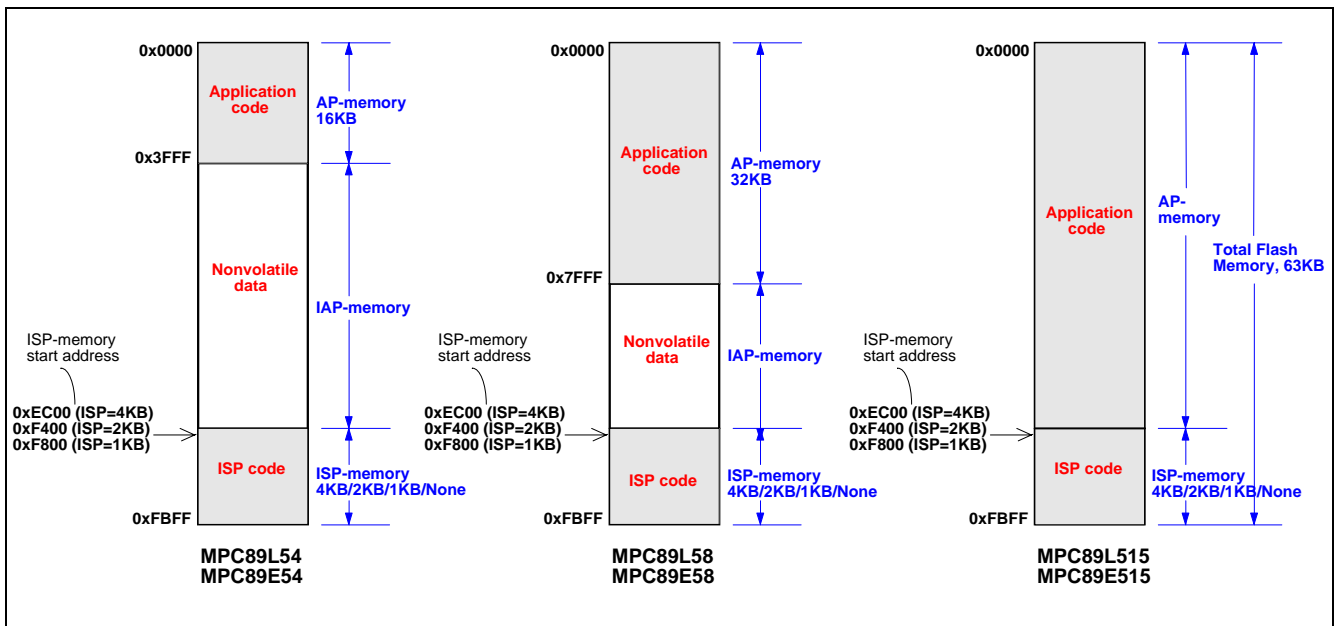
Figure 2 shows the configuration of the Flash memory of MPC89L(E)54/58/515. The total memory size is 63K bytes, and the ISP-memory is user-configured by using the Writer.

For MPC89L(E)54/58, there is an IAP-memory if the ISP-memory has been configured at least 1K bytes.

For MPC89L(E)515, there is always no IAP-memory.

Table 2 shows the relation between IAP-memory and ISP-memory.

Figure 1: Flash Memory Configuration



!!! Note: For MPC89L(E)515, there is no IAP-memory.

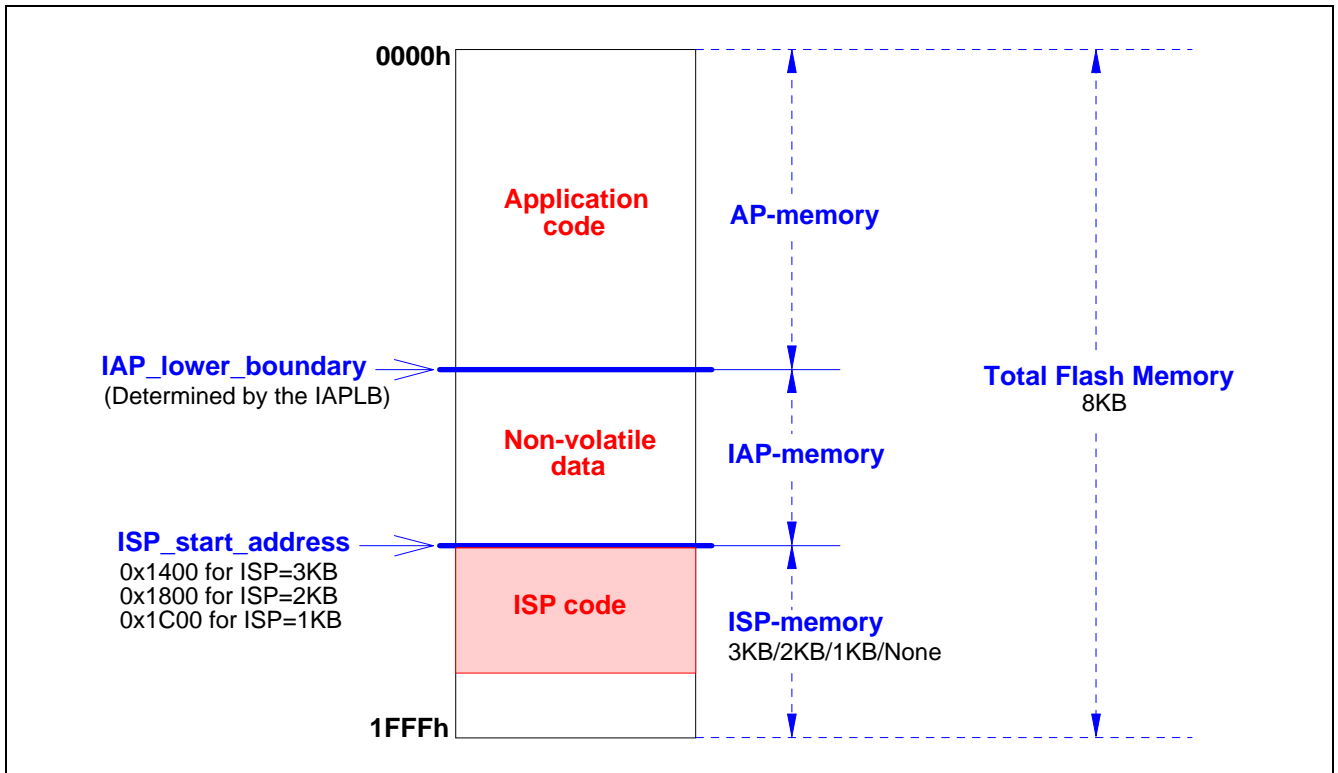
Table 2: IAP-memory Range and Size for MPC89L(E)54/58

Part No.	IAP-memory Range (Size)			
	ISP_size =0KB	ISP_size =1KB	ISP_size =2KB	ISP_size=4KB
MPC89L(E)54	(NA)	0x4000~0xF7FF (46KB)	0x4000~0xF3FF (45KB)	0x4000~0xEBFF (43KB)
MPC89L(E)58	(NA)	0x8000~0xF7FF (30KB)	0x8000~0xF3FF (29KB)	0x8000~0xEBFF (27KB)

3. MPC82L(E)52 Flash Configuration

Figure 3 shows the configuration of the Flash memory of MPC82L(E)52. The total memory size is 8K bytes, and the IAP-memory & ISP-memory are user-configured by using the Writer.

Figure 3: Flash Memory Configuration



The IAP-memory lower boundary is determined by the MCU's Option IAPLB. Two examples show how to configure the IAPLB:

Example-1:

4K bytes of IAP-memory is wanted while no ISP-memory is configured.

→ IAPLB should be programmed to 0x10, so the IAP-memory range will be 0x1000~0x1FFF (total 4K bytes).

Example-2:

4K bytes of IAP-memory is wanted while 1K bytes of ISP-memory has been configured at 0x1C00~0x1FFF.

→ IAPLB should be programmed to 0x0C, so the IAP-memory range will be 0x0C00~0x1BFF (total 4K bytes).

The user can find that the range of IAP-memory range is:

Lower boundary = $IAPLB \times 256$, and

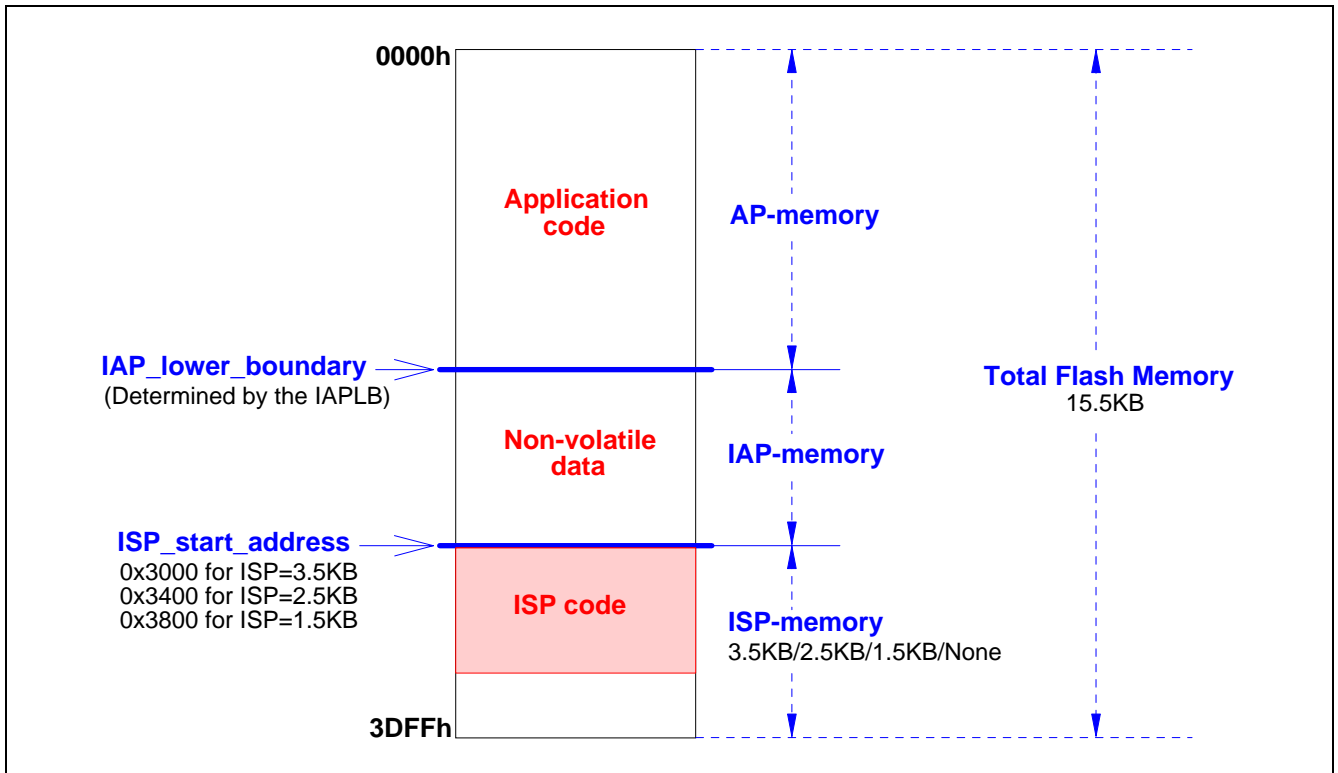
Upper boundary = $ISP_start_address - 1$.

Where, **IAPLB** should be an *even number*.

4. MPC82L(E)54 Flash Configuration

Figure 4 shows the configuration of the Flash memory of MPC82L(E)54. The total memory size is 15.5K bytes, and the IAP-memory & ISP-memory are user-configured by using the Writer.

Figure 4: Flash Memory Configuration



The IAP-memory lower boundary is determined by the MCU's Option IAPLB. Two examples show how to configure the IAPLB:

Example-1:

4K bytes of IAP-memory is wanted while no ISP-memory is configured.

→ IAPLB should be programmed to 0x2E, so the IAP-memory range will be 0x2E00~0x3DFF (total 4K bytes).

Example-2:

4K bytes of IAP-memory is wanted while 1.5K bytes of ISP-memory has been configured at 0x3800~0x3DFF.

→ IAPLB should be programmed to 0x28, so the IAP-memory range will be 0x2800~0x37FF (total 4K bytes).

The user can find that the range of IAP-memory range is:

Lower boundary = $\text{IAPLB} \times 256$, and

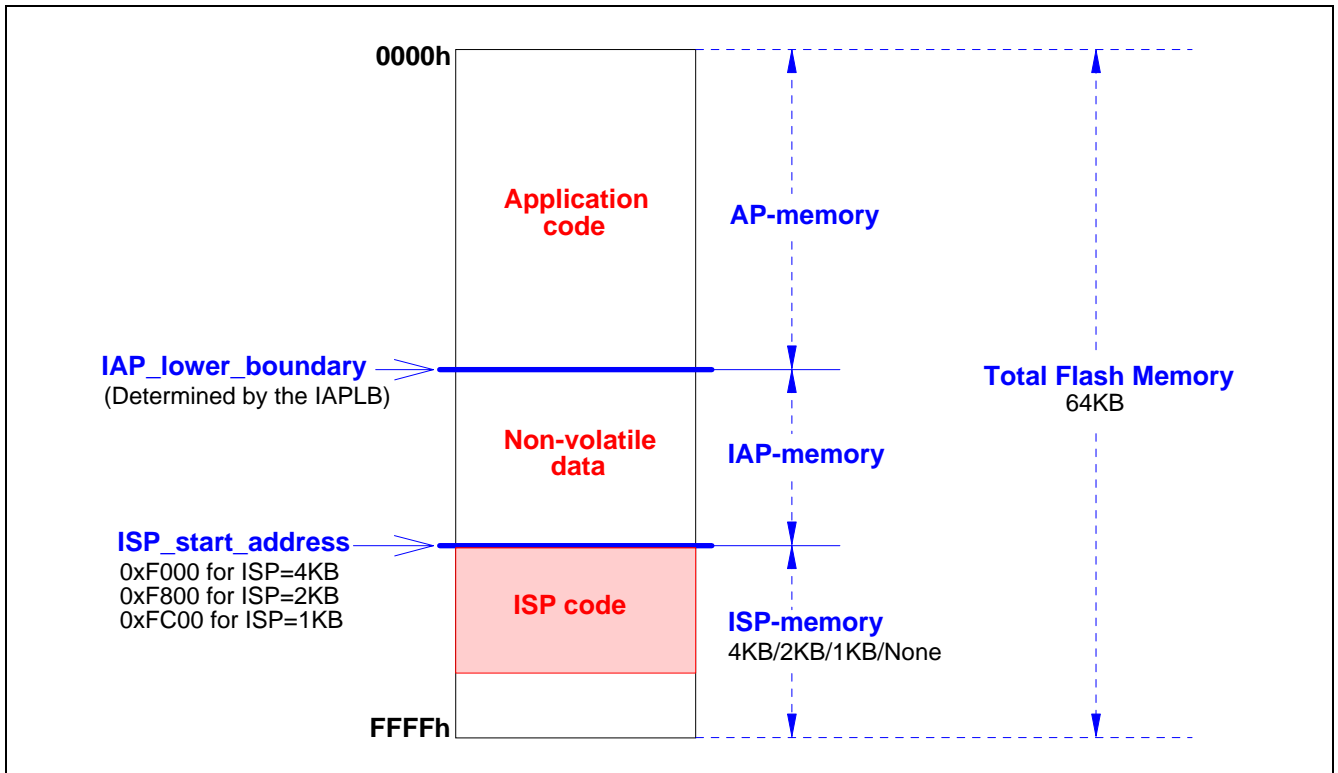
Upper boundary = $\text{ISP_start_address} - 1$.

Where, **IAPLB** should be an *even number*.

5. MPC82G516 Flash Configuration

Figure 5 shows the configuration of the Flash memory of MPC82G516. The total memory size is 64K bytes, and the IAP-memory & ISP-memory are user-configured by using the Writer.

Figure 5: Flash Memory Configuration



The IAP-memory lower boundary is determined by the MCU's Option IAPLB. Two examples show how to configure the IAPLB:

Example-1:

4K bytes of IAP-memory is wanted while no ISP-memory is configured.

→ IAPLB should be programmed to 0xF0, so the IAP-memory range will be 0xF000~0xFFFF (total 4K bytes).

Example-2:

4K bytes of IAP-memory is wanted while 1K bytes of ISP-memory has been configured at 0xFC00~0xFFFF.

→ IAPLB should be programmed to 0xEC, so the IAP-memory range will be 0xEC00~0xFBFF (total 4K bytes).

The user can find that the range of IAP-memory range is:

Lower boundary = $IAPLB \times 256$, and

Upper boundary = $ISP_start_address - 1$.

Where, **IAPLB** should be an *even number*.