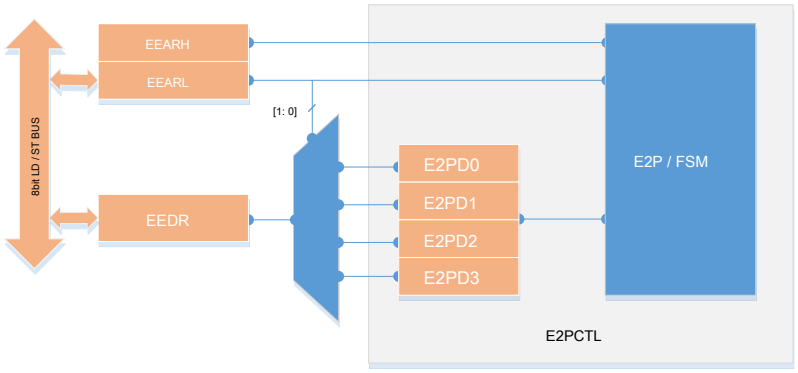
E2PCTL Data register

E2PCTL There are internal controller 4 Bytes of data cache (E2PD0 ~ 3) ,this 4 The composition of the final byte cache access FLASH Spatial 32 Bit data interface.

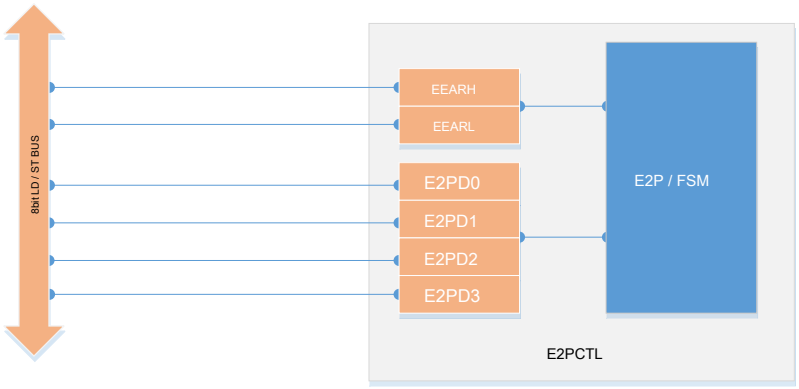
when E2PCTL Controller operates in byte read and write mode, EEDR As an interface to read and write bytes of data, E2PCTL more EEARL [1: 0] Address information to load data into the correct data cache, and according to the current FLASH Padded data destination further three bytes of data, The final will be a combination of full 32 Bit data updates to FLASH in.

when E2PCTL work at 32 When the bit read-write mode, At this point you can still use EEDR Data register as a common interface through EEARL [1: 0] As the internal address addressing data cache, a full read and write 32 Bit data. In addition, use may also be directly mapped to the data cache IO Direct access to the register space (E0 ~ 3) .

E2PCTL work at 8 Bit byte data write mode access a schematic view:



E2PCTL work at 32 Data read-write mode bit access word schematic:



Byte mode for downward compatibility LGT8FX8D Byte-write mode. LGT8FX8P Built-in FLASH for 32 Bit interface width, using 32 Bit reads and writes will write efficiency and FLASH The Endurance bring great benefits, it is recommended to use 32 Bit read-write mode.

E2PCTL simulation E2PROM Interface algorithm

we know, FLASH The memory must be erased before writing, and erasing operation is in units of pages. LGT8FX8P Internal FLASH A memory page size is 1K byte. Therefore, in order to update a data byte page, the data also need to be erased entire page, and then update the target address data, and other page while restoring bytes of data, the entire operation not only time consuming, It also brings the risk of data loss due to unexpected power.

E2PCTL Internal use of paging algorithm simulation E2PROM . Page mode switching algorithm can guarantee the implementation of a page erase, not because of power failure and other unforeseen circumstances result in the loss of the original data. As well as exchange algorithm 2 A page space