



# FR, F<sup>2</sup>MC-16L/LX F<sup>2</sup>MC-8L

## Addendum Programming Adapters

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### Addendum, Programming Adapters

This addendum is covering additional information about the usage of programming adapters for Flash and OTP devices of Fujitsu FR, F<sup>2</sup>MC-16L/LX and F<sup>2</sup>MC-8L Families.

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To program OTP and Flash microcontrollers (MCUs) mostly a parallel programming mode is supported which offers the possibility to program MCUs using a standard parallel programmer (writer). For this purpose dedicated programming adapters must be used. The programming adapter to be used depends normally on the MCU and the programmer itself. Information about how to proceed to program the device and which programming adapters can be used can be found in the related Datasheets of the MCU.

While mostly OTPs can be programmed on different programmers using the same programming adapters, selecting an EPROM device type from the programmers supported device list (e.g. MBM27C256A), programming adapters for Flash MCUs are specific for each type of parallel programmer and MCU type.

Although Fujitsu is offering and recommending programming adapters to program the OTP and Flash MCUs, it is highly recommended to the customer to check the right programming support of the MCUs with the programmers manufacturer! Due to the physical design of the programming adapter it might be possible that some parallel programmers do not support the programming of the device. So e.g. additional capacitors mounted on the programming adapter to buffer Vcc and Vpp may influence timing conditions and may lead in some cases to incorrect data programmed to the MCU memory. Especially in case of programming OTPs such problems might possibly occur.

In case of Flash MCUs different programming adapters exist for different programmers. These adapters are supplied by the programmers manufactures and are dedicated for the type of programmer used and MCU type. So each programmer has its own programming adapter, which is carefully checked and specified by the programmers manufacturers.

Fujitsu does not take any responsibility for correct programming support by third party tools suppliers. So Fujitsu generally recommends customers to contact the programmer manufacturer and to confirm correct programming support of the used devices.