For using the Philips 80C51MX, you need to have an PK51 package.

Details about the Philips 80C51MX are discussed in the Application

Note 160 available at www.keil.com.

C Program Example for the Philips 80C51MX Architecture in Linear Mode

The program contains the configuration file:

START\_MX.A51: C start-up for the Philips 80C51MX devices which is

configured for extended 24-bit interrupt frame.

This program shows how to use the ROM(HUGE) directive that allows you to use

the linear programming model for the code space. This option is selected in

uVision under Options for Target - Target - Code ROM Size.

When the ROM(HUGE) directive is used, all CALL instructions are encoded as ECALL.

The memory types 'xdata' and 'code' still access 64KB regions. This implies that

program sections that address 'code' space must be located in the same 64KB 'code'

space as well. Other program sections will go into ECODE space.

You may access the full address space using the memory type 'far' and 'const far'.

The program code is located to the memory class ECODE.

In addition the program code of the module 'main\_a' is located to the user

defined memory class ECODE\_APPL. This allows you to locate the program code easily

with the LX51 CLASSES directive. The memory area for this user defined memory classes

is specified in uVision under Options for Target - LX51 Locate - User Classes.

\*\*\* NOTE \*\*\*

This example is configured for ECRM Mode available in Philips 80C51Mx2 parts.

To enable ECRM Mode you need to:

- use the START\_MX.A51 file version 1.03 or higher and enable the ECRM setting

- set Code Rom Size: "Huge: 8MB Program" under Options - Target.

- set Linker Code Packing (max. AJMP/ACALL) under Options - CX51.

Now the LX51 Linker/Locater will insert RET instead of ERET and optimizes the

ECALL instructions to ACALL or LCALL wherever possible.