MICROCONTROLLER TECHNOLOGY OTP PROGRAMMER SUPPORT APPLICATION NOTE

SUBJECT: All COP8 OTPs,   Generating a correct Intel HEX programmer file.
.
PROBLEM and SYMPTOMS:
   HEX files generated from Metalink Debug Module (DM), EPU, and software tools for input to programmers are missing the ECON data.

   Programmed devices will pass program/verify, but will not work in the system.

   Device checksums do not match the expected HEX file checksum.

   The third-party programmer will not accept your HEX file.

SCOPE:
   The Metalink DM, EPU, and the software tools can generate several types of HEX files.

   Only one type is correct for downloading into third-party programmers (Including the EPU and DM): An Intel HEX file generated from either the EPU/DM, or from the COP8ASM utility PROMCOP.exe.

   The utility PROMCOP.exe defaults to creating an Intel HEX file WITHOUT the ECON data (To be used for a ROM device).   The EPROM array is correct, but the ECON data is missing.

SOLUTIONS:

1.   Instead of using the linker output file, or the debugger tool output, generate the programmer Intel HEX file from the EPU/DM Programmer menu (After correctly configuring the ECON, and selecting Intel HEX as the format). This file will include the ECON and User Bytes data in the correct format.

2.   When using ASMCOP8, make sure you declare the ECON data.   You then run PROMCOP.exe to generate the Intel HEX programmer file.   When running PROMCOP.exe, add the ECON directive to make sure the HEX file includes the ECON data.

3.   Use a KNOWN GOOD master device, instead of a HEX file, to load your programmer. All Approved programmers will read the ECON and User Bytes data correctly from the device, and will include them in a generated output HEX file. This file can be used as a master HEX file.

4.   Third-party programmers are designed to accept only Intel HEX files as master data files for COP8.

For more information contact Dave Katra by EMAIL: dave.katra@nsc.com.
end.