Hex file merge utility

This article applies to the information in: C51, all version C166, all versions C251, all versions Keil MDK, any version question I am developing a bootloader program (Project A) and a separate application program (Project B). Project A 0000h. Project B starts at 8000h. I need a single hex file that includes both programs for device programming. Is there a tool that allows me to do this? The answer is yes. You can use the free srec_cat.exe utility that is available as a Windows EXE file from . It is part of the SRecord project held on sourceforge.net. With this utility, you can load multiple hex files, cut specific address areas, move them to a new address and merge everything into a hex file. You can invoke srec_cat.exe from the Windows command prompt or make tool: srec_cat.exe hexfile1.hex-intel hexfile2.hex-intel-o mergedHexFile.hex-intel you can also invoke this tool by specifying your invocation in µVision dialog options for target-user-after-creation/creation.</a0/00/20000/20000/2009). If multiple parameters are required, the command file is easy to use: for a full description of all srec_cat.exe parameters, mention the SRecord reference manual. Here are some options that are useful with nail tools: -Disable_Sequence_Warnings this option suppresses a warning if the records of the input Intel hex file are not resolved in order of ascending addresses. The Apex file generated by OH51 or OHX51 is not resolved in order of ascending addresses. - Address-length = 2 or 3 or 4 Specifies the number of address bytes in intel hex output file. By default, srec_cat generates extended address records (type 04) for an address limit of up to 4GB. Since a code bank application is larger than 64K, the -address-length =2 should not be used before specifying the output file. This will limit the maximum address space to 64K. -Output_Block_Size= Bytecount specifies the length of each hex record. By default, srec_cat generates lines that have up to 32 bytes of data. If you want to limit the maximum line length to 16 bytes (compatible to OH51, OHX51, OH251, or OH166), use -Output_Block_Size=16. -Fill fill the fillavalue startdress and address fill the unused areas with the specified constant value. A filling value of 0xFF is often used with this option because it corresponds to the erased flash. - Crop StartDress and Address only loads the specified address area from the previous input file. This option can be combined with -offset. - Offset offset adds an address offset to the previous input file. Positive or negative values are allowed. This option can be combined with the -crop. - Intel can be used after input or output filename to specify whether an input file should be understood as an Intel hex file or the output file should be generated as an Intel hex file. - Binary access input After the output filename it can be done to specify whether an input file should be deemed as a binary file or the output file should be generated as a binary file. should. A command file can have some or all invocation parameters for srec_cat.exe. You can also use the comments - starting with the extension to the end of the '#' line. Example 1: Merge two hex files (HexFile1.hex and HexFile2.hex) which have no address overlap: srec_cat.exe HexFile1.hex-Intel HexFile2.hex-Intel-O MergerHexFile .hex-Intel Example 2: Merge two hex files (HexFile1.hex and HexFile2.hex) which both assign an address area from 0x00000-0x007FFF. The resulting merger should include HexFile1.hex in the ADDRESS RANGE 0x000000-0x007FFF and Address Range 0x008000-0x00FFFF in HexFile2.hex. In this example, a command file (MergeHex.cmd) is used. The resulting HEX file is MyCompleteProject.hex: Contents of the MergHex.cmd command file: #BL51 hex files are not resolved for ascending addresses. Suppress this alert - disable-sequence-alert #HexFile1.hex and limit the address area to 0x000000-0x007FFF.\000000000000000000000FFF. OBJ \ HexFile1.hex-intel-crop 0x00000 0x007FFF# le HexFile2.hex, limit it to 0x00000-0x007FFF and move it to 0x008000-0x00FFFF\000000FFF. OBJ \ hexfille2.hex -intel -crop 0x0000000 0x007FFF-offset 0x008000 #generate hex record with 16 byte data length (default 32 bytes) -Output_Block_Size =1 6# Generate a full Intel Hex file -o.\OBJ\MyCompleteProject.hex - Invocation of srec_cat.exe with Intel command file: srec_cat.exe @MergeHex.cmd See more information also forum threads The following discussion forum threads can provide information related to this topic. Last Reviewed: Tuesday, November 10, 2020 The information in this article applies to: Keil MDK any version C51 any version C251 any version C166 any version question is there a utility or an easy way to combine Intel HEX files? Answer Usually, Apex files are loaded sequentially using software provided with your device programmer or download utility. If your programmer or download tool doesn't support it or if you want more control, you might consider using the free srec_cat.exe utility that's available as a Windows EXE file from . It is part of the SRecord project held on sourceforge.net. With this utility, you can load multiple hex files, cut specific address areas, move them to a new address and merge everything into a hex file. You can invoke srec_cat.exe from the Windows command prompt or make tool: srec_cat.exe hexfile1.hex-intel hexfile2.hex-intel-o mergedHexFile.hex-intel you can also invoke this tool by specifying your invocation in µVision dialog options for target-user-after-creation/creation.</a0/00/20000/20000/2009). If multiple parameters are required, the command file is easy to use. When using the command file to srec_cat.exe in µVision, be sure to double the '@' character, or µVision can interpret it as a key-sequence. For a full description of all srec_cat.exe parameters, refer to the SRecord reference manual. Here are some options Those that are useful with nail tools are: This option suppresses an alert if the records of the input Intel hex file are not resolved in order of ascending addresses. The Apex file generated by OH51 or OHX51 is not resolved in order of ascending addresses. - Address-length = 2 or 3 or 4 Specifies the number of address bytes in intel hex output file. By default, srec_cat generates extended address records (type 04) for an address limit of up to 4GB. Since a code bank application is larger than 64K, the -address-length =2 should not be used before specifying the output file. This will limit the maximum address space to 64K. -Output_Block_Size= Bytecount specifies the length of each hex record. By default, srec_cat generates lines that have up to 32 bytes of data. If you want to limit the maximum line length to 16 bytes (compatible to OH51, OHX51, OH251, or OH166), use -Output_Block_Size=16. -Fill fill the fillavalue startdress and address fill the unused areas with the specified constant value. A filling value of 0xFF is often used with this option because it corresponds to the erased flash. - Crop StartDress and Address only loads the specified address area from the previous input file. This option can be combined with -offset. - Offset offset adds an address offset to the previous input file. Positive or negative values are allowed. This option can be combined with the -crop. - Intel can be used after input or output filename to specify whether an input file should be understood as an Intel hex file or the output file should be generated as an Intel hex file. - Binary can be used after input or output filename to specify whether an input file should be deemed as a binary file or the output file should be generated as a binary file. @CommandFile a command file can have some or all of the invocation parameters for srec_cat.exe. You can also use the comments - starting with the extension to the end of the '#' line. Example 1: Two hex files (hexfile1.hex and hex files. Merge hex) that has no address overlap: srec_cat.exe hexfile1.hex-intel hexfile2.hex-intel-o MergedHexFile.hex-Intel Example 2: Merge two hex files (HexFile1.hex and HexFile2.hex) which both assign an address area from 0x0000-0xFFFF. The resulting merging HEX file address range should include 0x000000-0x00FFFF and HexFile2.HexFile2.hex At Address Range 0x010000-0x01FFFF at HexFile1.hex. In this example, a command file (MergeHex.cmd) is used. The resulting HEX file is MyCompleteProject.hex: Contents of the MergHex.cmd command file: #BL51 hex files are not resolved for ascending addresses. Suppress this alert - disable-sequence-alert #HexFile1.hex and limit the address area to 0x000000-0x00FF.\000000000000000000000FFFF.\0000000000000000000000000000FF.\0 OBJ \ HexFile1.hex-intel-crop 0x000000 0x00FFFF# le HexFile2.hex, limit it to 0x000000-0x00FFFF and limit it to 0x010000-0x01FF .\0000000FF.\ OBJ\HexFile2.hex-Intel-Crop 0x0000000000x00FFFF-Offset 1x000FFFF-Offset move to 1x0100000-0x01FF. 0x010000 Hex record with 16 byte data length (default 32 bytes) - Output_Block_Size = 16 # Generate a full Intel Hex file -o.\OBJ\MyCompleteProject.Hex-Invocation invocation of Intel srec_cat.exe Command File: srec_cat.exe @MergeHex.CMD More information also refer to Forum Threads Following discussion forum threads can provide information related to this topic. Last reviewed: Tuesday, December 8, 2020 2020