

# How to use "HexAreaChecker" (Hex file address space confirmation tool)

## 1 First of all

This file is the viewer of the Hex file. Main purpose is to check the address space.

It supports Motorola S-record format (.s19, .mot) and Intel HEX format (.hex), and automatically determines the format when reading.


Correspondence:

Motorola S-record format: Record Field=S0~S3, S5~S9 (S4 is not responding because it is Reserved)

Intel HEX format: Recode Type=00~05

HexAreaChecker also checks the data length and checksum, so it can be used for confirming the checksum after editing data. Numbers are written in hexadecimal notation except for the "No." column of the Summary sheet.

## Sample Hex file



| No. | Record | Address | Data                               | Checksum |
|-----|--------|---------|------------------------------------|----------|
| 1   | S00F   | 0000    | 0000                               | 1E       |
| 2   | S113   | 0000    | 0000                               | E8       |
| 3   | S113   | 0010    | 0000                               | D8       |
| 4   | S113   | 0020    | 0000                               | C8       |
| 5   | S113   | 0030    | 0000                               | B8       |
| 6   | S113   | 0040    | 0000                               | A8       |
| 7   | S113   | 0050    | 0000                               | 98       |
| 8   | S113   | 0060    | 0000                               | 88       |
| 9   | S113   | 0070    | 0000                               | 78       |
| 10  | S113   | 0080    | 0000                               | 68       |
| 11  | S113   | 0090    | 0000                               | 58       |
| 12  | S113   | 00A0    | 0000                               | 48       |
| 13  | S113   | 00B0    | 0000                               | 38       |
| 14  | S113   | 00C0    | 0000                               | 28       |
| 15  | S113   | 00D0    | 0000                               | 18       |
| 16  | S113   | 00E0    | 0000                               | 08       |
| 17  | S107   | 00F0    | 0000100                            | 07       |
| 18  | S113   | 0100    | 7A07000FFF0E7A00000001627A01000F   | E7       |
| 19  | S113   | 0110    | DF107A02000FDF1069036930B800B81    | F3       |
| 20  | S113   | 0120    | 1FA145F45E00012A40D601006DF80FF6CA | CA       |
| 21  | S113   | 0130    | 1B97FAFF3AD418AA3AD61AB32AD6170A42 | 42       |
| 22  | S113   | 0140    | 3AD601006FE3FFFC01006F62FFFC0DAA   | C9       |
| 23  | S113   | 0150    | 46EA01006F62FFFC0B0201006FE2FFFC44 | 44       |
| 24  | S105   | 0160    | 40E6                               | 73       |
| 25  | S9     | 03      | 0100                               | FB       |

## Detailed result: (Detail sheet)

| No. | Type | Cnt | Address | Data                               | ChkSum | Address | START/END       | Log         |
|-----|------|-----|---------|------------------------------------|--------|---------|-----------------|-------------|
| 1   | S0   | 0F  | 0000    | 8C65645F746573742E6D6F74           | 1E     |         | (Start of file) |             |
| 2   | S1   | 13  | 0000    | 00000100000001000000010000000100   | E8     | 0000    | - 000F          | START       |
| 3   | S1   | 13  | 0010    | 00000100000001000000010000000100   | D8     | 0010    | - 001F          |             |
| 4   | S1   | 13  | 0020    | 00000100000001000000010000000100   | C8     | 0020    | - 002F          |             |
| 5   | S1   | 13  | 0030    | 00000100000001000000010000000100   | B8     | 0030    | - 003F          |             |
| 6   | S1   | 13  | 0040    | 00000100000001000000010000000100   | A8     | 0040    | - 004F          |             |
| 7   | S1   | 13  | 0050    | 00000100000001000000010000000100   | 98     | 0050    | - 005F          |             |
| 8   | S1   | 13  | 0060    | 00000100000001000000010000000100   | 88     | 0060    | - 006F          |             |
| 9   | S1   | 13  | 0070    | 00000100000001000000010000000100   | 78     | 0070    | - 007F          |             |
| 10  | S1   | 13  | 0080    | 00000100000001000000010000000100   | 68     | 0080    | - 008F          |             |
| 11  | S1   | 13  | 0090    | 00000100000001000000010000000100   | 58     | 0090    | - 009F          |             |
| 12  | S1   | 13  | 00A0    | 00000100000001000000010000000100   | 48     | 00A0    | - 00AF          |             |
| 13  | S1   | 13  | 00B0    | 00000100000001000000010000000100   | 38     | 00B0    | - 00BF          |             |
| 14  | S1   | 13  | 00C0    | 00000100000001000000010000000100   | 28     | 00C0    | - 00CF          |             |
| 15  | S1   | 13  | 00D0    | 00000100000001000000010000000100   | 18     | 00D0    | - 00DF          |             |
| 16  | S1   | 13  | 00E0    | 00000100000001000000010000000100   | 08     | 00E0    | - 00EF          |             |
| 17  | S1   | 07  | 00F0    | 00000100                           | 07     | 00F0    | - 00F3          | END         |
| 18  | S1   | 13  | 0100    | 7A07000FFF0E7A00000001627A01000F   | E7     | 0100    | - 010F          | START       |
| 19  | S1   | 13  | 0110    | DF107A02000FDF1069036930B800B81    | F3     | 0110    | - 011F          |             |
| 20  | S1   | 13  | 0120    | 1FA145F45E00012A40D601006DF80FF6CA | CA     | 0120    | - 012F          |             |
| 21  | S1   | 13  | 0130    | 1B97FAFF3AD418AA3AD61AB32AD6170A42 | 42     | 0130    | - 013F          |             |
| 22  | S1   | 13  | 0140    | 3AD601006FE3FFFC01006F62FFFC0DAA   | C9     | 0140    | - 014F          |             |
| 23  | S1   | 13  | 0150    | 46EA01006F62FFFC0B0201006FE2FFFC44 | 44     | 0150    | - 015F          |             |
| 24  | S1   | 05  | 0160    | 40E6                               | 73     | 0160    | - 0161          | END         |
| 25  | S9   | 03  | 0100    |                                    | FB     |         |                 | (Terminate) |

## Summary results (Summary sheet)

| No. | Address     | Size |
|-----|-------------|------|
| 1   | 0000 - 00F3 | 00F4 |
| 2   | 0100 - 0161 | 0062 |

## 2 Usage



File name  
C:\Users\toowaki\Documents\自作VBA\HexAreaChecker\sample\_hex\_files\sample\_intel.hex ...

☒ Separate areas by termination record / offset record  
☒ Check the data length and checksum  
☒ Output "Detail" sheet

Execute

[Step1]

Please select Hex file.

[Step2]

Please press the "Execute" button.

Detailed result is output on Detail sheet, summary result is output on Summary sheet.

\* Do not edit other Excel files while scripts is running.

[Option setting]

You can choose whether or not to separate the address space by "Separate areas by termination record / offset record".

Termination record

Motorola S-record format: Record Field=S7, S8, S9

Offset record

Intel HEXformat: Recode Type=02, 04

## 3 Reference: About Hex file

For Hex files, please see below

Motorola S-record format:

【SREC (file format) - Wikipedia】

[https://en.wikipedia.org/wiki/SREC\\_\(file\\_format\)](https://en.wikipedia.org/wiki/SREC_(file_format))

Intel HEXformat:

【Intel HEX - Wikipedia】

[https://ja.wikipedia.org/wiki/Intel\\_HEX](https://ja.wikipedia.org/wiki/Intel_HEX)

## 4 Operating environment

Excel2007、Excel2010、Excel2013、Excel2016、  
Excel2019(Tested by Office365 MSO(16.0.11425.20220) 32bit)

## 5 Terms of use

This program is freeware. toowaki has copyright.

Please reprint freely.

Also, please do not alter or change add-ins attached to this software.

## 6 Disclaimer

Regardless of the damage caused by using this program, the author is not involved at all.

Please use this program at your own risk.

## 7 Contact

If you have any requests, please email [toowaki.fc2@gmail.com](mailto:toowaki.fc2@gmail.com).

In addition, please have a look, if it is good, since it is open to the following URL besides this software.

<http://toowaki.web.fc2.com/>

## 8 History

| 日付         | 内容  | Ver. | 編集者     |
|------------|---|------|---------|
| 2017/7/7   | Create New  | 1.0  | toowaki |
| 2017/11/3  | I made it easy to understand the progress situation                                   | 1.1  |         |
| 2017/01/19 | Corrected to open and analyze Hex file as read only                                   | 1.2  |         |
| 2018/10/07 | Added control of data length and checksum check                                       | 1.3  |         |
| 2018/10/13 | Added control of output detail sheet  | 1.4  |         |
| 2019/04/14 | VBA overflowed when the address exceeded 0x7FFFFFFF.<br>Therefore, it has been fixed. | 1.5  |         |