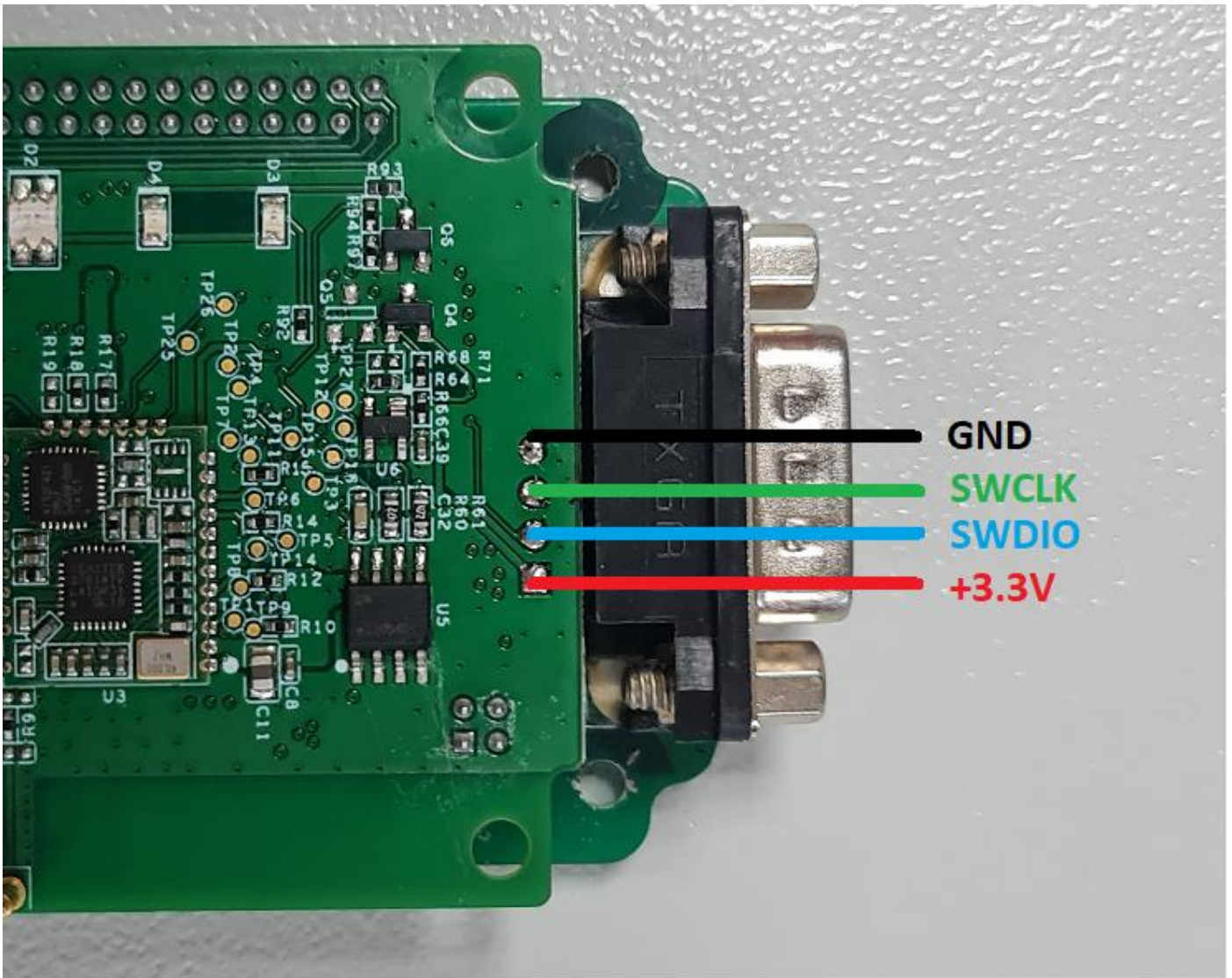


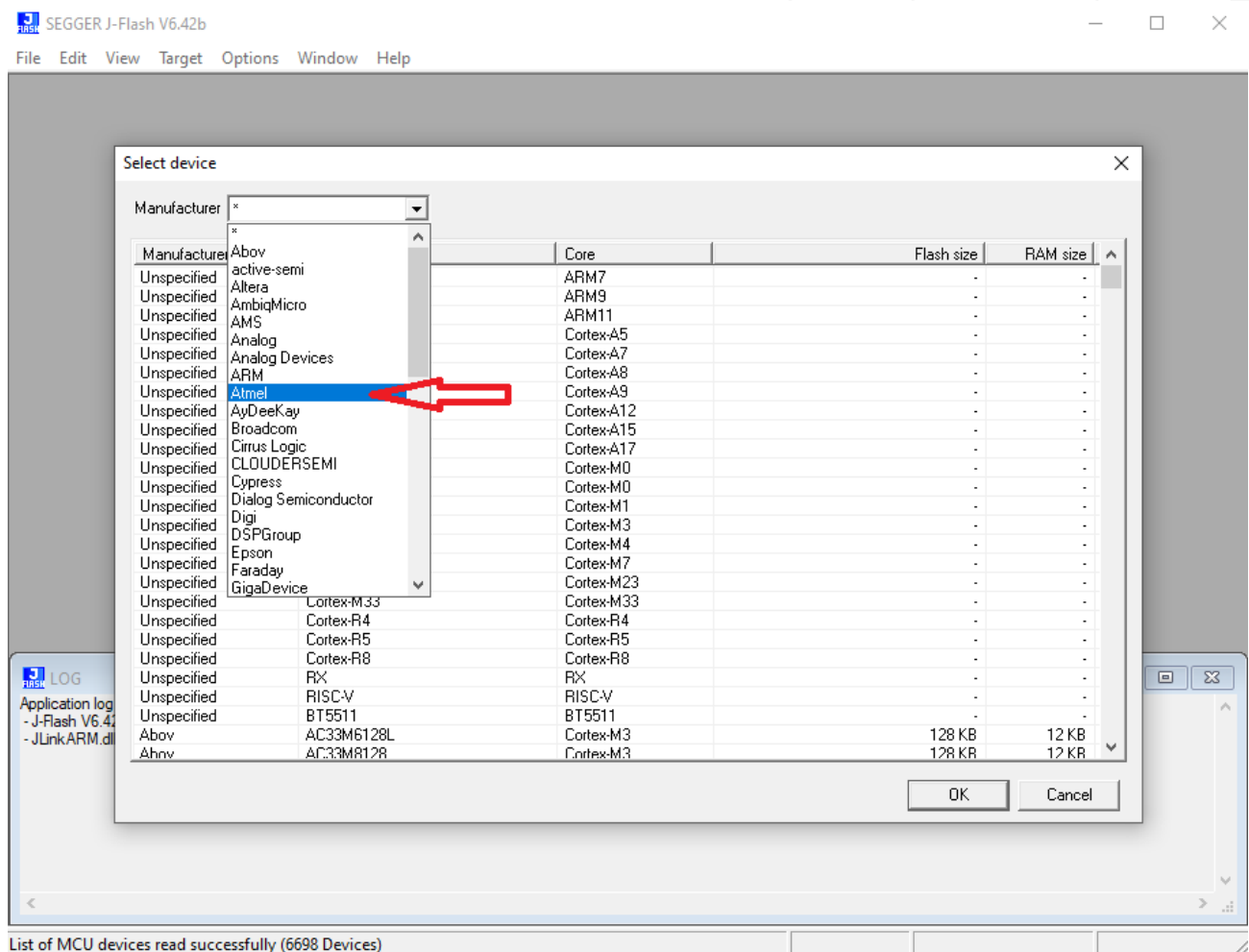
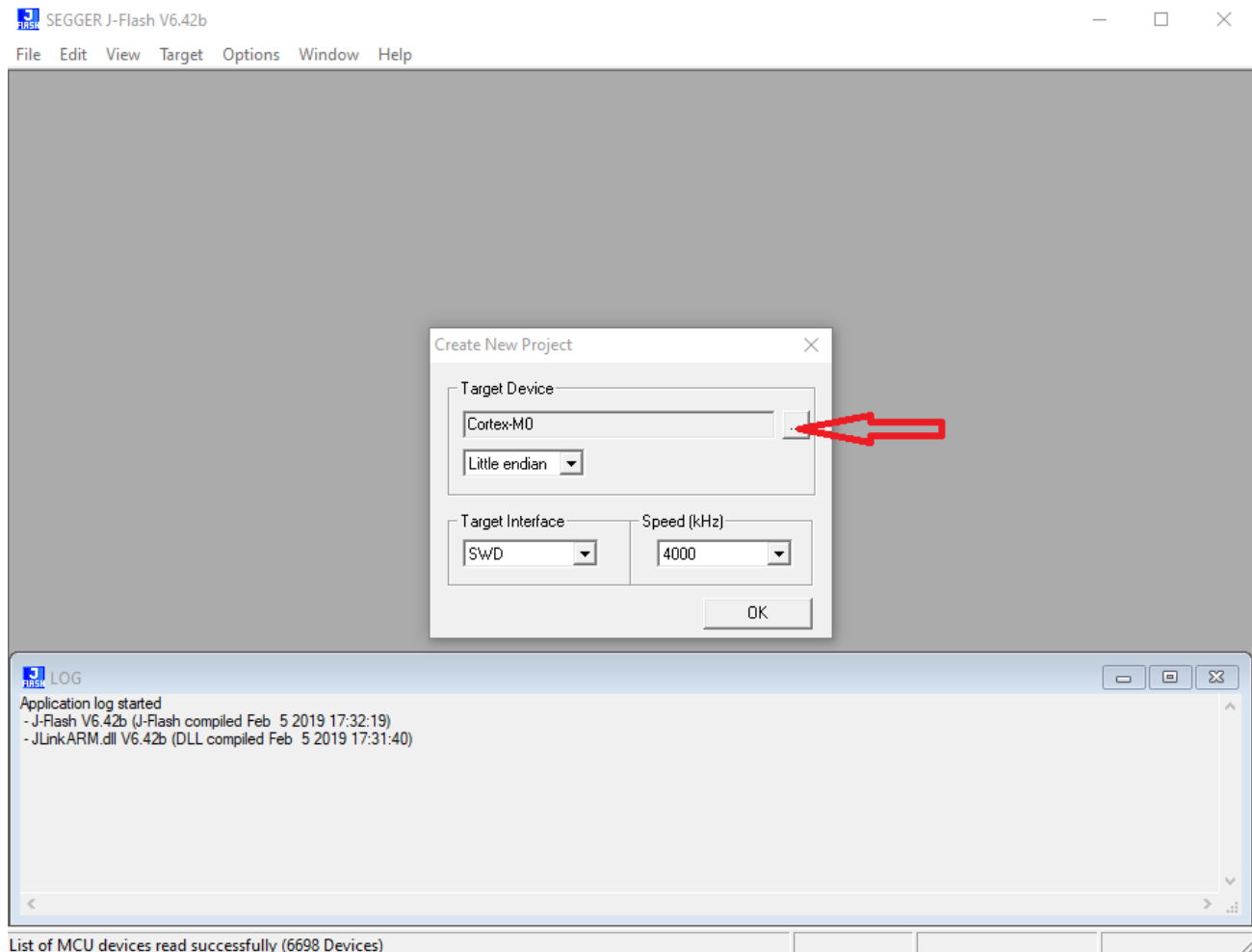
Programming THINKDIAG 2 , DBSCAR VII using J-link programmer.

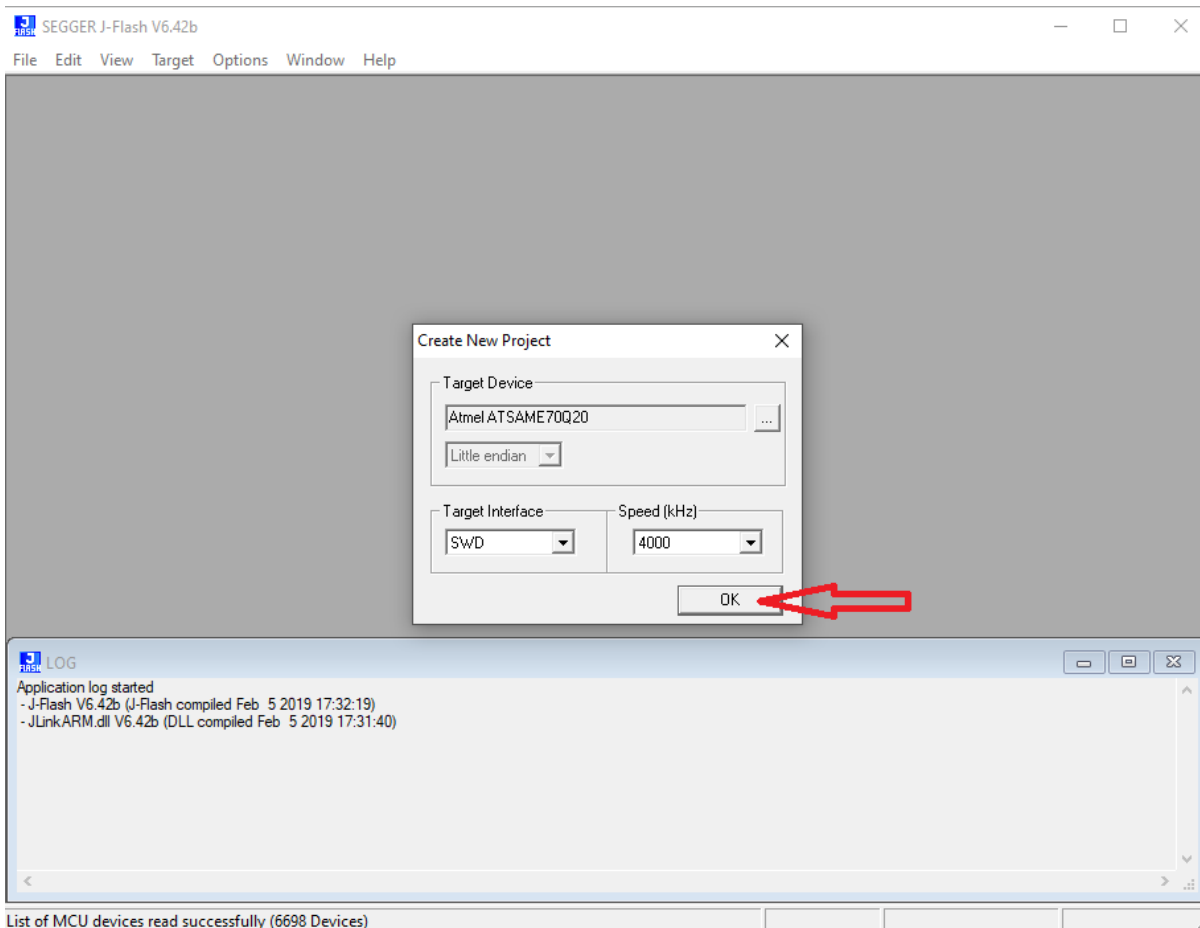
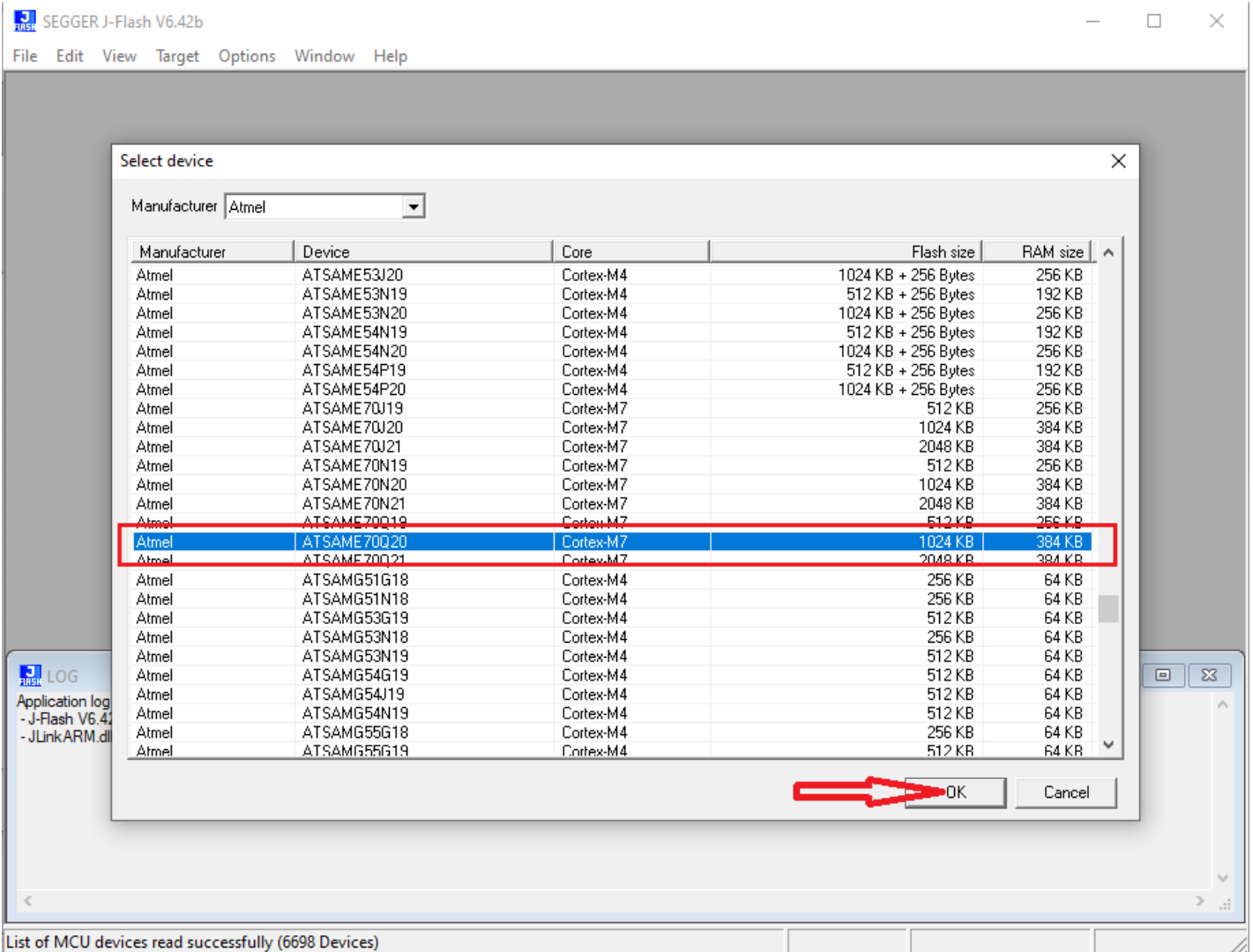


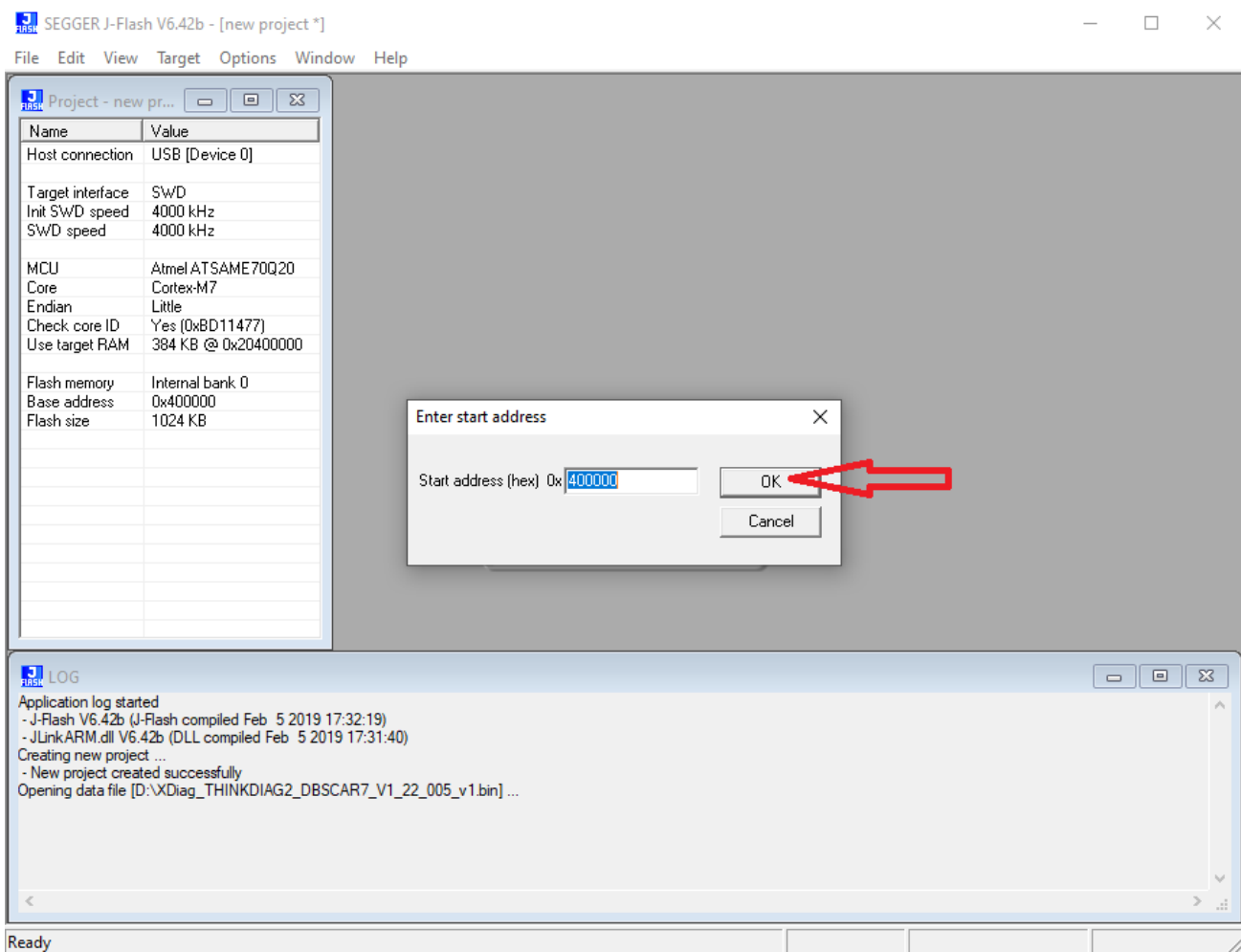
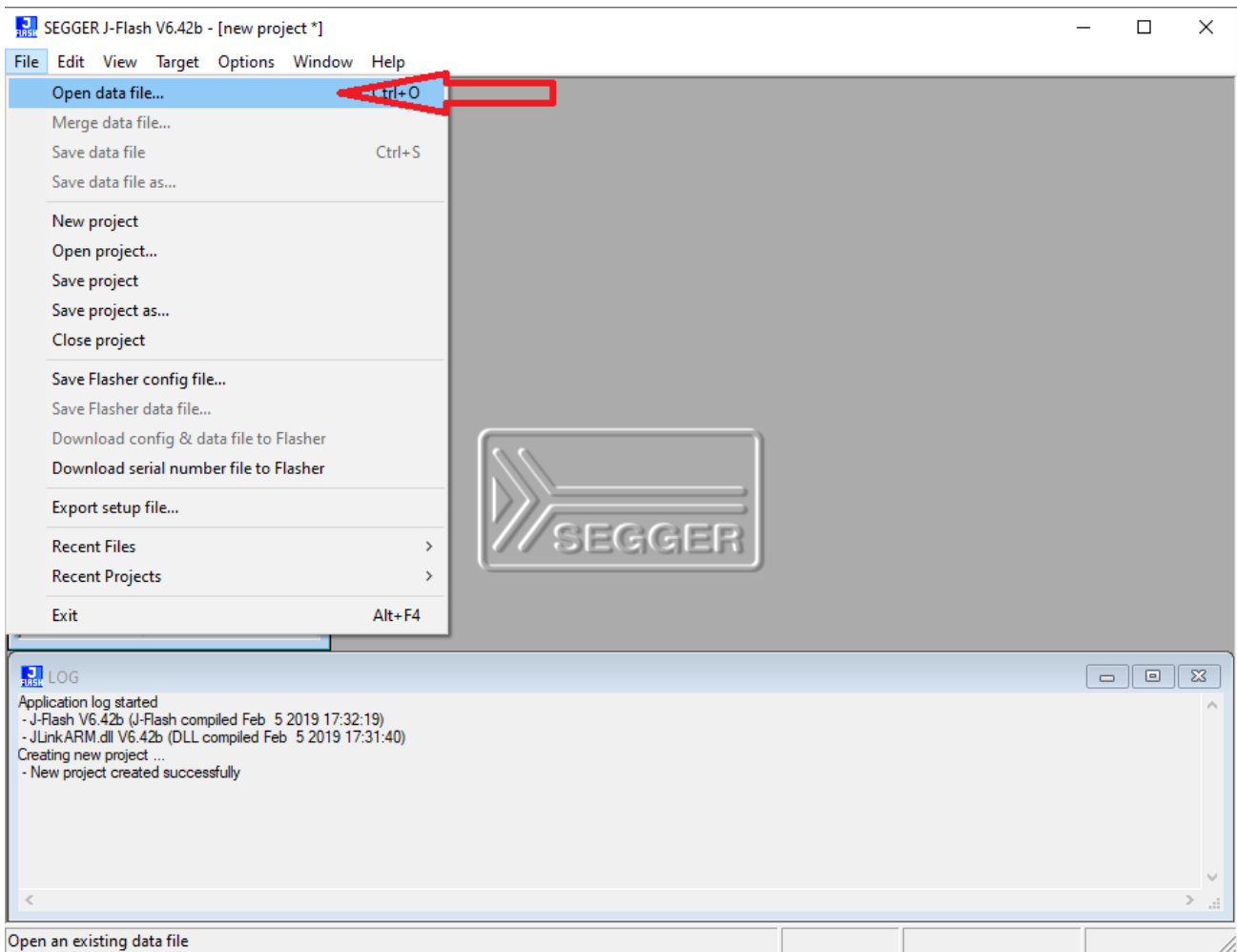
| | | | |
|-----------|----|----|-----|
| VTref | 1 | 2 | NC |
| Not used | 3 | 4 | GND |
| Not used | 5 | 6 | GND |
| SWDIO | 7 | 8 | GND |
| SWCLK | 9 | 10 | GND |
| Not used | 11 | 12 | GND |
| SWO | 13 | 14 | * |
| RESET | 15 | 16 | * |
| Not used | 17 | 18 | * |
| 5V-Supply | 19 | 20 | * |



Use Flash.exe







SEGGER J-Flash V6.42b - [new project *]

File Edit View Target Options Window Help

Project - new

Host connection

Target interface

Init SWD speed

SWD speed

MCU

Core

Endian

Check core ID

Use target RAM

Flash memory

Base address

Flash size

Internal bank 0

0x400000

1024 KB

Connect

Disconnect

Test

Production Programming

Manual Programming

Address: 00000

x1 x2 x4

| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | A | B | C | D | E | F | ASCII | |
|--------|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|-------|-------------------|
| 400000 | 28 | 66 | 42 | 20 | 2F | F3 | 40 | 00 | 2B | F3 | 40 | 00 | 2D | F3 | 40 | 00 | <fB / .e.+.e.-.e. |
| 400010 | 2B | F3 | 40 | 00 | 2B | F3 | 40 | 00 | 2B | F3 | 40 | 00 | 00 | 00 | 00 | 00 | +.e.+.e.+.e.+.e. |
| 400020 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 2B | F3 | 40 | 00 | +.e.+.e.+.e.+.e. |
| 400030 | 2B | F3 | 40 | 00 | 00 | 00 | 00 | 00 | 2B | F3 | 40 | 00 | C9 | C3 | 40 | 00 | +.e.+.e.+.e.+.e. |
| 400040 | 2B | F3 | 40 | 00 | 2B | F3 | 40 | 00 | 2B | F3 | 40 | 00 | 2B | F3 | 40 | 00 | +.e.+.e.+.e.+.e. |
| 400050 | 2B | F3 | 40 | 00 | 2B | F3 | 40 | 00 | 2B | F3 | 40 | 00 | 2B | F3 | 40 | 00 | +.e.+.e.+.e.+.e. |
| 400060 | 2B | F3 | 40 | 00 | 00 | 00 | 00 | 00 | 0D | D6 | 40 | 00 | 71 | D6 | 40 | 00 | +.e.+.e.+.e.+.e. |
| 400070 | D5 | D6 | 40 | 00 | 2B | F3 | 40 | 00 | D7 | 8C | 40 | 00 | 2B | F3 | 40 | 00 | +.e.+.e.+.e.+.e. |
| 400080 | 39 | D7 | 40 | 00 | 9D | D7 | 40 | 00 | 2B | F3 | 40 | 00 | 2B | F3 | 40 | 00 | 9.e.+.e.+.e.+.e. |
| 400090 | 2B | F3 | 40 | 00 | 2B | F3 | 40 | 00 | 2B | F3 | 40 | 00 | 2B | F3 | 40 | 00 | +.e.+.e.+.e.+.e. |
| 4000A0 | 2B | F3 | 40 | 00 | 2B | F3 | 40 | 00 | CD | C3 | 40 | 00 | 7F | 8D | 40 | 00 | +.e.+.e.+.e.+.e. |
| 4000B0 | 2B | F3 | 40 | 00 | 1B | D4 | 40 | 00 | 2B | F3 | 40 | 00 | 2B | F3 | 40 | 00 | +.e.+.e.+.e.+.e. |
| 4000C0 | 2B | F3 | 40 | 00 | 2B | F3 | 40 | 00 | FB | DB | 40 | 00 | 2B | F3 | 40 | 00 | +.e.+.e.+.e.+.e. |
| 4000D0 | 2B | F3 | 40 | 00 | 2B | F3 | 40 | 00 | 2B | F3 | 40 | 00 | 2B | F3 | 40 | 00 | +.e.+.e.+.e.+.e. |
| 4000E0 | 77 | D4 | 40 | 00 | 2B | F3 | 40 | 00 | 2B | F3 | 40 | 00 | 2B | F3 | 40 | 00 | w.e.+.e.+.e.+.e. |
| 4000F0 | 2B | F3 | 40 | 00 | 2B | F3 | 40 | 00 | 2B | F3 | 40 | 00 | 2B | F3 | 40 | 00 | +.e.+.e.+.e.+.e. |
| 400100 | 2B | F3 | 40 | 00 | 2B | F3 | 40 | 00 | 2B | F3 | 40 | 00 | 2B | F3 | 40 | 00 | +.e.+.e.+.e.+.e. |
| 400110 | 2B | F3 | 40 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | +.e.+.e.+.e.+.e. |
| 400120 | 2B | F3 | 40 | 00 | 2B | F3 | 40 | 00 | 2B | F3 | 40 | 00 | 2B | F3 | 40 | 00 | +.e.+.e.+.e.+.e. |
| 400130 | 2B | F3 | 40 | 00 | 2B | F3 | 40 | 00 | 2B | F3 | 40 | 00 | 2B | F3 | 40 | 00 | +.e.+.e.+.e.+.e. |
| 400140 | 2B | F3 | 40 | 00 | 2B | F3 | 40 | 00 | 2B | F3 | 40 | 00 | 2B | F3 | 40 | 00 | +.e.+.e.+.e.+.e. |
| 400150 | 2B | F3 | 40 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | +.e.+.e.+.e.+.e. |
| 400160 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | F0 | B5 | 03 | AF | 4D | F8 | 04 | BD | +.e.+.e.+.e.+.e. |
| 400170 | 88 | B0 | 44 | F2 | 00 | 04 | 00 | 20 | C4 | F2 | 06 | 04 | AD | F8 | 1C | 00 | ..D.+.e.+.e.+.e. |

LOG

Application log started

- J-Flash V6.42b (J-Flash compiled Feb 5 2019 17:32:19)

- JLinkARM.dll V6.42b (DLL compiled Feb 5 2019 17:31:40)

Creating new project ...

- New project created successfully

Opening data file [D:\XDiag_THINKDIAG2_DBSCAR7_V1_22_005_v1.bin] ...

- Data file opened successfully (131072 bytes, 1 range, CRC of data = 0x34C9C114, CRC of file = 0x34C9C114)

Erase, program and verify target

SEGGER J-Flash V6.42b - [new project *]

File Edit View Target Options Window Help

Project - new pr...

Host connection

Target interface

Init SWD speed

SWD speed

MCU

Core

Endian

Check core ID

Use target RAM

Flash memory

Base address

Flash size

USB [Device 0]

SWD

4000 kHz

4000 kHz

Atmel ATSAME70Q20

Cortex-M7

Little

Yes (0xBD11477)

384 KB @ 0x20400000

Internal bank 0

0x400000

1024 KB

Address: 0x400000

x1 x2 x4

| Address | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | A | B | C | D | E | F | ASCII |
|---------|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|-------------------|
| 400000 | 28 | 66 | 42 | 20 | 2F | F3 | 40 | 00 | 2B | F3 | 40 | 00 | 2D | F3 | 40 | 00 | <fB / .e.+.e.-.e. |
| 400010 | 2B | F3 | 40 | 00 | 2B | F3 | 40 | 00 | 2B | F3 | 40 | 00 | 00 | 00 | 00 | 00 | +.e.+.e.+.e.+.e. |
| 400020 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 2B | F3 | 40 | 00 | +.e.+.e.+.e.+.e. |
| 400030 | 2B | F3 | 40 | 00 | 00 | 00 | 00 | 00 | 2B | F3 | 40 | 00 | C9 | C3 | 40 | 00 | +.e.+.e.+.e.+.e. |
| 400040 | 2B | F3 | 40 | 00 | 2B | F3 | 40 | 00 | 2B | F3 | 40 | 00 | 2B | F3 | 40 | 00 | +.e.+.e.+.e.+.e. |
| 400050 | 2B | F3 | 40 | 00 | 2B | F3 | 40 | 00 | 2B | F3 | 40 | 00 | 2B | F3 | 40 | 00 | +.e.+.e.+.e.+.e. |
| 400060 | 2B | F3 | 40 | 00 | 00 | 00 | 00 | 00 | 0D | D6 | 40 | 00 | 71 | D6 | 40 | 00 | +.e.+.e.+.e.+.e. |
| 400070 | D5 | D6 | 40 | 00 | 2B | F3 | 40 | 00 | D7 | 8C | 40 | 00 | 2B | F3 | 40 | 00 | +.e.+.e.+.e.+.e. |
| 400080 | 39 | D7 | 40 | 00 | 9D | D7 | 40 | 00 | 2B | F3 | 40 | 00 | 2B | F3 | 40 | 00 | 9.e.+.e.+.e.+.e. |
| 400090 | 2B | F3 | 40 | 00 | 2B | F3 | 40 | 00 | 2B | F3 | 40 | 00 | 2B | F3 | 40 | 00 | +.e.+.e.+.e.+.e. |
| 4000A0 | 2B | F3 | 40 | 00 | 2B | F3 | 40 | 00 | CD | C3 | 40 | 00 | 7F | 8D | 40 | 00 | +.e.+.e.+.e.+.e. |
| 4000B0 | 2B | F3 | 40 | 00 | 1B | D4 | 40 | 00 | 2B | F3 | 40 | 00 | 2B | F3 | 40 | 00 | +.e.+.e.+.e.+.e. |
| 4000C0 | 2B | F3 | 40 | 00 | 2B | F3 | 40 | 00 | FB | DB | 40 | 00 | 2B | F3 | 40 | 00 | +.e.+.e.+.e.+.e. |
| 4000D0 | 2B | F3 | 40 | 00 | 2B | F3 | 40 | 00 | 2B | F3 | 40 | 00 | 2B | F3 | 40 | 00 | +.e.+.e.+.e.+.e. |
| 4000E0 | 77 | D4 | 40 | 00 | 2B | F3 | 40 | 00 | 2B | F3 | 40 | 00 | 2B | F3 | 40 | 00 | w.e.+.e.+.e.+.e. |
| 4000F0 | 2B | F3 | 40 | 00 | 2B | F3 | 40 | 00 | 2B | F3 | 40 | 00 | 2B | F3 | 40 | 00 | +.e.+.e.+.e.+.e. |
| 400100 | 2B | F3 | 40 | 00 | 2B | F3 | 40 | 00 | 2B | F3 | 40 | 00 | 2B | F3 | 40 | 00 | +.e.+.e.+.e.+.e. |
| 400110 | 2B | F3 | 40 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | +.e.+.e.+.e.+.e. |
| 400120 | 2B | F3 | 40 | 00 | 2B | F3 | 40 | 00 | 2B | F3 | 40 | 00 | 2B | F3 | 40 | 00 | +.e.+.e.+.e.+.e. |
| 400130 | 2B | F3 | 40 | 00 | 2B | F3 | 40 | 00 | 2B | F3 | 40 | 00 | 2B | F3 | 40 | 00 | +.e.+.e.+.e.+.e. |
| 400140 | 2B | F3 | 40 | 00 | 2B | F3 | 40 | 00 | 2B | F3 | 40 | 00 | 2B | F3 | 40 | 00 | +.e.+.e.+.e.+.e. |
| 400150 | 2B | F3 | 40 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | +.e.+.e.+.e.+.e. |
| 400160 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | F0 | B5 | 03 | AF | 4D | F8 | 04 | BD | +.e.+.e.+.e.+.e. |
| 400170 | 88 | B0 | 44 | F2 | 00 | 04 | 00 | 20 | C4 | F2 | 06 | 04 | AD | F8 | 1C | 00 | ..D.+.e.+.e.+.e. |

J-Flash

Programming target memory...

Programming range 0x0040D800 - 0x0040DFFF (2 KB)

42%

Cancel

LOG

- CPU is running at 120000 kHz.

- Start of erasing sectors

- Blank checking 0x00400000 - 0x00403FFF

- Erasing range 0x00400000 - 0x00403FFF (2 Sectors, 16 KB)

- Blank checking 0x00404000 - 0x0041FFFF

- Erasing range 0x00404000 - 0x0041FFFF (1 Sector, 112 KB)

- End of erasing sectors

- Start of flash programming

- Programming range 0x00400000 - 0x00403FFF (2 Sectors, 16 KB)

- Programming range 0x00404000 - 0x0041FFFF (1 Sector, 112 KB)

Ready

Connected

Core Id: 0x0BD11477

Speed: 4000 kHz

SEGGER J-Flash V6.42b - [new project *]

File Edit View Target Options Window Help

Project - new pr... D:\XDiag_THINKDIAG2_DBSCAR7_V1_22_005_v1.bin

Name Value

Host connection USB [Device 0]

Target interface SWD

Init SWD speed 4000 kHz

SWD speed 4000 kHz

MCU Atmel ATSAME70Q20

Core Cortex-M7

Endian Little

Check core ID Yes (0xBD11477)

Use target RAM 384 KB @ 0x20400000

Flash memory Internal bank 0

Base address 0x400000

Flash size 1024 KB

Address: 0x400000 x1 x2 x4

| Address | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | A | B | C | D | E | F | ASCII |
|---------|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|-------------------|
| 400000 | 28 | 66 | 42 | 20 | 2F | F3 | 40 | 00 | 2B | F3 | 40 | 00 | 2D | F3 | 40 | 00 | <fB / .e.+.e.-.e. |
| 400010 | 2B | F3 | 40 | 00 | 2B | F3 | 40 | 00 | 2B | F3 | 40 | 00 | 00 | 00 | 00 | 00 | + .e.+.e.+.e.+.e. |
| 400020 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 2B | F3 | 40 | 00 |+.e. |
| 400030 | 2B | F3 | 40 | 00 | 00 | 00 | 00 | 00 | 2B | F3 | 40 | 00 | C9 | C3 | 40 | 00 | + .e.+.e.+.e.+.e. |
| 400040 | 2B | F3 | 40 | 00 | 2B | F3 | 40 | 00 | 2B | F3 | 40 | 00 | 2B | F3 | 40 | 00 | + .e.+.e.+.e.+.e. |
| 400050 | 2B | F3 | 40 | 00 | 2B | F3 | 40 | 00 | 2B | F3 | 40 | 00 | 2B | F3 | 40 | 00 | + .e.+.e.+.e.+.e. |
| 400060 | 2B | F3 | 40 | 00 | 00 | 00 | 00 | 00 | 0D | D6 | 40 | 00 | 71 | D6 | 40 | 00 | + .e.+.e.+.e.+.e. |
| 400070 | D5 | D6 | 40 | 00 | 2B | F3 | 40 | 00 | D7 | 8C | 40 | 00 | 2B | F3 | 40 | 00 | + .e.+.e.+.e.+.e. |
| 400080 | 39 | D7 | 40 | 00 | 9D | D7 | 40 | 00 | 2B | F3 | 40 | 00 | 2B | F3 | 40 | 00 | 9 .e.+.e.+.e.+.e. |
| 400090 | 2B | F3 | 40 | 00 | 2B | F3 | 40 | 00 | 2B | F3 | 40 | 00 | 2B | F3 | 40 | 00 | + .e.+.e.+.e.+.e. |
| 4000A0 | 2B | F3 | 40 | 00 | 2B | F3 | 40 | 00 | CD | C3 | 40 | 00 | 7F | 8D | 40 | 00 | + .e.+.e.+.e.+.e. |
| 4000B0 | 2B | F3 | 40 | 00 | 2B | F3 | 40 | 00 | 2B | F3 | 40 | 00 | 2B | F3 | 40 | 00 | + .e.+.e.+.e.+.e. |
| 4000C0 | 2B | F3 | 40 | 00 | 2B | F3 | 40 | 00 | 2B | F3 | 40 | 00 | 2B | F3 | 40 | 00 | + .e.+.e.+.e.+.e. |
| 4000D0 | 2B | F3 | 40 | 00 | 2B | F3 | 40 | 00 | 2B | F3 | 40 | 00 | 2B | F3 | 40 | 00 | + .e.+.e.+.e.+.e. |
| 4000E0 | 2B | F3 | 40 | 00 | 2B | F3 | 40 | 00 | 2B | F3 | 40 | 00 | 2B | F3 | 40 | 00 | + .e.+.e.+.e.+.e. |
| 4000F0 | 2B | F3 | 40 | 00 | 2B | F3 | 40 | 00 | 2B | F3 | 40 | 00 | 2B | F3 | 40 | 00 | + .e.+.e.+.e.+.e. |
| 400100 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | F0 | B5 | 03 | AF | 4D | F8 | 04 | BD |M... |
| 400110 | 88 | B0 | 44 | F2 | 00 | 04 | 00 | 20 | C4 | F2 | 06 | 04 | AD | F8 | 1C | 00 | ..D..... |

J-Flash V6.42b

Target erased, programmed and verified successfully - Completed after 1.744 sec

OK

LOG

- Flash programming performed for 2 ranges (131072 bytes)
- 0x400000 - 0x403FFF (2 Sectors, 16 KB)
- 0x404000 - 0x41FFFF (1 Sector, 112 KB)
- Start of verifying flash
- End of verifying flash
- Start of restoring
- End of restoring
- Executing exit sequence ...
- De-initialized successfully
- Target erased, programmed and verified successfully - Completed after 1.744 sec

Ready Connected Core Id: 0xBD11477 Speed: 4000 kHz

SEGGER J-Flash V6.42b - [new project *]

File Edit View Target Options Window Help

Project - new pr... NKNDIAG2_DBSCAR7_V1_22_005_v1.bin

Name Value

Host connection USB [Device 0]

Target interface SWD

Init SWD speed 4000 kHz

SWD speed 4000 kHz

MCU Atmel ATSAME70Q20

Core Cortex-M7

Endian Little

Check core ID Yes (0xBD11477)

Use target RAM 384 KB @ 0x20400000

Flash memory Internal bank 0

Base address 0x400000

Flash size 1024 KB

Address: 0x400000 x1 x2 x4

| Address | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | A | B | C | D | E | F | ASCII |
|---------|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|-------------------|
| 400000 | 28 | 66 | 42 | 20 | 2F | F3 | 40 | 00 | 2B | F3 | 40 | 00 | 2D | F3 | 40 | 00 | <fB / .e.+.e.-.e. |
| 400010 | 2B | F3 | 40 | 00 | 2B | F3 | 40 | 00 | 2B | F3 | 40 | 00 | 00 | 00 | 00 | 00 | + .e.+.e.+.e.+.e. |
| 400020 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 2B | F3 | 40 | 00 |+.e. |
| 400030 | 2B | F3 | 40 | 00 | 00 | 00 | 00 | 00 | 2B | F3 | 40 | 00 | C9 | C3 | 40 | 00 | + .e.+.e.+.e.+.e. |
| 400040 | 2B | F3 | 40 | 00 | 2B | F3 | 40 | 00 | 2B | F3 | 40 | 00 | 2B | F3 | 40 | 00 | + .e.+.e.+.e.+.e. |
| 400050 | 2B | F3 | 40 | 00 | 2B | F3 | 40 | 00 | 2B | F3 | 40 | 00 | 2B | F3 | 40 | 00 | + .e.+.e.+.e.+.e. |
| 400060 | 2B | F3 | 40 | 00 | 00 | 00 | 00 | 00 | 0D | D6 | 40 | 00 | 71 | D6 | 40 | 00 | + .e.+.e.+.e.+.e. |
| 400070 | D5 | D6 | 40 | 00 | 2B | F3 | 40 | 00 | D7 | 8C | 40 | 00 | 2B | F3 | 40 | 00 | + .e.+.e.+.e.+.e. |
| 400080 | 39 | D7 | 40 | 00 | 9D | D7 | 40 | 00 | 2B | F3 | 40 | 00 | 2B | F3 | 40 | 00 | 9 .e.+.e.+.e.+.e. |
| 400090 | 2B | F3 | 40 | 00 | 2B | F3 | 40 | 00 | 2B | F3 | 40 | 00 | 2B | F3 | 40 | 00 | + .e.+.e.+.e.+.e. |
| 4000A0 | 2B | F3 | 40 | 00 | 2B | F3 | 40 | 00 | CD | C3 | 40 | 00 | 7F | 8D | 40 | 00 | + .e.+.e.+.e.+.e. |
| 4000B0 | 2B | F3 | 40 | 00 | 2B | F3 | 40 | 00 | 2B | F3 | 40 | 00 | 2B | F3 | 40 | 00 | + .e.+.e.+.e.+.e. |
| 4000C0 | 2B | F3 | 40 | 00 | 2B | F3 | 40 | 00 | 2B | F3 | 40 | 00 | 2B | F3 | 40 | 00 | + .e.+.e.+.e.+.e. |
| 4000D0 | 2B | F3 | 40 | 00 | 2B | F3 | 40 | 00 | 2B | F3 | 40 | 00 | 2B | F3 | 40 | 00 | + .e.+.e.+.e.+.e. |
| 4000E0 | 2B | F3 | 40 | 00 | 2B | F3 | 40 | 00 | 2B | F3 | 40 | 00 | 2B | F3 | 40 | 00 | + .e.+.e.+.e.+.e. |
| 4000F0 | 2B | F3 | 40 | 00 | 2B | F3 | 40 | 00 | 2B | F3 | 40 | 00 | 2B | F3 | 40 | 00 | + .e.+.e.+.e.+.e. |
| 400100 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | + .e.+.e.+.e.+.e. |
| 400110 | 88 | B0 | 44 | F2 | 00 | 04 | 00 | 20 | C4 | F2 | 06 | 04 | AD | F8 | 1C | 00 |M... |

Connect

Disconnect

Test

Production Programming F7

Manual Programming

Secure Chip

Unsecure Chip

Check Blank F2

Erase Sectors F3

Erase Chip F4

Program F5

Program & Verify F6

Verify F8

Read back

Start Application F9

LOG

- Flash programming performed for 2 ranges (131072 bytes)
- 0x400000 - 0x403FFF (2 Sectors, 16 KB)
- 0x404000 - 0x41FFFF (1 Sector, 112 KB)
- Start of verifying flash
- End of verifying flash
- Start of restoring
- End of restoring
- Executing exit sequence ...
- De-initialized successfully
- Target erased, programmed and verified successfully - Completed after 1.744 sec

Start target application (uses RESET pin to start application) Connected Core Id: 0xBD11477 Speed: 4000 kHz