```
I (263) main_task: Started on CPU0
I (273) main_task: Calling app_main()
Hello world!
I (273) I2C: i2c_new_master_bus initialized
I (273) I2C: I2C initialized successfully
I (283) I2C: Successful i2c_master_bus_add_device
I (283) I2C: Successful i2c_master_bus_add_device
I (283) FRAM: FRAM lower bank byte test
I (293) FRAM: FRAM_SingleByteTest adr 0x0 data 0xa5
I (293) FRAM: Write 0xa5
I (303) FRAM: Write/read matches 0xa5==0xa5
I (303) FRAM: FRAM_SingleByteTest adr 0x1 data 0x5a
I (303) FRAM: Write 0x5a
I (313) FRAM: Write/read matches 0x5a==0x5a
I (313) FRAM: FRAM_SingleByteTest adr 0x1 data 0xa5
I (313) FRAM: Write 0xa5
I (323) FRAM: Write/read matches 0xa5==0xa5
I (323) FRAM: FRAM_SingleByteTest adr 0x2 data 0x5a
I (323) FRAM: Write 0x5a
I (333) FRAM: Write/read matches 0x5a==0x5a
I (333) FRAM: FRAM_SingleByteTest adr 0x2 data 0xa5
I (343) FRAM: Write 0xa5
I (343) FRAM: Write/read matches 0xa5==0xa5
I (343) FRAM: FRAM_SingleByteTest adr 0x3 data 0x5a
I (353) FRAM: Write 0x5a
I (353) FRAM: Write/read matches 0x5a==0x5a
I (353) FRAM: FRAM_SingleByteTest adr 0x3 data 0xa5
I (363) FRAM: Write 0xa5
I (363) FRAM: Write/read matches 0xa5==0xa5
I (363) FRAM: FRAM_SingleByteTest adr 0x4 data 0x5a
I (373) FRAM: Write 0x5a
I (373) FRAM: Write/read matches 0x5a==0x5a
I (373) FRAM: FRAM_SingleByteTest adr 0x4 data 0xa5
I (383) FRAM: Write 0xa5
I (383) FRAM: Write/read matches 0xa5==0xa5
I (383) FRAM: FRAM_SingleByteTest adr 0x5 data 0x5a
I (393) FRAM: Write 0x5a
I (393) FRAM: Write/read matches 0x5a==0x5a
I (403) FRAM: FRAM_SingleByteTest adr 0x5 data 0xa5
I (403) FRAM: Write 0xa5
I (403) FRAM: Write/read matches 0xa5==0xa5
I (413) FRAM: FRAM_SingleByteTest adr 0x6 data 0x5a
I (413) FRAM: Write 0x5a
I (413) FRAM: Write/read matches 0x5a==0x5a
I (423) FRAM: FRAM_SingleByteTest adr 0x6 data 0xa5
I (423) FRAM: Write 0xa5
I (423) FRAM: Write/read matches 0xa5==0xa5
I (433) FRAM: FRAM_SingleByteTest adr 0x7 data 0x5a
I (433) FRAM: Write 0x5a
I (443) FRAM: Write/read matches 0x5a==0x5a
I (443) FRAM: FRAM_SingleByteTest adr 0x7 data 0xa5
I (443) FRAM: Write 0xa5
I (453) FRAM: Write/read matches 0xa5==0xa5
I (453) FRAM: FRAM_SingleByteTest adr 0x8 data 0x5a
I (453) FRAM: Write 0x5a
I (463) FRAM: Write/read matches 0x5a==0x5a
I (463) FRAM: FRAM_SingleByteTest adr 0x8 data 0xa5
I (463) FRAM: Write 0xa5
I (473) FRAM: Write/read matches 0xa5==0xa5
I (473) FRAM: FRAM_SingleByteTest adr 0x9 data 0x5a
I (473) FRAM: Write 0x5a
I (483) FRAM: Write/read matches 0x5a==0x5a
I (483) FRAM: FRAM_SingleByteTest adr 0x9 data 0xa5
I (493) FRAM: Write 0xa5
I (493) FRAM: Write/read matches 0xa5==0xa5
I (493) FRAM: FRAM_SingleByteTest adr 0xa data 0x5a
I (503) FRAM: Write 0x5a
I (503) FRAM: Write/read matches 0x5a==0x5a
I (503) FRAM: FRAM upper bank byte test
I (513) FRAM: FRAM_SingleByteTest adr 0x10000 data 0xa5
```

```
I (513) FRAM: Write 0xa5
I (513) FRAM: Write/read matches 0xa5==0xa5
I (523) FRAM: FRAM_SingleByteTest adr 0x10001 data 0x5a
I (523) FRAM: Write 0x5a
I (533) FRAM: Write/read matches 0x5a==0x5a
I (533) FRAM: FRAM_SingleByteTest adr 0x10001 data 0xa5
I (533) FRAM: Write 0xa5
I (543) FRAM: Write/read matches 0xa5==0xa5
I (543) FRAM: FRAM_SingleByteTest adr 0x10002 data 0x5a
I (543) FRAM: Write 0x5a
I (553) FRAM: Write/read matches 0x5a==0x5a
I (553) FRAM: FRAM_SingleByteTest adr 0x10002 data 0xa5
I (563) FRAM: Write 0xa5
I (563) FRAM: Write/read matches 0xa5==0xa5
I (563) FRAM: FRAM_SingleByteTest adr 0x10003 data 0x5a
I (573) FRAM: Write 0x5a
I (573) FRAM: Write/read matches 0x5a==0x5a
I (573) FRAM: FRAM_SingleByteTest adr 0x10003 data 0xa5
I (583) FRAM: Write 0xa5
I (583) FRAM: Write/read matches 0xa5==0xa5
I (583) FRAM: FRAM_SingleByteTest adr 0x10004 data 0x5a
I (593) FRAM: Write 0x5a
I (593) FRAM: Write/read matches 0x5a==0x5a
I (603) FRAM: FRAM_SingleByteTest adr 0x10004 data 0xa5
I (603) FRAM: Write 0xa5
I (603) FRAM: Write/read matches 0xa5==0xa5
I (613) FRAM: FRAM_SingleByteTest adr 0x10005 data 0x5a
I (613) FRAM: Write 0x5a
I (613) FRAM: Write/read matches 0x5a==0x5a
I (623) FRAM: FRAM_SingleByteTest adr 0x10005 data 0xa5
I (623) FRAM: Write 0xa5
I (633) FRAM: Write/read matches 0xa5==0xa5
I (633) FRAM: FRAM_SingleByteTest adr 0x10006 data 0x5a
I (633) FRAM: Write 0x5a
I (643) FRAM: Write/read matches 0x5a==0x5a
I (643) FRAM: FRAM_SingleByteTest adr 0x10006 data 0xa5
I (643) FRAM: Write 0xa5
I (653) FRAM: Write/read matches 0xa5==0xa5
I (653) FRAM: FRAM_SingleByteTest adr 0x10007 data 0x5a
I (663) FRAM: Write 0x5a
I (663) FRAM: Write/read matches 0x5a==0x5a
I (663) FRAM: FRAM_SingleByteTest adr 0x10007 data 0xa5
I (673) FRAM: Write 0xa5
I (673) FRAM: Write/read matches 0xa5==0xa5
I (673) FRAM: FRAM_SingleByteTest adr 0x10008 data 0x5a
I (683) FRAM: Write 0x5a
I (683) FRAM: Write/read matches 0x5a==0x5a
I (683) FRAM: FRAM_SingleByteTest adr 0x10008 data 0xa5
I (693) FRAM: Write 0xa5
I (693) FRAM: Write/read matches 0xa5==0xa5
I (703) FRAM: FRAM_SingleByteTest adr 0x10009 data 0x5a
I (703) FRAM: Write 0x5a
I (703) FRAM: Write/read matches 0x5a==0x5a
I (713) FRAM: FRAM_SingleByteTest adr 0x10009 data 0xa5
I (713) FRAM: Write 0xa5
I (713) FRAM: Write/read matches 0xa5==0xa5
I (723) FRAM: FRAM_SingleByteTest adr 0x1000a data 0x5a
I (723) FRAM: Write 0x5a
I (733) FRAM: Write/read matches 0x5a==0x5a
I (733) FRAM: FRAM lower bank buffer test
I (783) FRAM: FRAM upper bank buffer test
I (833) FRAM: FRAM span bank buffer test
I (883) FRAM: addr 0x0000
I (883) I2C: 0x3fc98ac0   a5 a5 a5 a5 a5 a5 a5 a5  a5 a5 5a 00 00 00 00 00  |..........Z.....|
I (883) I2C: 0x3fc98ad0   00 00 00 00 00 00 00 00  00 00 00 00 00 00 00 00  |................|
I (913) FRAM: addr 0x1003
I (913) I2C: 0x3fc98ac0   00 01 02 03 04 05 06 07  08 09 0a 0b 0c 0d 0e 0f  |................|
I (913) I2C: 0x3fc98ad0   10 11 12 13 14 15 16 17  18 19 1a 1b 1c 1d 1e 1f  |................|
I (923) I2C: 0x3fc98ae0   20 21 22 23 24 25 26 27  28 29 2a 2b 2c 2d 2e 2f  | !"#$%&'()*+,-./|
I (933) I2C: 0x3fc98af0   30 31 32 33 34 35 36 37  38 39 3a 3b 3c 3d 3e 3f  |0123456789:;<=>?|
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I (933) I2C: 0x3fc98b00   40 41 42 43 44 45 46 47  48 49 4a 4b 4c 4d 4e 4f  |@ABCDEFGHIJKLMNO|
I (943) I2C: 0x3fc98b10   50 51 52 53 54 55 56 57  58 59 5a 5b 5c 5d 5e 5f  |PQRSTUVWXYZ[\]^_|
I (953) I2C: 0x3fc98b20   60 61 62 63 64 65 66 67  68 69 6a 6b 6c 6d 6e 6f  |`abcdefghijklmno|
I (963) I2C: 0x3fc98b30   70 71 72 73 74 75 76 77  78 79 7a 7b 7c 7d 7e 7f  |pqrstuvwxyz{|}~.|
I (973) I2C: 0x3fc98b40   80 81 82 83 84 85 86 87  88 89 8a 8b 8c 8d 8e 8f  |................|
I (983) I2C: 0x3fc98b50   90 91 92 93 94 95 96 97  98 99 9a 9b 9c 9d 9e 9f  |................|
I (983) I2C: 0x3fc98b60   a0 a1 a2 a3 a4 a5 a6 a7  a8 a9 aa ab ac ad ae af  |................|
I (993) I2C: 0x3fc98b70   b0 b1 b2 b3 b4 b5 b6 b7  b8 b9 ba bb bc bd be bf  |................|
I (1003) I2C: 0x3fc98b80   c0 c1 c2 c3 c4 c5 c6 c7  c8 c9 ca cb cc cd ce cf  |................|
I (1013) I2C: 0x3fc98b90   d0 d1 d2 d3 d4 d5 d6 d7  d8 d9 da db dc dd de df  |................|
I (1023) I2C: 0x3fc98ba0   e0 e1 e2 e3 e4 e5 e6 e7  e8 e9 ea eb ec ed ee ef  |................|
I (1033) I2C: 0x3fc98bb0   f0 f1 f2 f3 f4 f5 f6 f7  f8 f9 fa fb fc fd fe ff  |................|
I (1043) FRAM: addr 0x7fe0
I (1043) I2C: 0x3fc98ac0   00 01 02 03 04 05 06 07  08 09 0a 0b 0c 0d 0e 0f  |................|
I (1053) I2C: 0x3fc98ad0   10 11 12 13 14 15 16 17  18 19 1a 1b 1c 1d 1e 1f  |................|
I (1063) FRAM: addr 0x10000
I (1063) I2C: 0x3fc98ac0   a5 a5 a5 a5 a5 a5 a5 a5  a5 a5 5a 00 00 00 00 00  |..........Z.....|
I (1073) I2C: 0x3fc98ad0   00 00 00 00 00 00 00 00  00 00 00 00 00 00 00 00  |................|
I (1103) FRAM: addr 0x14007
I (1103) I2C: 0x3fc98ac0   00 01 02 03 04 05 06 07  08 09 0a 0b 0c 0d 0e 0f  |................|
I (1103) I2C: 0x3fc98ad0   10 11 12 13 14 15 16 17  18 19 1a 1b 1c 1d 1e 1f  |................|
I (1113) I2C: 0x3fc98ae0   20 21 22 23 24 25 26 27  28 29 2a 2b 2c 2d 2e 2f  | !"#$%&'()*+,-./|
I (1113) I2C: 0x3fc98af0   30 31 32 33 34 35 36 37  38 39 3a 3b 3c 3d 3e 3f  |0123456789:;<=>?|
I (1123) I2C: 0x3fc98b00   40 41 42 43 44 45 46 47  48 49 4a 4b 4c 4d 4e 4f  |@ABCDEFGHIJKLMNO|
I (1133) I2C: 0x3fc98b10   50 51 52 53 54 55 56 57  58 59 5a 5b 5c 5d 5e 5f  |PQRSTUVWXYZ[\]^_|
I (1143) I2C: 0x3fc98b20   60 61 62 63 64 65 66 67  68 69 6a 6b 6c 6d 6e 6f  |`abcdefghijklmno|
I (1153) I2C: 0x3fc98b30   70 71 72 73 74 75 76 77  78 79 7a 7b 7c 7d 7e 7f  |pqrstuvwxyz{|}~.|
I (1163) I2C: 0x3fc98b40   80 81 82 83 84 85 86 87  88 89 8a 8b 8c 8d 8e 8f  |................|
I (1163) I2C: 0x3fc98b50   90 91 92 93 94 95 96 97  98 99 9a 9b 9c 9d 9e 9f  |................|
I (1173) I2C: 0x3fc98b60   a0 a1 a2 a3 a4 a5 a6 a7  a8 a9 aa ab ac ad ae af  |................|
I (1183) I2C: 0x3fc98b70   b0 b1 b2 b3 b4 b5 b6 b7  b8 b9 ba bb bc bd be bf  |................|
I (1193) I2C: 0x3fc98b80   c0 c1 c2 c3 c4 c5 c6 c7  c8 c9 ca cb cc cd ce cf  |................|
I (1203) I2C: 0x3fc98b90   d0 d1 d2 d3 d4 d5 d6 d7  d8 d9 da db dc dd de df  |................|
I (1213) I2C: 0x3fc98ba0   e0 e1 e2 e3 e4 e5 e6 e7  e8 e9 ea eb ec ed ee ef  |................|
I (1223) I2C: 0x3fc98bb0   f0 f1 f2 f3 f4 f5 f6 f7  f8 f9 fa fb fc fd fe ff  |................|
I (1223) FRAM: Clear FRAM back to 0s
Clearing offset 0x0
Clearing offset 0x2000
Clearing offset 0x4000
Clearing offset 0x6000
Clearing offset 0x8000
Clearing offset 0xa000
Clearing offset 0xc000
Clearing offset 0xe000
Clearing offset 0x10000
Clearing offset 0x12000
Clearing offset 0x14000
Clearing offset 0x16000
Clearing offset 0x18000
Clearing offset 0x1a000
Clearing offset 0x1c000
Clearing offset 0x1e000
I (25453) I2C: FRAM 128K test passed
I (25453) I2C: i2c_master_bus_rm_device OK
I (25453) I2C: i2c_master_bus_rm_device OK
I (25453) I2C: I2C de-initialized successfully
I (25453) main_task: Returned from app_main()
```