

SFA7700™

Invalid -20° C Temperature Message

Error Message

An invalid temperature error message occurs regularly in the SFA7700 storage array family (SFA7700, SFA7700X, ES7K, and GS7K). This message reports a temperature sensor reading of -20° C (or -4° F). For example:

```
382570 2015-07-14 11:15:45:4647550 G=61 S=2 T=1 RP=0 VP=00
LOG_ES_TEMPERATURE_SENSOR_ERROR ES Enclosure 0x1ff0a09c90000
temperature sensor 4 reported error condition. SES status = 7,
T = -20 (degC), OverT = 0, UnderT = 0.
```

This message can be recognized as invalid because the under-temperature flag is set to FALSE (**UnderT=0**), even though the reported temperature has passed the under-temperature warning threshold.

Root Cause

SFA7700 platforms running old firmware versions *prior* to *any* of the following may see the invalid temperature message:

- FPGA < 003.000-000.052
- BMC < 22.04
- SFA OS < 2.3.1.3
- SEP < 0116-101
- PSU < 0227

Obsolete BMC and FPGA firmware account for most instances of the invalid temperature error.

Resolution

To fully resolve the invalid temperature message problem, upgrade all SFA7700 firmware to current levels. As of the date of this bulletin, the latest firmware versions for the SFA7700 family are:

- SFA OS 3.0.1.5
- BMC 22.04
- FPGA 003.000-000.052
- BIOS 25.105
- SEP 0118-108

ALERT! Installation of FPGA/BMC package `sfa7700-bmc-22.04_003_000-000.052` is **mandatory** on all SFA7700 controllers. **BIOS 25.105 is a mandatory prerequisite** for the FPGA/BMC upgrade on SFA7700 embedded processor models (ES7K and GS7K).

If only a subset of the recommended upgrades can be accommodated, **upgrade the BMC/FPGA firmware package to the mandatory level**. On embedded processing platforms (ES7K and GS7K), install the mandatory prerequisite BIOS upgrade before upgrading the BMC/FPGA. Upgrading just this firmware will significantly reduce the number of invalid temperature errors seen.

Note that PSU firmware cannot currently be upgraded in the field.

Please contact DDN Support for upgrade assistance.

Contacting DDN Technical Support

Please contact DDN Technical Support at any time for questions or assistance. Support can be reached by phone, by email, or on the web as listed below.

Web

*DDN Community Support Portal
Portal Assistance*

<https://community.ddn.com/login>
webportal.support@ddn.com

Telephone

DDN Support Worldwide Directory

<http://www.ddn.com/support/contact-support>

Email

Support Email

support@ddn.com

Bulletins

Support Bulletins

End-of-Life Notices

Bulletin Subscription Requests

<http://www.ddn.com/support/technical-support-bulletins>

<http://www.ddn.com/support/end-of-life-notices>

support-tsb@ddn.com