



Field Bulletin #: FB013

Date of Notice: July 06, 2022

Issue: Ventnor Power Issue

Affected Product(s): Ventnor (16-port)

Affected Part Number(s): 070-16-VNT-S01, -S02, -S03, -S04, -C01, -C02
070-16-VCOM-S01, -S02, -S03, -S04, -S05, -S06, -C02

Affected Timeframe: Any 16-port Ventnor systems shipped from Sunhillo Corporation that are running an OS Version between 5.0.0 and 5.2.0.

Problem Description:

Sunhillo Corporation has discovered an issue with our Ventnor product in which a pin multiplexing error in the initialization code for the processor can cause internal power failures that results in the Ventnor system unexpectedly powering off or failing to power on properly. Once this condition exists the Ventnor system does not power on properly even after a physical power cycle. Ventnor systems running the operating system versions 5.0.0 through 5.2.0 for extended periods are susceptible to failure.

Analysis:

Failure analysis of the Ventnor systems indicates that the point of failure is a pin multiplexing error in the initialization code for the processor. For 16-port Ventnor systems only, this pin multiplexing error erroneously configures two processor pins in contention and one grounded output pin to be driving high (3.3V). The electrical short of the grounded output pin can, over time, cause the failure of the processor and a power failure of the Ventnor system.

Sunhillo Engineering has worked with component suppliers to help determine the root cause for the Ventnor system failures and corroborated all failure analysis data with IC component suppliers.

Note that this issue is not present for customers using operating system version 4.X.X.

Resolution:

To address the Ventnor system power issue, Sunhillo is providing, at no cost, a combined operating system and application code software update. The combined software release upgrades the operating system to version 5.2.1 and the Ventnor application layer release to version 8.8.3. The operating system update includes only a UBOOT patch which is a one-line change in the initialization code for the processor to address the pin multiplexing errors. To reduce risk, this simple UBOOT change to the register initialization of the processor is the only change in the operating system update; there are no other changes included. Once the combined operating system and application package have been installed, the application version can be downgraded, if needed, to another application version based on the operational needs of the customer.

Please note that this field bulletin supersedes field bulletin FB012 since the EXAR power issue outlined in FB012 is induced by the short condition created with the pin multiplexing error explained in this field bulletin.

Recommended Action:

Sunhillo advises all 16-port Ventnor customers currently using operating system version 5.0.0 through 5.2.0 to upgrade the operating system of their Ventnor units to operating system version 5.2.1 and application code version 8.8.3 or better as soon as possible.

Sunhillo is taking the additional step to extend the warranty for fielded Ventnor units for a period of 5 years if any failures occur due to Ventnor system power failure.

If a failure does occur, please contact Sunhillo Support/Helpdesk by email at support@sunhillo.com and we will diagnose the issue and RMA the Ventnor if the unit needs to be returned to Sunhillo.

Sunhillo Corporation takes great pride in our product quality and reliability and the Ventnor product maintains a total defect rate of less than 1.5%. Sunhillo Corporation will support all issues customers may have related to this field bulletin.