11 June 2021

TO: WHOM IT MAY CONCERN
RE: NON-VOLATILE AND VOLATILE MEMORY ON ALTA PRODUCTS

There are non-volatile and volatile memory parts on **ALL** Alta interface cards and appliances (such as PCIe, PMC, XMCs, ENETs, TBOLT, USB, NLINE, NLUSB). These parts include:

- **Non-Volatile Flash Memory for FPGA load: 64k-16Mbytes.** This part stores the FPGA boot-up image.

   o **There is NOT a memory sanitation process/procedure for this part**

   o This part could be used for data storage by someone with detailed knowledgeable of customer's computer design, **but the person would have to be intentionally trying to manipulate memory for non-standard purposes**. Normal application usage does not store data to this part.

      ▪ The customer can access this part through a standard AltaAPI SDK function call ADT_L1_ProgramBoardFlash(). The customer has the source to the AltaAPI and can remove this function from their image build. This would block access to this part during normal application usage.

   o **Alta provides a standard hardware option that can <u>inhibit user storage</u> to this part making all the device's memory volatile.**

      ▪ This inhibit option ("**N**" in part number/label suffix) must be designated at order time, or the product can be sent back to the factory for upgrade/rework **for a fee**.

         - Example Alta part numbers with this -**N** option: PCIE4l-1553-2F-**N**T**,** ENET-A429-8-A**N,** TBOLT-MA4-2F8-**N,** USB-MA4-2F8-**N, etc.** With this option, all memory on the product is cleared/sanitized with power loss/cycle.

         - This option prevents in-field updates, meaning products must be returned to factory for rare firmware updates (usually at no cost excluding shipping fees).

         - Alta provides a Window's tool (AltaView "Open Device") that scans the Alta product and shows if this -N setting is implemented on the device (shown as a "WP" write protect acronym). Please see the AltaView Users' Manual or contact the factory for more information about AltaView operations.

- **Volatile Memory Part: 2-16Mbyte SRAM.** For **temporary storage** of application data.

   o This part's contents are cleared/sanitized with power loss/cycle.

If there are any questions, please contact the undersigned.

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