

## Replacing the old VME based SBC with simple VME2USB card

### Background

VME is quite an old and outdated communication protocol that was widely used in various industries in the past, but over the last 2 decades it has been discontinued for new projects after more compact, faster, economical, and reliable communication interfaces have been developed and spread around.

Having said that, there are still active systems (mainly for legacy military applications) that continue to operate with the same old VME stations from 30 years ago.

### Problem

The VME station is a 6U (19") card rack that contains several cards, such as communication cards, power supply cards, and a Single Board Computer (SBC), all cards communicate with each other via the VME backplane using VME protocol.

Since these systems are decades old, the SBC performance is likely to have a significant degradation in performance, in particular when running an outdated, low performance OS trying to cope concurrently with various applications of the numerous VME cards, and as a result the system (the SBC) experiences performance degradation, and even frequent crashes.

In addition, software developers who develop new software (or maintain existing software) are forced to work in a very noisy environment (the VME station contains fans to dissipate the heat of the station), and use an old and instable development environment.

### Solution

Sital has developed a VME to USB adapter card that replace the VME SBC card, thus allowing the programmer who needs to develop software for VME-based systems to develop the software sitting on his desk (not next to a noisy VME station), on his personal computer using a Windows/Linux environment, without the VME SBC.

The VME2USB adapter card converts the VME protocol to a standard USB interface (and vice versa), the VME2USB card is a 6U VME form factor card, and can be either inserted into the VME chassis alongside all the other VME cards, or be used on the user's desk using a compact backplane with VME connectors connecting to one or two additional VME cards without the need for the VME chassis to be connected.