

Unified VME module design for the muon system

In order to standardize front-end electronics and simplify design efforts we propose a common mechanical specification for all VME-based muon front-end electronics. The proposed requirements are listed below.

- Front panel. Panel color – almond (Federal Standard Color # 37722), font – Helvetica, font color – black. “D0 μ ” logo and module codes are located at the top of the front panel.

Table 1. Muon front-end electronics module codes.

Module type	Module code
Reserved	0..10
Muon Readout Card	11
Muon Fanout Card	15
Trigger Fanout Card	17
Mini-drift tube Digitizing Card	41
Mini-Drift tube Readout Controller	43
Amplifier-Discriminator Board	45
Scintillator Front-End card	71
Scintillator Readout Controller	73
Scintillator LED pulser	75
LMB power interface card	76
PDT Front-End Board	91
PDT Control Board	92

Note: Modified versions of the same module will have a letter suffice at the end.

All auxiliary modules (e.g. testers) will be specified later.

- LED colors. All front panel LEDs have to comply with the following convention:
 - Power supply indicators – yellow
 - Error and abnormal condition indicators – red
 - Normal (working) condition indicators – green
- Mechanical. All VME-based modules have to comply with mechanical dimensions for 9U x 280 mm boards. For better rigidity it is recommended that all boards have a horizontal stiffener across to maintain board planarity. All the VME hardware is already purchased.
- Authorization. B.Baldin will authorize front panel mechanical drawings and the same vendor will produce final versions of the front panels for all modules.