



Downie, Evangeline <edownie@email.gwu.edu>

## MUSE Experiment Quotation

Michael Traxler <M.Traxler@gsi.de>  
To: Evangeline Downie <edownie@gwu.edu>

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Hi Evie,

TRB3:

The official (with offer from GSI and invoice) TRB3 price is after my current calculation 2294€/piece.  
This doesn't include tax.

I always feel bad about this, but 20% is kept by GSI administrations for their "effort" :-)

I hate that but I heard that this happens in many institutions.

Therefore I made sometimes the deal, that "customers" pay for example directly the FPGAs + PCBs + assembly costs to the companies and then I get all the parts and pay for the rest and make more modules for that (20% more money available). But I guess this would make a great problem to solve this formally from the US. You most probably need this "one" invoice for the finished boards (and not the components). Then I can not avoid this.

As 20 pieces is my standard lot, there is no "discount" for buying 20 in one batch instead of 10 now and 10 in a year.

So, a total of 52762€ for 23 TRB3.

PADIWA System:

Padiwa2:

Here I have a problem: The bare component costs (without PCB and without tax and without GSI overhead) is 32€. And then plus 50€ just for the 16 MMCX connectors (coax-cable connector)!

We have to talk about the way you want to connect the PMTs to the Padiwa. If you plug the Padiwa3 directly to a 16/64-channel MAPMT then these costs of the MMCX connectors are vanishing!

So, here the Padiwa2 calculation:

amount	component	price/EUR	comment
304	padiwa2	49690	mainly determined by the MMCX connectors
304	cables	8760	
74	adapter-boards	7920	
	sum	66370	

#+TBLFM: @5\$3=vsun(@ll..lll)

alternative Padiwa3:

amount	component	price/EUR	comment
304	padiwa3	28460	pin header instead of MMCX
304	cables	8760	
74	adapter-boards	7920	assembled at GSI to save costs
	sum	45140	

#+TBLFM: @5\$3=vsum(@II..III)

If you go for two batches the price will again increase:

amount	component	price/EUR	comment
152	padiwa3	17600	pin header instead of MMCX
152	cables	5170	
38	adapter-boards	5650	
	sum	28420	
	two batches	56840	assembled at GSI to save costs

#+TBLFM: @5\$3=vsum(@II..III)::@7\$3=@5\$3\*2

So, the price increase for two batches is around 24%.

I added always some contingency, so that I'm not doomed if some unforeseen additional costs come into the game. I don't want to get sued by you :-)

Just that you know:

In a real close cooperation with sharing the bills of the companies, as explained above, we can dramatically (~30%) reduce the costs.... But also increase you risk, if I made some mistakes in the calculation!

Michael

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 Dr. Michael Traxler  
 Tel.: [+49 \(0\)6159 / 71 1348](tel:+4906159711348)

GSI Helmholtzzentrum für Schwerionenforschung GmbH  
 Planckstraße 1  
 64291 Darmstadt

Gesellschaft mit beschränkter Haftung; Sitz der Gesellschaft:  
 Darmstadt; Handelsregister: Amtsgericht Darmstadt, HRB 1528;  
 Geschäftsführung: Prof. Dr. Dr. h.c. mult. Horst Stöcker, Peter  
 Hassenbach; Vors. des Aufsichtsrats: Dr. Beatrix Vierkorn-Rudolph  
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