

# Optical Splitters for TTC

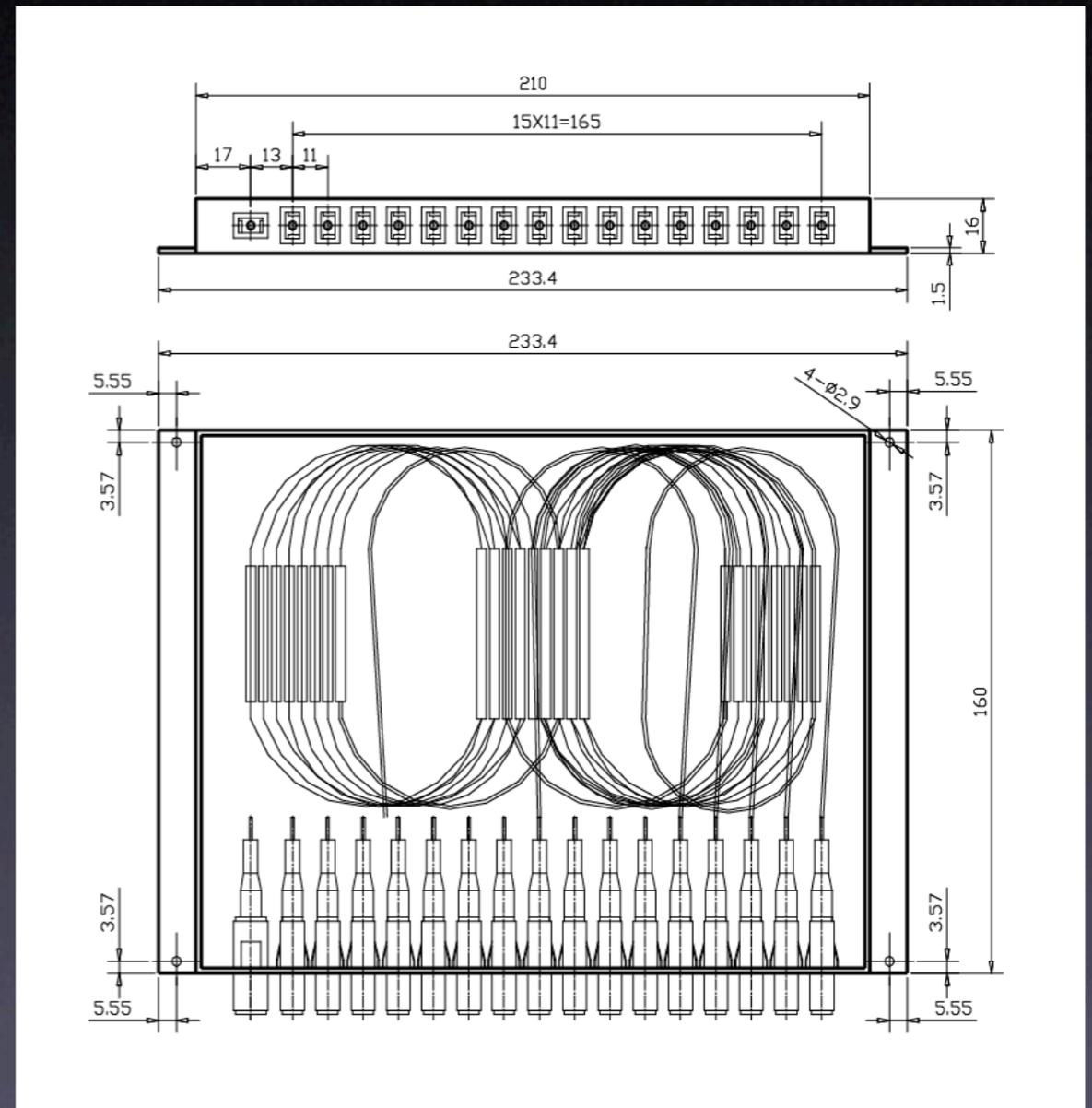
- Standard proposal: TTCoc
  - 19" horizontal rack-mount
  - Blocks vertical air-flow in a Rack
    - Could perforate top/bottom plates, but use of 250µm buffered fibre in the current design might prove fragile in the longer term
- Since the optical component itself is very small, why not mount it in a box with the same format as our standard electronics cards - i.e. VME

# More CMS background

- CMS has chosen a single-mode TTC distribution system
- Good opportunity to vary the connector type used by the TTC system
  - The ST connector is now quite old, newer more compact types are available
  - For a single-slot VME module, we start to lack front-panel real estate for 2.5mm ferrule connectors
    - Chosen MU for the first prototypes due to positive experience within CMS

# TTCvo

- VME form-factor Optical Splitter
  - 6U version 1x16 singlemode for first prototype
  - Order placed for 4 modules
  - Delivery Expected 1st of June
  - Front-panel option will make module 6U or 9U



# TT Cvo Specs

Specification	Min.	Typ.	Max.	Units	Comment
Wavelength		1310		nm	
Fibre Type	Single-mode, SMF-28				
Connector Type	MU-UPC				UPC polish for 45dB return loss
Insertion Loss			13.6	dB	$12\text{dB} \approx 10\log(1/16)$
Excess Loss		0.8		dB	
Uniformity			1.6	dB	
Polarization-dependent Loss			0.4	dB	
Return Loss	45			dB	
Package					See drawing
Temperature Range	-20		+85	°C	Operation