

## Cooling RE3/1 and RE4/1

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### Power dissipation for PetiRoc with integrated TDC

| Channel                                 | Chamber | FPGA+GBT   | 1 station  | 1 YE3   | Rack Power | PetiRoc<br>Dissipation |
|---|---------|--|--|---|------------|------------------------|
|   | 640     | 20 + 1W  | 18   |   | Eff 66%    |                        |
| [mW]                                    | [watt]  | [W]  | [W]  | [W]   | [W]        | [W]                    |
| 3.6                                     | 2.304   | 21   | 419  | 839   | 432        | 1271                   |
| <b>One Endcap Power</b>                 |         |  |  |   |            | <b>1271</b>            |
| PS efficiency definition = output/input |         |  |  | Power <sub>tot</sub> = L <sub>rack</sub> + L <sub>chamber</sub> |            |                        |
|   |         | $P_{\text{eff}} = L_{\text{ch}}/\text{power}_{\text{tot}}$ | $L_{\text{rack}} = (L_{\text{ch}}/0.66) - L_{\text{ch}}$ |   |            |                        |