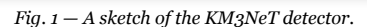


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detection units are connected with submarine **junction boxes** and through them to shore for power feed and data transmission. The **all-data-to-shore** data taking approach follows the choice done by ANTARES [3]. No trigger is done underwater; all signals from PMTs arrive onshore where they are triggered and processed by farm of computers. The **Trigger and Data Acquisition System (TriDAS)** must be able to handle an extremely large throughput of data arriving from off-shore; the DAQ modularity and scalability are needed properties.



purpose data transfer and synchronization, that allows to synchronize all the KM3NeT DOMs with 1 ns resolution. The data provided by the PMT Bases is collected and distributed to the CLB by means of two boards, the **Octopus Boards**. The CLB contains the electronic components for an optical link to shore. All necessary DC power is provided by the **Power Board** [6]. An aluminium structure provides heat conduction between the electronics inside and the exterior of the sphere. The electronic boards contained inside the DOM are shown in Fig. 3.



About **120 Gbps** throughput is expected from the full detector composed of **690 detection units**, assuming a photon-hit rate of 6 kHz for each 3" PMT. The first detection unit of KM3NeT that uses all the technologies described here will be installed soon offshore the French coasts near Toulon [8].

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