

Press Releases

SUBMARINE CONNECTIONS WITH SARDINIA: THE TERABIT PROJECT GOES LIVE AND STRENGTHENS CANDIDACY FOR ET



The [TeRABIT project](#) enters the execution phase for the network component with the exclusive acquisition of a portion of Sparkle's BlueMed submarine cable. This will allow to extend GARR-T, the new generation of GARR network, to Sardinia, thus connecting it to the rest of the research network on the national territory.

The TeRABIT project, funded by the NRRP with INFN and OGS as proposers and CINECA and GARR as partners, is creating a digital research

infrastructure that integrates a high-performance network with HPC resources and distributed computing to make it available to the entire scientific community.

Thanks to the current acquisition and the use of cutting-edge technologies, it will be possible to exploit the optical spectrum of the BlueMed submarine cable system. This means that there will be more lanes in the fiber, managed by GARR, exclusively for research data traffic. This innovation represents the first step towards achieving dual high-speed fiber optic connectivity in Sardinia, ensuring not only rapid data transmission to the research and university world but also greater redundancy and reliability extending globally.

From a technological point of view, this is a unique result so far in the national panorama, as explained by **Massimo Carboni**, Chief Technical Officer of GARR: "Thanks to the open cable technology, which offers the possibility to freely manage a wide range of spectrum rather than individual optical signals, this new digital fiber optic bridge will eliminate the distance of the island creating a seamless integration between the GARR-T infrastructure in the peninsula and that of Sardinia, effectively opening a unified optical network throughout the national territory. Today's is the first stone of the expansion of GARR-T, which will be completed by 2025 and will provide connectivity up to 400 Gbps".

"We are proud to present this first concrete result today," commented **Mauro Campanella**, scientific coordinator of the TeRABIT project. "We are creating a broad-spectrum infrastructure, perfectly harmonized with other ongoing interventions financed by the NRRP. Once operational, the new connection will bring Sardinia's infrastructure and researchers closer to TeRABIT's HPC computing systems and to the resources of ICSC, the National Research Center in HPC, Big Data, and Quantum Computing being installed throughout the national territory."

The new network connection will support the needs of several research infrastructures and laboratories in Sardinia and will strengthen the candidacy of the Sos Enattos area to host the Einstein Telescope, the future infrastructure to be built in Europe dedicated to gravitational waves, a third-generation detector 10 times more sensitive than those currently existing.

Once the expansion is completed, the GARR-T network will guarantee an increase of 5,000 km of fiber optic, reaching a total capacity of approximately 40 Tbps throughout Italy.