

NATIONAL TIME SCALE OF SINGAPORE

SYNCHRONIZING SINGAPORE'S TIME TO INTERNATIONAL ATOMIC TIME (TAI)



The National time scale, maintained by the National Metrology Centre (NMC), is the local realisation of Coordinated Universal Time (UTC) in Singapore. Through regular steering of time, the UTC(SG) is aligned to UTC within 20 nanoseconds. The Singapore Standard Time (SST) is generated by advancing the UTC (SG) by 8 hours to account for the time zone. The SST is therefore aligned to the international time scales.

NMC currently maintains an ensemble of hydrogen maser and caesium atomic clocks. They are regularly compared with other atomic clocks in a global network of time transfers via Global Positioning System (GPS). Time data are continuously sent to BIPM, which in turn computes the International Atomic Time (TAI) and UTC based on contributed data of some 400 atomic clocks around the world.

Industry users and the public can access the national time scale via MNC's computer time synchronisation service.

ABOUT NATIONAL METROLOGY CENTRE

A*STAR's National Metrology Centre (NMC) is the national measurement institute of Singapore, dedicated to advancing measurement science for an innovative and global economy. NMC conducts R&D in the science of measurement to enable innovation for emerging technologies. With a multi-disciplinary team of scientists and engineers, NMC supports the growth of advanced technologies. With a multi-disciplinary team of scientists and engineers, NMC supports the growth of advanced technologies for industries such as clean energy, nanotechnology and medical technology.

NMC establishes and maintains measurement standards at the highest level of accuracy in Singapore, and are recognised worldwide through the Mutual Recognition Arrangement on measurement as being traceable to the International System of Units (the SI units) under the Metre Convention. Our internationally recognized measurement capabilities help Singapore companies in a broad range of industry sectors, including aerospace, electronics, manufacturing, pharmaceutical and biotechnology, and oil and gas, meet international trade requirements and gain access to markets worldwide. The enhanced accuracy of measurements and standards provided by NMC promotes fair trade, safe environment, productivity, high quality and reliable products.

NMC works with companies on research projects, consultancy, training, precision measurements and calibration services. For more information about NMC, please visit www.a-star.edu.sg/nmc/

