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## Highly reliable industrial solid-state RF Amplifier for synchrotron light sources

*Wednesday, 10 May 2023 16:30 (2 hours)*

Cryoelectra's 3rd generation of solid-state RF amplifiers (SSA) for synchrotron applications is presented in the frame of a poster. The SSA delivers up to 160 kW cw RF output power at 500 MHz. The amplifier is of industrial design regarding space and maintenance requirements. Together with its redundant architecture this allows for a 24/7 operation over several months without any need of maintenance.

The output power of the amplifier is produced by 15 RF power modules of our patented "tower" design with 16 RF transistors each. With its advanced water-cooling scheme, cable-free 16-way high power combiner, and reliability optimized RF transistor path, the "tower" module enables industry leading run-times. A newly designed compact 15-way wave guide combiner collects the output power of each RF module for a practically lossless combination. For a smooth operation of the solid-state amplifier and reliable machine and personnel protection, all components are continuously monitored by a sophisticated control system.

### Funding Agency

### Footnotes

### I have read and accept the Privacy Policy Statement

Yes

**Primary authors:** NEDOS, Mirco (Cryoelectra GmbH); PUPETER, Nico (Cryoelectra GmbH)

**Presenter:** NEDOS, Mirco (Cryoelectra GmbH)

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