



REVITALIZING OUTDATED HEATER SYSTEMS

HIGHLIGHTS

- ✓ The well-known [shutdown](#) of 2G and 3G networks is bringing many challenges to people and businesses that have relied solely on networking devices supporting these technologies.
- ✓ Thorsten Stegmaier, a software engineer from Switzerland, faced a similar predicament with his [personal ALDE heater project](#). With ALDE's Smart Control supporting 2G and an outdated RS232 only, it presented a danger to the viability of the solution.
- ✓ Fortunately, our TRB142 gateway came to the rescue, offering support for the RS232 interface and advanced 4G LTE mobile technology. Our gateway enabled remote control functionality and heater data readings, ultimately revitalizing the solution.

THE CHALLENGE – 2G CALLED, SAYS IT'S DOWN

As our dependency on mobile technology increases daily, the continuous development of newer versions like [5G](#) brings exciting and futuristic innovations, like self-driving cars. However, you must always lose some to win some. In this process of growth, older generations like 2G and 3G networks face an inevitable fate – global shutdowns.

The shutdown of 2G and 3G networks is a logical step to increase network [bandwidth](#) for 4G and 5G. Yet, it presents challenges for individuals and businesses relying on these technologies, as Thorsten Stegmaier experienced with his ALDE heater project.

A previously used communication solution for communication with ALDE heater consisted of ALDE's Smart Control and SMS messaging. Unfortunately, this brought a huge challenge, as this controller had an old-school RS232 interface and was based on a 2G network, meaning it could no longer support the needed communication. Without communication with the heater, Thorsten was unable to remotely control the heater and attain all the necessary information about the project metrics.

Replacing it with a device that supports the RS232 interface, newer mobile technologies, and is capable of enabling remote control and data reading is necessary. However, it consequently entails challenges, such as increased costs, complexities associated with technology migration, and loss of convenience because of the requirement for specialized expertise. But if there's one thing we know, it's that there's no situation without a way out.

TOPOLOGY



THE SOLUTION – 4G TO THE RESCUE

The solution to revive outdated networking components lies within a small, but very mighty and easy to install device – our TRB142 gateway. With a user-friendly web interface for hassle-free configuration and management, along with robust network connectivity support, this gateway proved to be the perfect match for Thorsten’s solution. But let’s let the gateway’s features speak for themselves.

First, the TRB142 gateway supports 4G LTE connectivity, which is a crucial element that makes the heater solution operate effortlessly. This connectivity empowers Thorsten with remote control and monitoring capabilities using the Telegram app, facilitated by the TRB142’s support of the Python-telegram-bot library. By sending commands and requests via Telegram, the system provides Thorsten with a heater’s status, error reporting, and control options, including temperature, gas levels, and overall heater functionality.

The great thing about communication via Telegram is that it ensures a robust security framework, as authorized administrators have the power to restrict access for other users, allowing only approved individuals to interact with the system via Telegram.

Of course, achieving all of this control and data wouldn’t be possible without the RS232 interface. This interface functions like a link intended to transmit commands from Thorsten to the heater panel and provides him back with data about the system’s status and performance. The inclusion of an RS232 interface in the TRB142 significantly reduces the cost of transitioning from ALDE’s Smart Control system. This feature eliminates the need for Thorsten to invest in new heater panels with different interfaces, saving expenses. Moreover, it eliminates the requirement for acquiring particular know-how or expertise.

The TRB142 not only revitalizes Thorsten’s solution, giving it a second lease on life, but it also plays a crucial role in elevating the user experience. By providing exceptional flexibility and convenience, it empowers Thorsten to efficiently manage the heater and its operations with ease.

