

# Device Server

## Hard and software development

### for a serial device server: CSAFE to ethernet or WLAN

#### Customer requirements

The customer delivers training software and computers as PCs to a fitness studio. In order to make individual training schedules, results and information about the fitness equipment available at the corresponding locations within the studio, the individual components, server and client, have to be connected with each other. Until now wired networks (ethernet) were used, which in individual cases led to a lot more work and considerable additional expenses for the studio operator due to the cables and wiring.

In addition to the common fitness equipment, in most of the studios cardio equipment (e.g. ergometers) is also used. These only have a standardized serial interface for data exchange, CSAFE. These cardio devices are also supposed to be connected via LAN and WLAN.

Existing device servers for the conversion of serial communication to network-oriented communication often only support wired technology (ethernet). In addition, what is also needed for this equipment is an adapter for the DSUB9 interface on the device server to the needed CSAFE interface (realized as a RJ45 socket/connector) of the cardio device.

#### Technology used:

Debian GNU/Linux, CSAFE, EIA-232, IEEE 802.11n, ARM9, CAD&CAE, C99, POSIX

#### comlet solution

In order to connect the cardio equipment with the network (LAN/WLAN), comlet designed a compact, credit card size device server with a low overall height. Apart from the CSAFE and ethernet interfaces, it also provides the needed WLAN connectivity. The space-saving dimensioning of the module allows it to be placed near the cardio device without attracting attention.

Linux is used as operating system. Due to the high level of standardization of this operating system, there is enough room for any future developments.

