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## EPICS IOC embedded in Android application

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EPICS applications are typically hosted on vxWorks, GNU/Linux, RTEMS, Solaris, MS Windows and MacOS operating systems. However, one of the most widely used operating systems is not included in this list: Android.

One could think that Android is typically out of the scope of EPICS environments, but looking from the opposite point of view: could manufacturers which base their products on Android take the advantage of the EPICS environments? The answer is yes, they could.

This work shows a prototype Android-based application that embeds the well-known *modbus* IOC. The system is based on an Octa-Core board with ARM Cortex A-53 processor that runs Android 5.1. The application allows starting/stopping the IOC as well as setting the network parameters of the *modbus* server. The IOC shell is always displayed and commands can be sent to the IOC while it is running. Finally, the application also includes an indicator to warn when anomalies are detected, for instance, if there is no communication with the *modbus* server.

An upgraded version of this driver is presently used in the EPOWERSYS range of high stability power converters. 11 units of standard 300A, 20V model are to power the quadrupole magnets in the Medium Energy Beam Transport section of the Linac at the European Spallation Source (ESS) in Lund, Sweden.

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