

Project Information

Project title	Containerized Software Oscilloscope
Project type	AMOS
Industry partner	Siemens Healthineers
Contact person	Wieland Eckert

Project Description

Project summary	<p>The software shall be a containerized (Docker) service that can receive a UDP data stream, representing data for a 10-channel oscilloscope, and can visualize this data for rendering by a web browser using the service.</p> <p>The service shall</p> <ul style="list-style-type: none">• Be able to handle (at least) 10K of samples per second• Provide a base UI including the data visualization• Allow for setting channels and positioning channels• Allow for setting the sweep speed• Allow for labeling a display grid• Allow for setting triggers (level, channel, hysteresis)• Be provided as container for use in a microservices system <p>Emphasis is put on quality, so the software shall</p> <ul style="list-style-type: none">• Have a clear quality assurance framework• Provide appropriate automated regression tests• Have a second container generating test data <p>Development should utilize continuous integration.</p>
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Project Constraints

Core technologies	UI: Javascript, HTML/CSS, WebGL Service: Performance-appropriate programming language, frameworks Operations: Docker, CI/CD on GitHub
Team language	English
Needed resources	None
Other comments	