



**SOMMACT** Self Optimising Measuring MACHine Tools

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## **Deliverable D4.1**

### **Specification of Industrial PC**

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1) **R** = Report, **P** = Prototype, **D** = Demonstrator, **O** = Other

2) **PU** = Public, **PP** = Restricted to other programme participants, **RE** = Restricted to a group specified by the consortium, **CO** = Confidential, only for members of the consortium



## Executive summary

The IPC is dedicated to host the self-learning software systems and the other hardware and software necessary to acquire data from those sensors that are not directly connected to the CNC.

This report provides the technical specification of the SOMMACT Industrial PC (IPC). The specification is based on the requirements that derive from the following documents:

- D1.3 – *Specification of the system required functions;*
- D1.4 – *Specification of high level system architecture;*
- D2.4 – *Preliminary metrological specification of the demonstrator.*

The IPC will be implemented on a FIDIA C20 CNC structure because, in addition to typical PC characteristics, it provides:

- physical characteristics that are required for working in an industrial environment (e.g. robustness to vibrations, power supply variations, temperature variations, protection from contaminations and EMC);
- standard hardware interfacing to I/O LUX and Profibus inputs/outputs;
- real-time interfacing for (possible) additional linear/rotary encoders.

Requirements for logical and physical interfaces between the different sensor(s)/artefact(s) systems and the Self-learning core are documented in Deliverable D1.4.

This document provides specifications of the IPC along with specification of sensors data acquisition hardware and software. Additional hardware specifications are provided for the interfaces between SOMMACT demonstrator modules and the IPC.

This document provides specifications at the level that is deemed indispensable for the implementation of the demonstrator IPC.



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