

Controller requirements: Productivity+™ Scanning Suite

Fanuc Series 30i / 31i / 32i

The information within this document provides the minimum recommended controller requirements to enable the use of the Productivity+™ Scanning Suite on a machining centre – including those produced by DMG Mori (Celos with Fanuc MAPPS) and Makino (Pro 5/6) – with a Fanuc Series 30i, 31i or 32i controller.

NOTE: Part numbers and descriptions within this document relating to items provided by organisations other than Renishaw are provided for information only. Whilst every effort has been made to ensure these are accurate, contact the machine tool builder, controller OEM or distributor for confirmation before purchasing.

CNC plug-in installations

MODEL A controllers: use of firmware version Gxx4 78.1 or later is recommended ¹

MODEL B controllers: use of firmware version Gxx1 61.2 or later is recommended ¹

| Controller option | Option number |
|---|-------------------------------|
| High-speed serial bus (HSSB) extended driver library option | A02B-0207-J900 ^{2 3} |
| Continuous positional data output function | A02B-03xx-J989 ³ |
| Interrupt type custom macro (UINT) | A02B-03xx-J874 ³ |
| High-speed skip (2 × minimum) | A02B-03xx-J848 ³ |
| Multi-step skip | A02B-03xx-J849 ³ |
| 'Macro B' user macro option | ³ |
| Additional custom macro common variables | A02B-03xx-J887 ³ |
| Three pairs of M-codes | |

| Application-dependent options | For use with | Option number |
|---|-------------------------------------|--|
| Part program memory 512 KB | | A02B-03xx-J946 ³ |
| Number of program expansion 1 | | A02B-03xx-J953 ³ |
| Three dimensional co-ordinate system conversion (G68) | Multi-axis prismatic measurement | A02B-03xx-J713 ³ |
| Titled Working Plane (TWP) (G68.2/G68.4) | Productivity+™ Blade Toolkit | 02B-03xx-S676 ³ (MODEL A: not 32) |
| | | A02B-03xx-R522 ³ (MODEL B) |
| Tool centrepoint control (TCP) (G43.4) | Productivity+™ Machine Health Check | A02B-03xx-xxxx ³ (MODEL A) |
| | | A02B-03xx-S677 ³ (MODEL B) |

¹ For earlier firmware versions, contact Renishaw.

² A HSSB card is not required with this software option.

³ Contact Fanuc for further information and the appropriate option number.

In addition to the Productivity+ CNC plug-in, a series of optional toolkits are available providing enhanced functionality.

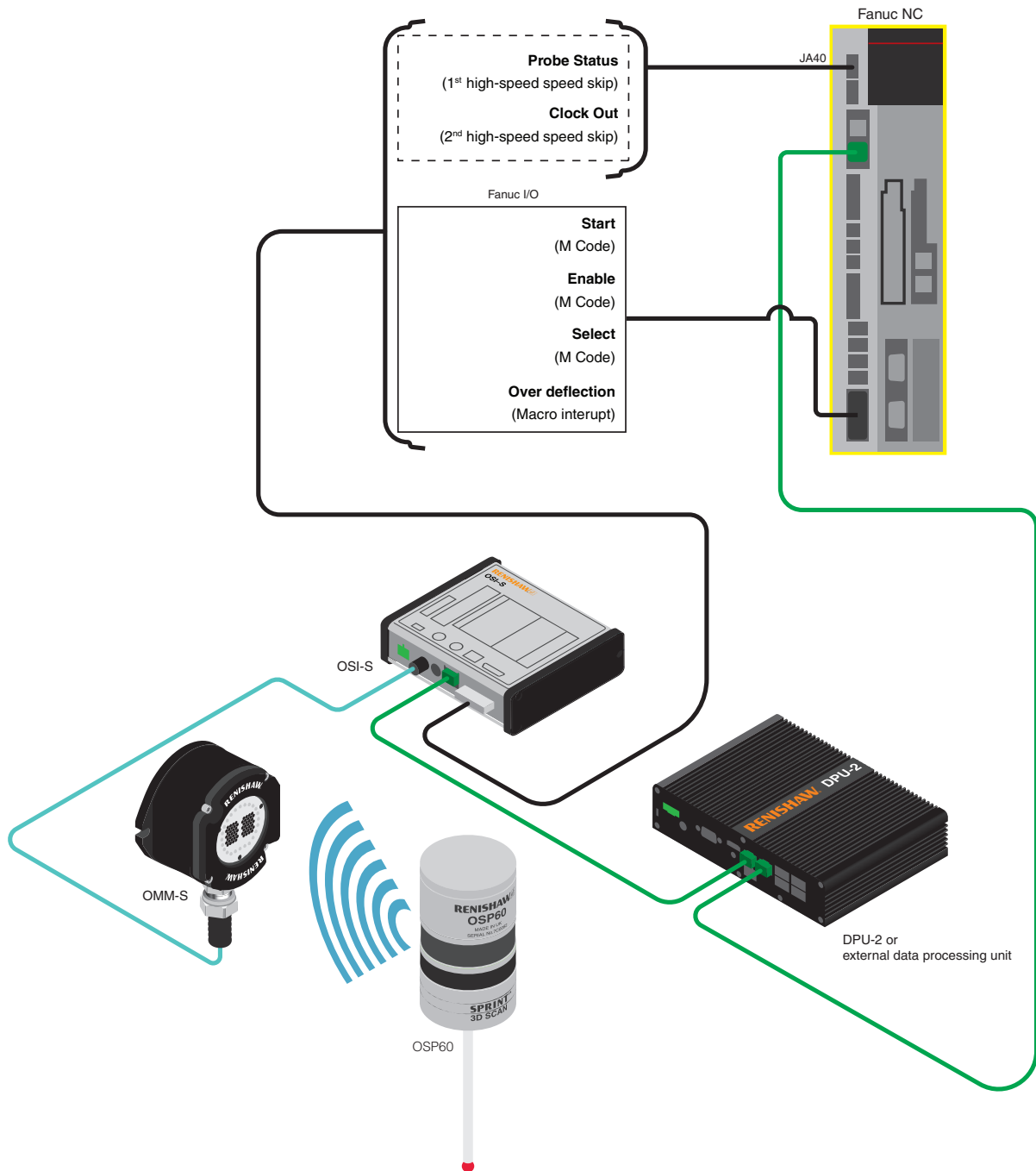
Typically, run-time elements of the Productivity+ Scanning Suite are installed on an external data processor. Use of a Renishaw DPU-2 (Renishaw part no. A-4007-4230) is recommended.

The minimum recommended specification for any alternative external data processor (PC) is:

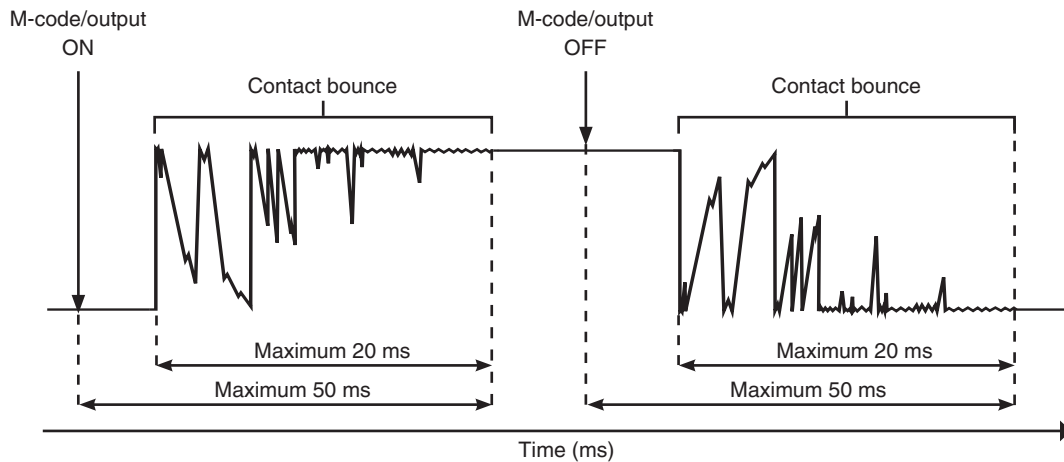
- Microsoft® Windows® 10 (Enterprise or Professional)
- Intel Core i3-5010U
- 2.1 GHz, 2 cores, 4 threads
- 4 GB RAM
- 64 GB solid state drive
- Two 100/1000Base-T Ethernet connections (dedicated to Productivity+). If a customer specific network connection is required, an additional Ethernet connection is required

NOTE: It is possible to install onto an external data processor with a lower specification, however this is the minimum recommended specification based on the data processing requirements of Productivity+ software applications.

Connection schematic



Output signal requirements



Any increase in these values will impact negatively on cycle times and may prevent the system working reliably.

The 3 × pairs of latched M-codes (high-speed digital outputs) should be reset when Reset is pressed on the CNC machine tool.

The output/input signal level change must be from 0 V to between 5 V and 30 V.

Use of solid-state relays is recommended as issues can arise from noise on mechanical relay contacts (contact debounce time of 20 ms maximum).

www.renishaw.com/contact

#renishaw

+44 (0) 1453 524524

uk@renishaw.com

© 2013–2024 Renishaw plc. All rights reserved. This document may not be copied or reproduced in whole or in part, or transferred to any other media or language by any means, without the prior written permission of Renishaw.

RENISHAW® and the probe symbol are registered trade marks of Renishaw plc. Renishaw product names, designations and the mark 'apply innovation' are trade marks of Renishaw plc or its subsidiaries. Other brand, product or company names are trade marks of their respective owners.

WHILE CONSIDERABLE EFFORT WAS MADE TO VERIFY THE ACCURACY OF THIS DOCUMENT AT PUBLICATION, ALL WARRANTIES, CONDITIONS, REPRESENTATIONS AND LIABILITY, HOWSOEVER ARISING, ARE EXCLUDED TO THE EXTENT PERMITTED BY LAW. RENISHAW RESERVES THE RIGHT TO MAKE CHANGES TO THIS DOCUMENT AND TO THE EQUIPMENT, AND/OR SOFTWARE AND THE SPECIFICATION DESCRIBED HEREIN WITHOUT OBLIGATION TO PROVIDE NOTICE OF SUCH CHANGES.

Renishaw plc. Registered in England and Wales. Company no: 1106260. Registered office: New Mills, Wotton-under-Edge, Glos, GL12 8JR, UK.

Part no.: H-5465-8507-07-B

Issued: 11.2024