

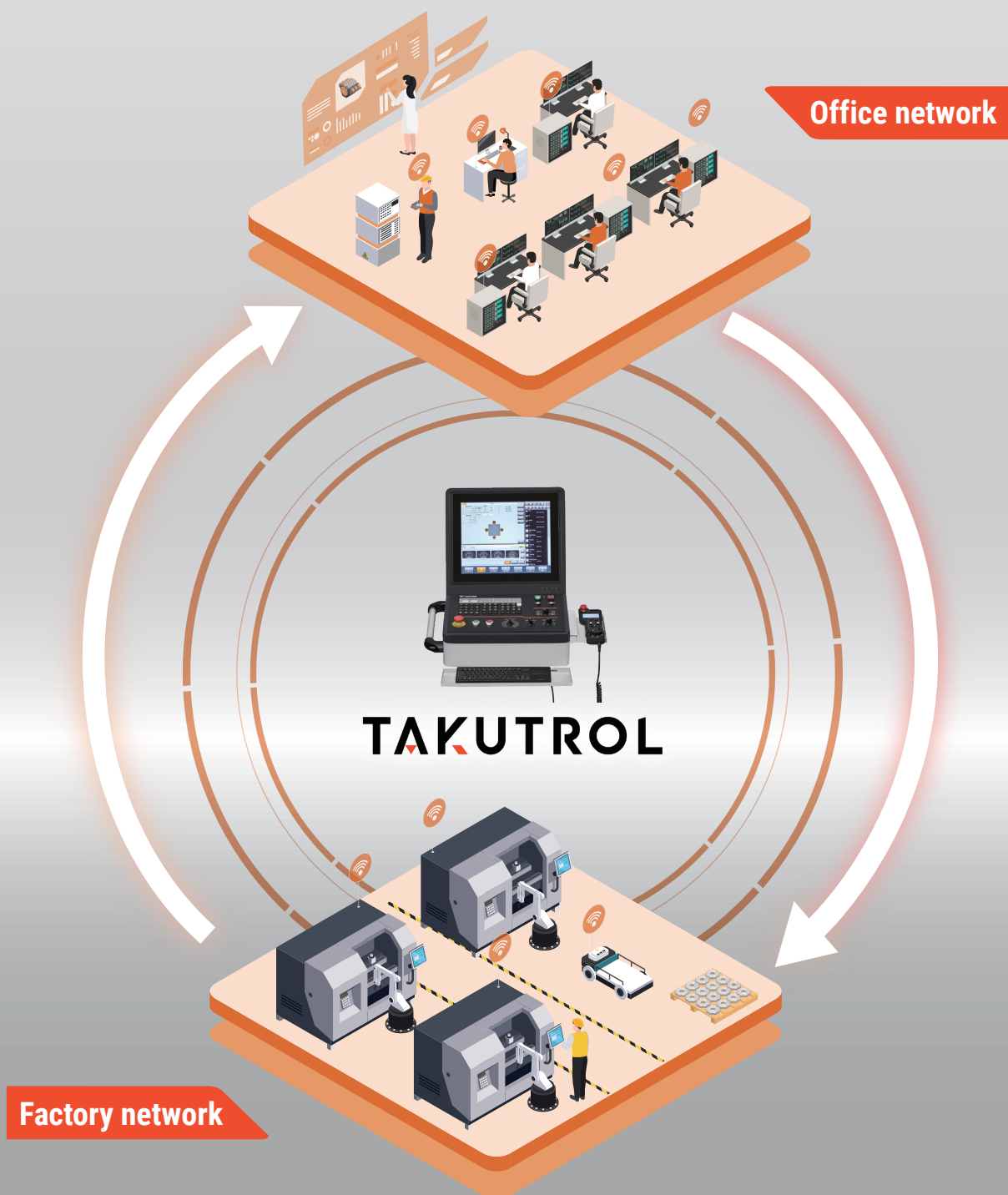


TAKUTROL

Powering Precision with Intelligent Control

TAKUTROL Making It Easier for Everyone!

TAKUTROL, developed by Takumi, is a CNC control system designed to meet the needs of modern factories striving for high efficiency, precision, and intelligent automation. Unlock the full potential of your factory with our advanced network solution. Gain complete visibility of your entire production line. By collecting and analyzing utilization data, you can reduce machine downtime, boost productivity, and maintain a consistently high-performance production environment.





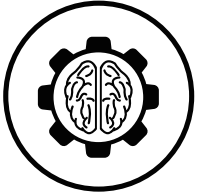
Hardware

- High Performance PC front-end with Intel-i7 CPU running Microsoft Windows 10 OS with UWF feature
- FANUC 0i-MF Plus CNC controller
- Renishaw LTS tool setter and OMP-40 spindle probe
- Rugged 19" industrial resistive LCD touch screen
- Standard keyboard and touchpad
- Handwheel
- USB and network ports for file transfer, bar code scanner, and external devices

Software & function

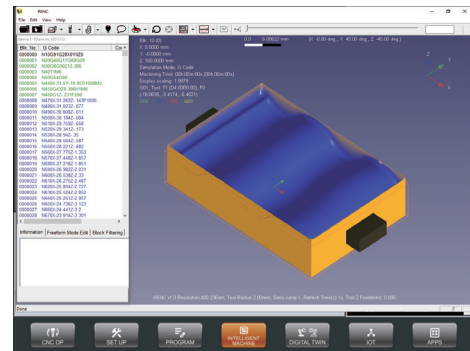
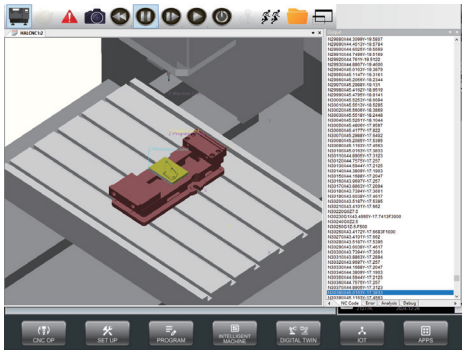
- Standard CNC control operation
 - FANUC compatible operation UI
 - POS, PROG, OFFSET, SYS, MSG screens
- User friendly work and tool set up
 - Rectangular and circular center find functions
 - Automatic tool change and tool length measurement
 - Simple probing setup
 - Measure the dimension of workpiece
- Programming
 - Conversational editor
- Intelligent machine
 - Advanced motion path planning with smooth toolpath generation and simulation
 - Machine monitor (spindle vibration monitor)
- Digital twin
 - Online/offline solid model simulation
 - Remote diagnostics
- Factory connectivity
 - Friendly connectivity with shop floor/ factory controller
- Utility
 - VNC/FTP/browser/operator log
 - iCal-Assist
 - Machine maintenance (operation log)

EASY_{AI}



| Digital twins

Digital Twin enables online/offline solid model simulation, supporting machining simulation, collision detection, and program verification to prevent setup and machining errors.



| AI path smoothing

Advanced digital control optimizes axis movement and tool paths for high-speed, high-precision machining. It improves surface quality, reduces machining time, and enhances motion with AI Path Smoothing for smoother, more accurate results.



The small radius corner has poor surface finish with noticeable tool marks.

Surface finish at the small radius corner has improved, while edge accuracy is maintained.

Corner radius improved

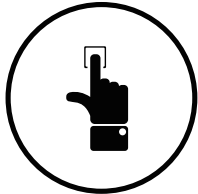


High speed and high precision setting

Provide simplified parameters and quickly setting for different machining conditionend.

ITEM		PARAMETER TUNING				16:04:15	
ABSOLUTE		RELATIVE		FEEDRATE(F)		0 mm/min	
X	-63.0000	X	-63.0000	PARTS COUNT		4	
Y	-79.9470	Y	-79.9470	RUN TIME		0H 00M 29S	
Z	0.0000	Z	0.0000	CYCLE TIME		0H 30M 55S	
A	-11.0000	A	0.0000	MA-PRM SET(AICC)			
C	-54.0000	C	-54.0000	X AXIS PRIORITY VELOCITY PRECISION			
MACHINE		DISTANCE GO		LEVEL			
X	-63.0000	X	0.0000	MA-PRM SET(AICC)			
Y	-76.9470	Y	0.0000	Y AXIS PRIORITY VELOCITY PRECISION			
Z	0.0000	Z	0.0000	T-CON			
A	0.0000	A	0.0000	LEVEL 1 10			
C	0.0000	C	0.0000	ACC FOR BIPL 1000.000 500.000			
MODAL G00 G80 G15 F 0 H 30 G17 G98 G40.1 H 0 G98 G95 G25 D 0 SP TOOL 2193 G04 G97 G13.1 S 8500 STAND BY 801 G21 G54 G96.1 G40 G54 G54.2 G40 G69 G80.5				CORNER MAX C			
MESSAGE: *** *** *** PROGRAM: DER1.NC 0000000				ACC CHG TIME(BELL) 32.000 64.000 MAX ACCELERATION 500.000 300.000 T-CON AIPL ACC/DEC 0 8.000 CORNER FEED DIFFER 1000.000 200.000 MAX CUT FEEDRATE 10000.000 10001.000			
ABSOLUTE		RELATIVE		ALL		PARAM	

EASY OPERATION 02



Friendly Work and Tool Set Up

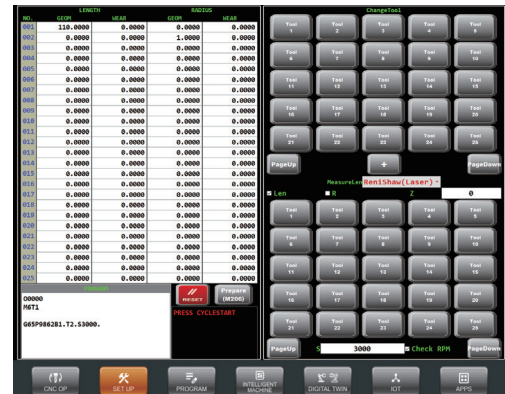
| Set work offset

The friendly work and tool setup features allow users to get started quickly, reduce setup time, and minimize errors caused by manual settings.



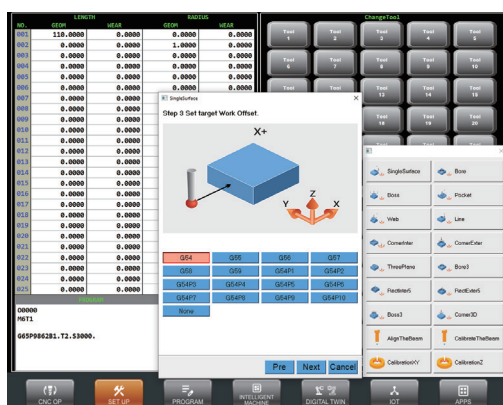
| One-button tool change and tool length measurement

Effortless operation that reduces training time, enhances efficiency, and is compatible with a wide range of tool length measurement systems.



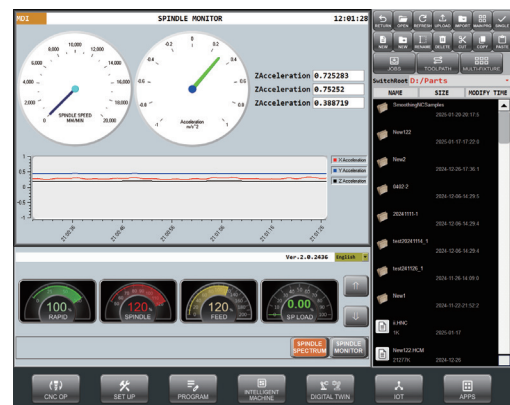
| Simple probing setup

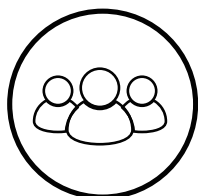
Easily create measurement programs with step-by-step graphical guidance—no coding needed. From tool length to workpiece probing, everything is streamlined for quick setup. Upload via MDI mode and run instantly for a faster, smarter workflow.



| Advanced spindle monitoring

Real-time vibration detection and intelligent thermal elongation compensation for enhanced machining stability.





Monitor Machine Performance

Machine utilization rate

The system provides comprehensive visualization of historical utilization data, alarm logs, and operation records.

TAKUMI PSH

REPORT - Machine Time

This is a report that shows machine status summaries for a given timeframe.

Run Time = machine is running part programs
 Idle Time = machine not running part programs
 Alarm Time = machine has an active alarm
 Offline Time = machine is offline
 Other Time = machine state is unspecified

No Data Time = no machine data was collected
 Query Time = duration of queried timeframe
 Data Count = number of data points collected
 Time Interval = data collection interval

ID	Name	Model	Run (hr)	Idle (hr)	Alarm (hr)	Offline (hr)	Other (hr)	Total Data Time (hr)
200	TAKUMI H6	U-SERIES 5-AXIS	3.57	5.62	0.00	0.00	0.00	9.19
			0.5% 0.8%	98.7%				
201	TAKUMI UC320	UC-SERIES 5-AXIS	3.61	18.93	1.02	0.00	0.00	23.57
			0.5% 2.6%	81.9%	96.7%			
202	TAKUMI H10	H-SERIES HighSpeed	7.22	78.43	0.02	0.00	0.00	85.67
			1.0%	10.9%				

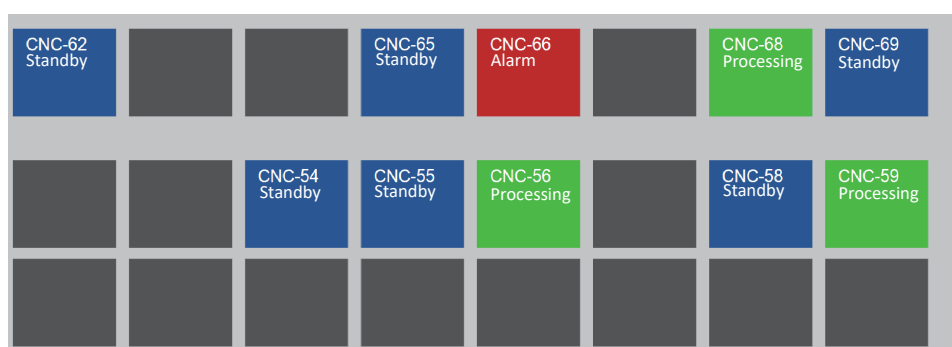
Individual machine display

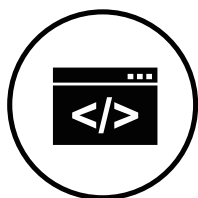
It enhances utilization by linking machine tools and offering visual insights into factory operations and machining processes through analytics.



Visualize the factory

Leverage real-time and historical data to minimize machine downtime and maximize operational efficiency. Instant alarm notifications enable swift intervention, reducing the risk of prolonged stoppages. Comprehensive tracking of utilization rates, alarm logs, and operation history supports data-driven diagnostics and continuous improvement.

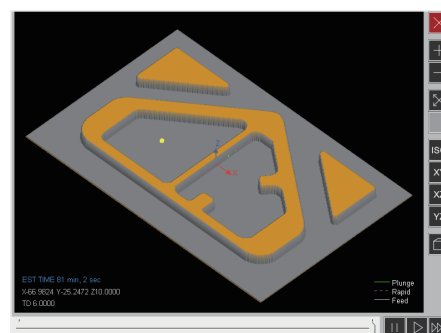
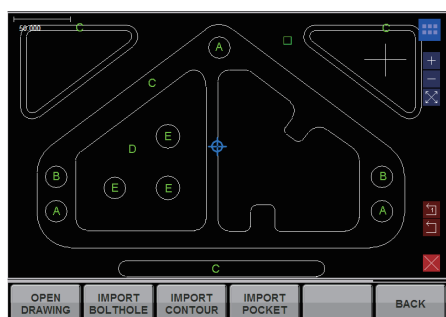
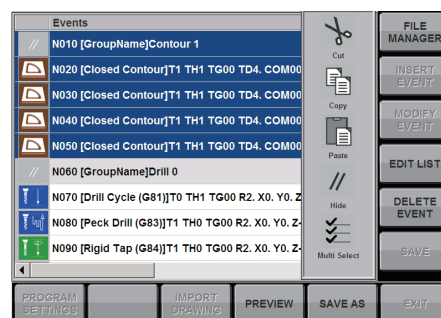




Conversational Programming

| Smart and intuitive programming

Conversational Event Based Programming allows making part programs by simply choosing machining events and configuring its parameters, without having to write G-Code.



No.10, Gong 10th Rd., Dajia Distr., Taichung City 437, Taiwan

T +886 4 26811215

F +886 4 26822803

sales-os@takumi.com.tw

www.takumi.com.tw

