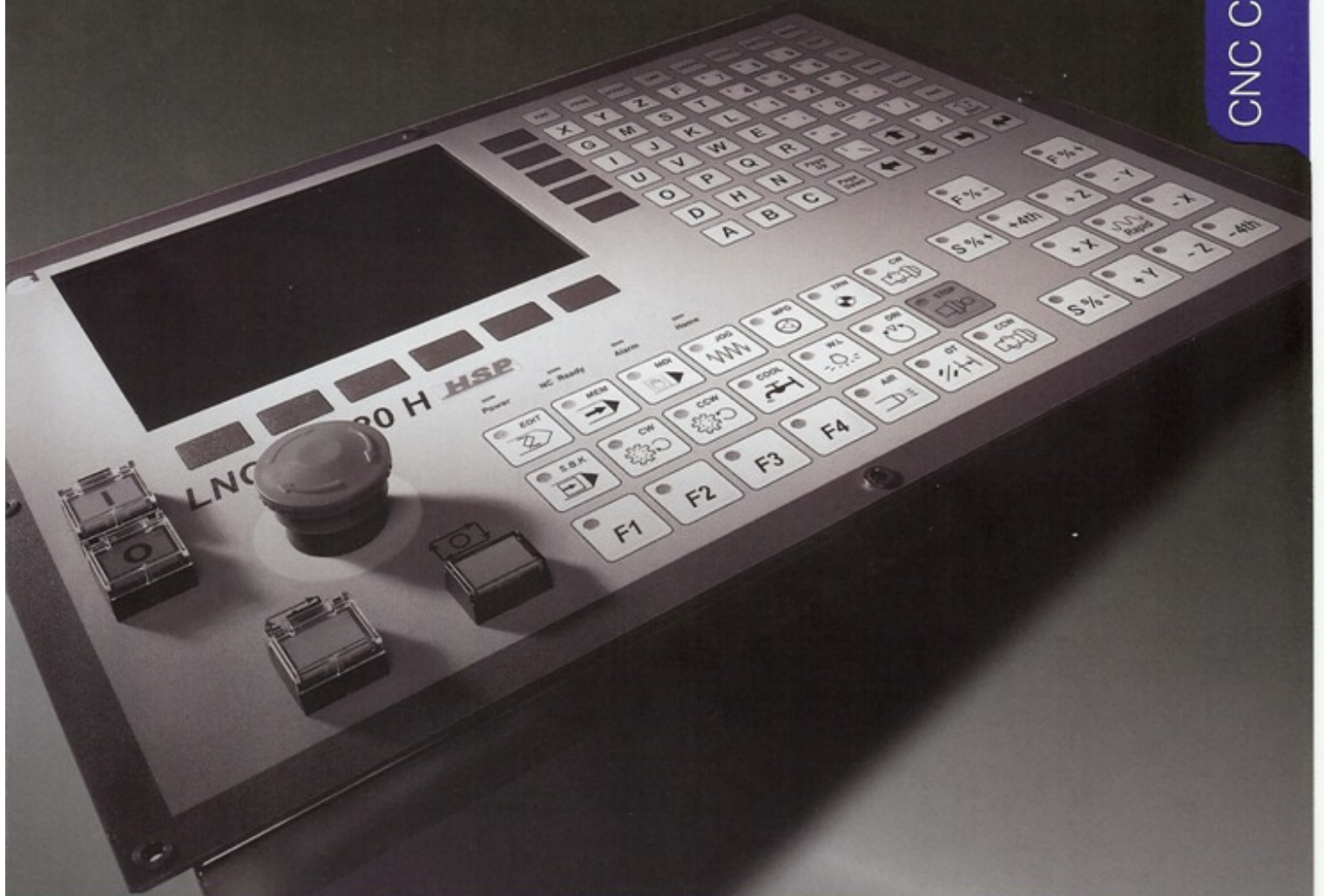


LNC

www.LNC.com.tw

Leading Numerical Controller in the World

CNC Controllers



LNC-520 SERIES

LNC Technology Co. is a specialist in the design and manufacturing of DOS-Based controllers with vast investment on research & development as well as strict quality control. LNC Series controllers are suitable for the applications in precision industrial equipments, automation production equipment and measuring systems.

Standard models include LNC-M520 milling controller, LNC-T520 lathe controller and LNC-G520 grinding controller that can all be extensively applied to various industries such as machinery, automation and semiconductors to name a few.

LNC-520 SERIES

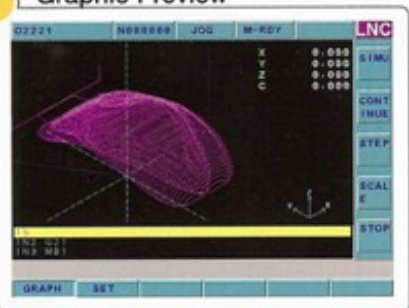
High-end Integrated PC-Based Controller

FEATURES

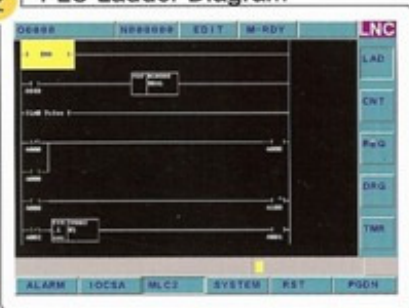
1. V-commands can be applied with a linear scale to realize close-loop control (optional).
2. High speed & high precision control feature ensures superior machining capacity at high feed rate with optimal corner deceleration & look ahead functions.
3. Absolute encoders can be applied to skip HOME return procedure, reduce pre-run time before machining, and also prevent tool collision caused by improper HOME return operation.
4. Rigid tapping RMP of M2 threading can reach up to 4000 RPM which meets CLASS 2 standard.
5. Ball bar test & sampling of high-speed position feedback signals provide the maximum & average offsets between ball bar path & command path which can serve as a reference for spike compensation.
6. Lathe spindle positioning function enables users to make random-point positioning (CH positioning).
7. Program restart function allows users to resume the previous machining from the last ending point. 2 program-resuming methods are provided: users can resume the program from the last ending point either by assigning a program line or by a block number. The search result can show up to 12 M codes, 2 T codes, & 1 S code.
8. Machining program batch function allows users to assign up to 14 machining programs for unremitting operation. Users can also choose whether to stop each time after a machining program is finished. This function is most suitable for workpieces with multiple machining steps.
9. Multi-block MDI users can input and execute up to 100 lines of commands, as well as call MACROs or sub-programs which simplifies the editing procedures tremendously.
10. Compound G code conversational function enables users to insert a canned cycle for ease of programming with a function list for quick selection, command hints, & tool path diagrams.
11. Graphic preview function provides graphic simulation by step and provides 7 angles & zoom-in functions for preview.
12. 2D CAD/CAM function provides project management function and direct simple 2D graphic editing. Users can input DXF files from which tool paths are generated automatically. Suitable for 2D machines.
13. PLC ladder diagram provides counter, timer, R register, D register, & I/O/C/S/A bits information.
14. Machining information provides machining time, total operation time and part count. Users can set the maximum allowed part count.
15. Compensation values can be modified during machining which makes it convenient for operation.
16. MPG interrupt function enables users to increase/decrease the motion amount of tools in Auto mode and to further change the tool path.
17. Hardware diagnosis function provides the signal statuses of DOG, motor encoder, Z axial signal, remote I/O connection, encoder cable and more.
18. Installment function provides 10 sets of expiry dates for setting; if the correct password is not entered within the expiry date, the machine will lock automatically.
19. LNC integrated communication software makes this system easy to upgrade, input and output parameters & PLC, as well as execute DNC machining.
20. All series of LNC products are CE certified.
21. Can support control of up to 3 spindles. Lathe side-facing (ex. side-drilling, side-tapping, etc.) are also available.

SOFTWARE DISPLAY

1 Graphic Preview



2 PLC Ladder Diagram



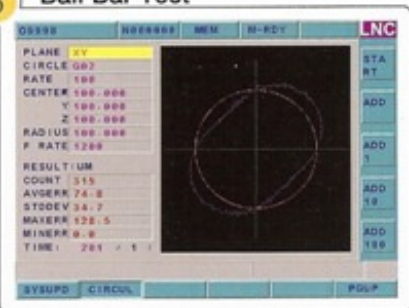
3 Program Restart



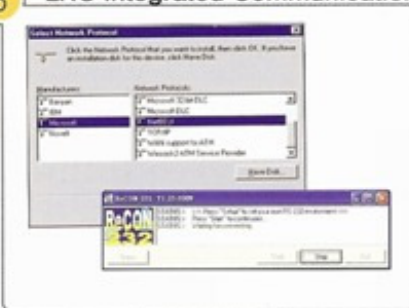
4 Compound G Code Function

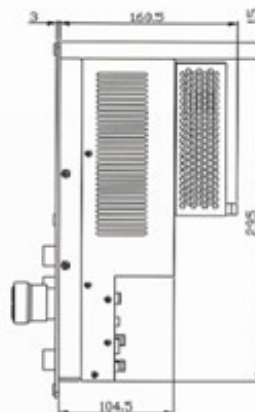
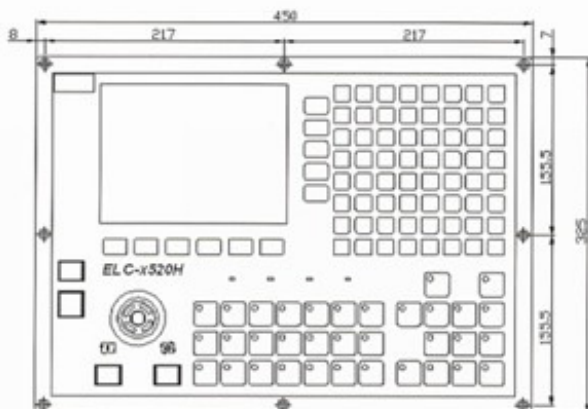


5 Ball Bar Test



6 LNC Integrated Communication





Featured Products

LNC-T800

Dual System Mill-Turn Controller

LNC-M600

Machining Center Controller

LNC-M520H

High-Speed Machining Center Controller

LNC-M510i

High-Speed Engraving Machine
Controller

LNC-T310i Compact Lathe Controller

LNC-R6000 Robot Controller

LNC-IN6000
Injection Molding Machine Controller

Whereas quality of product and service are at the core of what we do, our ultimate goal is the satisfaction of each and every one of our customers. That is why LNC Co. offers comprehensive technical consultation and immediate customer service at all stages of our contact with clients, from pre-sales presentation to after-sales service. Growth and trust in our company will only come through the consistent delivery of what we preach; long term partnerships are the fruit of our hard work.



**You can
rest assured
that we will
be there
for you**

Today, LNC Technology Co., Ltd. has over 700 customers of machine makers around the world, most of which are repeat orders. Having received CE certifications for the entire series of LNC controllers and by setting up a strong overseas service team, LNC Co. is well-prepared for entering the European market. We aim to satisfy all our customers, from the pre-sales presentation of products to our after-sales service. In doing so, LNC Co. supplies comprehensive technical

LNC-520 SERIES

SPECIFICATIONS

1. Control Axes

1. Control Axes (feed + spindle): 4+1
2. Simultaneously interpolated axes (feed): 4

2. Display/Program Data Interfaces

Monitor

8.4" TFT LCD*

Status Display

1. Operation Status
2. Parameter Setting
3. Operation Time
4. Language Selection: English/Chinese
5. Manual Data Input
6. Operation Hint
7. Parameter hint
8. Work piece counter
9. Machining time

Program Data Interfaces

1. RS-232C (DNC)
2. Program Storage by CF Card
3. Ethernet

3. Command Input

Input Unit

1. Linear input unit: 1 μ m/ 0.0001 in/0.001"
2. Linear command unit: 1 μ m/ 0.0001 in/0.001"

Bit System

Metric/Imperial system conversion G20/G21

Numerical Format

1. Absolute/Incremental command
2. Diameter/radius command (Lathe)

4. Interpolation

Interpolation

1. Linear Interpolation G01
2. Circular Interpolation G02 / G03
3. Helical Interpolation G02 / G03
4. Tangential (Mill)

5. Feed Function

Feed Rate

1. Rapid Traverse (m/min) (G00)
2. Cutting Feed Rate 0-60 (m/min)
3. Jog Feed Rate 0-60 (m/min)

Feed rate format

1. Feed per Minute
2. Feed per Revolution

Feed Rate Override

1. Rapid traverse override
2. Cutting Feed Rate Override

Acceleration/Deceleration

1. G00 Acc / Dec (Linear/S Curve)
2. G01 Acc / Dec (Exponential/S Curve)
3. Automatic Corner Deceleration
4. G02/03 radius-based feed rate clamping

Thread Cutting

1. Linear Thread Cutting (G33)(Lathe)
2. Chamfer
3. Thread cutting cycle G76 (Lathe)
4. Rigid tapping

Manual Feed

1. Manual Rapid Traverse
2. Manual Jog Feed
3. Handwheel (MPG)

Dwell

1. Dwell in sec (G04)
2. Dwell in ms (G04)

6. Program Memory / Edit

Memory Capacity

1. RAM 64MB above
2. CF Card 64MB above

Program Editing

Background Editing

7. Spindle, Tools, Functions

Spindle Function

1. Spindle orientation
2. Multi-spindle position orientation (Lathe)
3. Constant surface cutting speed G96/G97 (Lathe)
4. Spindle /C-axis control (Lathe)
5. Gear-change function (Mill)

Tool Function

1. Spindle Tool No. Display
2. Tool Compensation
3. ATC Tool Table (Mill)

8. Machine Auxiliary Functions

PLC

1. PLC fast/normal mode
2. Built-in PLC Functions
3. PLC axes control
4. User-defined Chinese/English warning message
5. Ladder Diagram Display

9. Tool Compensation

Mill

1. Tool length compensation
2. Tool radius compensation

Lathe

1. Geometry compensation
2. Wear compensation (dynamic)
3. Tool nose compensation
4. Auto/manual tool length measurement

10. Coordinate System

Coordinate system and setting

1. Absolute/relative coordinate setting G90/G91
2. Machine coordinate G53
3. Working coordinate selection G54-G59 (6 sets)
4. Local coordinate setting G52 (Mill)
5. Coordinate rotation (Mill)
6. Working plane selection G17-G19
7. Mirror image (Mill)
8. Mirror image of double turrets G68/G69 (Lathe)
9. Polar coordinate setup G15/G16 (Mill)

Reference point return

1. reference point return
2. Auto reference point return G27-G29
3. Auto 2nd, 3rd, 4th reference point return G30

11. Operation Auxiliary Function

Operation auxiliary function

1. Optional stop (M01)
2. Optional block skip

Program stop

1. Dry run
2. Machine lock
3. Auxiliary function lock
4. MPG dry run forward
5. MPG dry run backward (Lathe)
6. Z axis cancellation
7. Tool path graphic display
8. Program preview (Lathe)

Program call start and stop

1. Block No. search
2. Sequence No. search
3. Cycle start
4. Reset and rewind
5. Single block
6. Stop (M00)
7. Program restart

12. Operation Auxiliary Functions

Machining auxiliary function

1. Drill cycles
2. Tapping cycles
3. User macro
4. Program variables
5. Canned cycles

Process precision auxiliary function

1. Exact stop
2. Look ahead (40 blocks)
3. Circular test error (Mill)

Part program control

1. Part program
2. Tool compensation table
3. Parameters
4. Common variables
5. System data
6. Program arguments

13. Machine Compensation

1. Backlash compensation
2. Pitch error compensation
3. Spike compensation

14. Built-in 2D CAD/CAM Software

1. Arachnoids pocketing *
2. Profile finish cutting *
3. DXF file restore *
4. Drilling *
5. Profile cutting *
6. Thread cutting *
7. Groove cutting *

15. Direct Conversational Function

1. Drill-machining (Mill)
2. Facing (Mill)
3. Pocketing (Mill)
4. Side-cutting (Mill)

16. Safety & Maintenance

Safety protection

1. Emergency stop
2. Hardware limitation
3. Software limitation

Troubleshooting

1. PLC error message display
2. PLC operation message display
3. Programming error display
4. Operation error display
5. Servo error display
6. Encoder auto-detect for disconnection
7. I/O transmit detection

17. PLC Programming Software

18. Installment Password Setting

19. LNC Communication Program

1. System update
2. Parameter restore/backup
3. PLC restore/backup
4. NC file transmission
5. DNC

* Optional Function

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