

UC32.netK

model options:	UC32.netK	UC32.netK/WEB	UC32.netK/MOD
	UC32.netK/LC	UC32.netK/LC/WEB	UC32.netK/P

The **UC32.netK** is an Ethernet-based peer-to-peer Communications Controller, used to network UnitronUC32 Field Controllers together. The **UC32.netK** co-ordinates communication between I/O controllers on its fieldbus, with other **UC32.netKs** and with PCs using Ethernet, and other peripherals using RS232/RS485 serial protocols. It can also add additional communications protocols such as BACnet and Modbus to the UnitronUC32 system, and downloadable fieldbus supervision web pages with email alarm facility.

- Peer-to-peer Networking
(up to 255 per network)
100Mbps Fast Ethernet using TCP/IP.

- Optional BACnet/IP support
read point values, read/write setpoints

- Embedded Web Server
controller configuration can be monitored and adjusted using standard web browser, optional fieldbus supervisor web pages and alarm emailing system available

- Optional Modbus Support

- RS485, RS232 and USB ports
for connection to modems, serial printers, keypads or supervisory computers.

- Fieldbus
for adding Unitron DDC* controllers within a radius of 1200 M without repeaters
*Direct Digital Control

- Powerful Diagnostics
with rapid error-free commissioning technologies



The **UC32.netK communications** controller is part of the **UnitronUC32** range of products, which offers the following benefits:

Unique Flexibility with UniPuts™

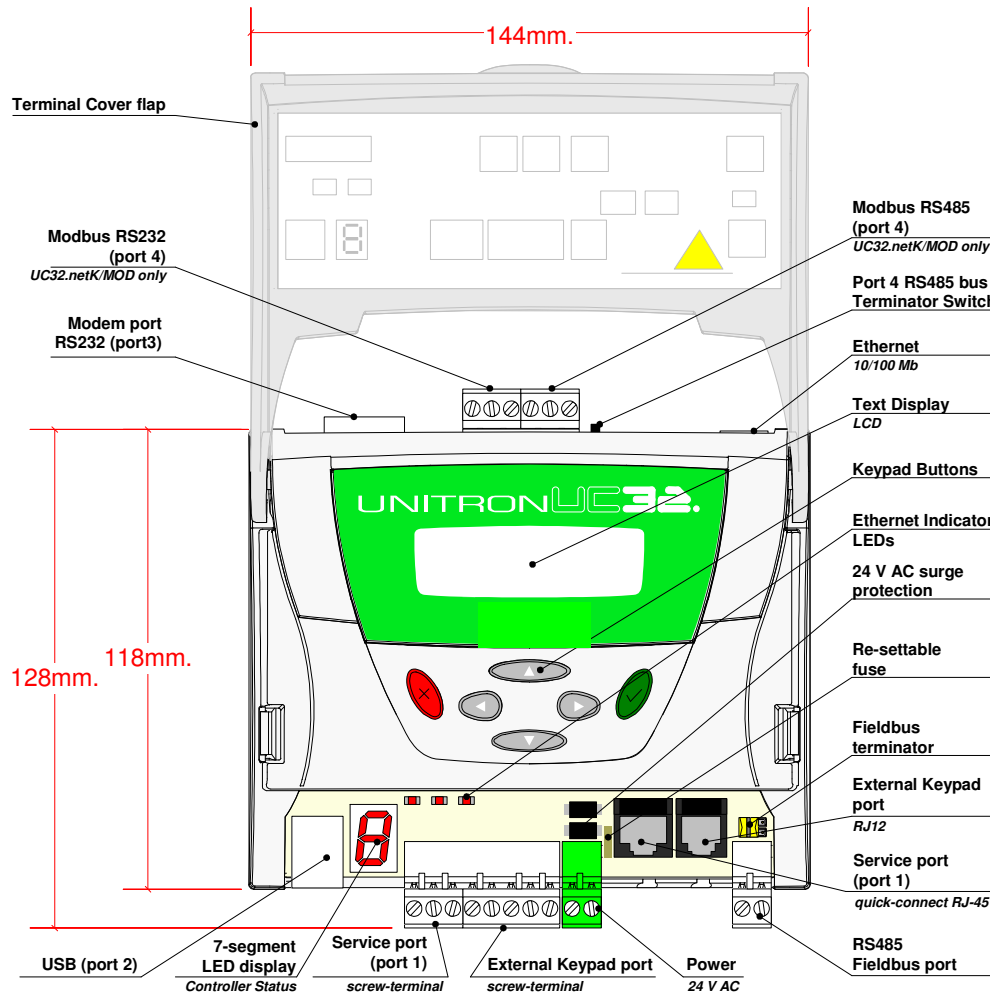
The **UnitronUC32** range uniquely presents **UniPuts™** - a revolutionary answer to flexible point configuration, offering maximised utilisation of controller capacity along with flexibility in strategy changes. Built on a modern web-based architecture, the **UnitronUC32** range has a wide application scope with the flexibility of being stand-alone or network enabled.





Cost Effective, low entry point for building control

The **UnitronUC32** range offers reduced costs in terms of training, implementation, rollout and maintenance. Modular, extendible packages along with low installation costs mean a low entry point for structural control. The future-proof **UnitronUC32** range provides forward & backward compatibility, meaning an effortless upgrade path for existing **Unitron** Systems.



Highly programmable and extendable through web-enabled HVAC technology

The **UnitronUC32** range offers an advanced web-based 32-bit architecture, with advanced programmability through **the Unitron Engineering Centre**. Inbuilt diagnostics, along with expanded data logging and strategy storage, is further enhanced by **Uniputs™**, offering up to 8 Universal inputs, up to 8 **Uniputs™** (AI/DI/AO/DO) and up to 8 **Uniputs™** with relays.





Note:

- In the keypad version of this controller,
- 1) pressing the  and  buttons simultaneously causes the display to toggle between **Configuration** and **Program** modes.
 - 2) pressing the  and  buttons simultaneously changes the contrast of the LCD screen display.



Port 4 RS485 Terminator

-  OFF
(RS485 bus not terminated at this controller)
-  ON
(RS485 bus terminated at this controller)

Ethernet Indicator LEDs

	 Traffic	 Speed	 Link
LED on	Ethernet message received	Ethernet link operating at 100 M	Ethernet is connected
LED off	No incoming Ethernet messages	Ethernet link operating at 10 M	Ethernet is not connected

Fieldbus Terminator

-  OFF
(fieldbus not terminated at this controller)
-  ON
(fieldbus terminated at this controller)

Factory Configuration Options

UC32.netK	Communications Controller with internal Keypad
UC32.netK/LC	Low-Cost version, controls a maximum of 4 Field Controllers.
UC32.netK/MOD	with active Modbus port
UC32.netK/WEB	with embedded fieldbus supervisor pages.
UC32.netK/LC/WEB	with embedded fieldbus supervisor pages, controls a maximum of 4 Field Controllers.
UC32.netK/P	Fully-featured Communications Controller, <ul style="list-style-type: none"> • with internal Keypad • with active Modbus port • with embedded fieldbus supervisor pages • with BACnet/IP support

Specifications:

MECHANICAL

Size (excluding terminal plugs)	144 x 118 x 65 mm (5.7 x 4.7 x 2.6")
Enclosure	Injection moulded ABS
Mounting	DIN rail

ENVIRONMENT

Note: This equipment is intended for field installation within another enclosure.

Ambient Temperature	0° - 66°C (32°-151°F) ambient.
Ambient Humidity	0% - 90% RH non-condensing
EMC Immunity	EN 50082-1
EMC Emission	EN55011 Class B
Protection Class	IP20/DIN 40050

WIRING

Note: Use Copper or Copper Clad Aluminium conductors only.

Ethernet	Screened or Unscreened CAT5e
RS485 Fieldbus	2 core screened twisted pair (e.g Belden 8132 up to 600m at max baud rate 76k, Belden 9841 up to 1200m at max baud rate 76k.)
RS232 (no handshaking)	3 core screened
RS232 (with handshaking)	9 core screened
External Keypad	6-core telephone type cable
USB	Standard USB cable assembly

ELECTRICAL

Supply Requirements	24 V AC +/- 20% 50/60 Hz
Transformer Rating	with UCKRA420: 15 VA without UCKRA420: 10 VA
Power Rating	5 Watts maximum
Fuse Rating	1 A resettable

PROCESSOR

Type	Netsilicon NET+50 32bit ARM 7
Clock Speed	44 MHz
Operating System ROM	2 MBytes Flash memory
Operating System RAM	16 MBytes SDRAM
Web Page Memory	8Mbytes Flash memory
Non-Volatile Memory	512 Kbytes battery-backed static RAM
Real-Time Clock	Battery backed for 2 years minimum

INTERFACE

Software	Unitron Command Centre Unitron Engineering Centre Unitron Palm program WebLink
Internal Keypad	LCD 4 x 20 characters, 6 Buttons. Compatible with UCKRA420
External Keypad	UCKRA420 Serial Text Keypad connected via RJ12 port (Maximum cable length 50m)

SOFTWARE FEATURES

Keypad Configuration Mode	Accessible via Internal or External Keypad.
Embedded Web Configuration Interface	UC32.netK configuration parameters can be accessed through embedded web pages, including: <ul style="list-style-type: none"> ▪ Fieldbus Setup and Map ▪ Unet status and setup ▪ Globals ▪ Alarm, Printer and Modem Strings ▪ Port configurations ▪ System statistics These pages are viewable in most browsers, including IE6, Mozilla Firefox, PalmOS5 browser and Pocket Internet Explorer.
Embedded Web Server	can serve dynamic web pages, created in Unitron engineering Centre, to (UC32.netK/WEB and UC32.net/LC/WEB only) view and change points, datalogs and alarms on the local Fieldbus.

COMMUNICATION PORT SPECIFICATIONS

Port	Connector	Transmission type	Detail	Function										
Fieldbus Port	2 way plug terminal	RS485	@ 1K2, 9K6, 19K2, 38K4 or 76K8 Baud	Fieldbus communications <table border="1"> <tr> <td>Max no. of nodes: (non-LC options)</td> <td>UC32.24: 16 UCU : 63</td> </tr> <tr> <td>Max no. of nodes : (LC option)</td> <td>4</td> </tr> <tr> <td>Max distance between nodes:</td> <td>1200 m (3937')</td> </tr> <tr> <td>Max length of network:</td> <td>1200 m (3937')</td> </tr> <tr> <td>Terminating resistance</td> <td>internal 120 Ω switchable</td> </tr> </table>	Max no. of nodes: (non-LC options)	UC32.24: 16 UCU : 63	Max no. of nodes : (LC option)	4	Max distance between nodes:	1200 m (3937')	Max length of network:	1200 m (3937')	Terminating resistance	internal 120 Ω switchable
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External Keypad Port	RJ12 / 5 way plug terminal	RS232	9K6 Baud	Keypad communications										
Port 1	RJ45 / 3 way plug terminal	RS232	@ 1K2, 2K4, 9K6, 14K4, 19K2, 38K4, 57K6 or 115K2 Baud	Service Port Printer										
Port 2	Type B USB con	Pro. USB diff	Client Mode	Service port										
Port 3	9 way Male D type	RS232	with full hardware handshaking	Modem with Unitron Software Printer Service port										
Port 4 (UC32.netK/MOD only)	6 way plug terminal	RS232 / RS485	@ 300, 600, 1K2, 2K4, 4K8, 9K6, 14K4, 19K2, 38K4, 57K6 or 115K2 Baud	RS232 Modbus-Master RS232 Modbus-Slave RS485 Modbus Master										
Ethernet Port	RJ45	Fast full-duplex Ethernet	10/100 BaseT	Service Port Network Link BACnet/IP (/P only) HTTP (/WEB, /P only) SMTP (/WEB, /P only) FTP (/WEB, /P only) Max no. of Unitron nodes : 254										

