

UNC 520 Series Universal Network Controller



SPECIFICATIONS

HARDWARE

Dimensions

9.75 in. W x 11.6 in. H x 2.5 in. D
(248 mm x 295 mm x 64 mm)

Weight

8.5 lbs (3.9 kg) with parts kit.
10 lbs (4.5 kg) as shipped.

CHASSIS

Mounting

Intended for indoor wall mounting only. When mounting, add clearance of 2 in. (51 mm) at top and bottom, and 1 in. (25 mm) on left and right sides.

Construction

Steel chassis.

Cooling

Internal air convection (vertical mounting required).

PLATFORM

Microprocessor

Motorola RISC Processor at 250 MHz.

Memory

128 MB RAM.

32 MB Flash for database backup.

Operating System

Wind River VxWorks™ Operating System with Jeode™ Java Virtual Machine.

Control Engine software.

TAC I/A Series UNC 520 Series

The TAC I/A Series™ UNC 520 Universal Network Controller (UNC) is a compact, embedded-processor platform with flash memory for backup. The UNC 520 can integrate combinations of LON, Modbus, BACnet, or legacy devices with the appropriate optional drivers. It provides integrated control, supervision, and network management solutions for a network of LonWorks™-based, BACnet™ MS/TP-based, NETWORK 8000™, or DMS controllers for building control. When connected over an Ethernet network, the UNC 520 can communicate to BACnet devices or systems and share data between LonWorks, BACnet, NETWORK 8000, and DMS systems.

A complete set of Java™-based control, application, logging, and user interface “objects” are included in a library. Models with the UNC-520-WEB option offer Web User Interface Service. In this configuration, the system’s graphical views can be accessed using any standard Web browser, such as Netscape™ Communicator or Microsoft™ Internet Explorer.

Applications

Specifically designed for mechanical room, factory floor, and other commercial environments. The UNC 520 is wall-mounted, using its integral metal enclosure.

In a small building application, a single UNC can be used to support a network of BACnet, LonWorks, NETWORK 8000, or DMS devices that can be accessed directly over the Ethernet LAN, remotely over the Internet, or via dial-up modem.

Backup

Battery backup.

Clock

Real-time clock.

RESOURCE CAPABILITIES

Java resource count maximum is 600,000.

Maximum MS/TP devices per RS-485 port is 31 (depending on device); requires one MS/TP driver per port.

Specifications continued on next page.

Specifications continued from first page.

ELECTRICAL

Input Power Supply

UNC-520-2

- 120 Vac, 50/60 Hz, 25 VA max.
- Lead wires for hot/neutral (wire nut), stud for ground connection.

UNC-520-2-N

- 240 Vac, 50/60 Hz, 25 VA max.
- Terminal block for hot/neutral, stud for ground connection.

ENVIRONMENT

Operating Temperature

32 to 122 °F (0 to 50 °C)

Shipping and Storage Temperature

32 to 158 °F (0 to 70 °C)

Humidity

5 to 95% RH, non-condensing

BATTERY BACKUP

Battery Backup provided for all onboard functions.

Battery is monitored and trickle charged. Expected battery life is three years. In environments outside of recommended temperature range, battery life expectancy is one year.

Battery maintains processor operation through power failures for a predetermined interval, then writes all data to flash memory, shuts processor down, and maintains clock for a minimum of 5 years.

AGENCY LISTINGS

US

FCC Part 15, Class A

UL 916, File #E207782 Category PAZX

Canadian

UL Listed to Canadian Safety Standards (CAN/CSA 22.2). No. 205-M 1983, "Signaling Equipment."

Australian

Meets requirements to bear the C-Tick Mark

European Community

EMC Directive 89/336/EEC, EN50081-1 (EMC Immunity), EN50082-1 (AC Mains Power Line Voltage).

COMMUNICATIONS

- One 10/100 Mbit Ethernet port. RJ-45 connector.
- Four RS-485 ports (up to 76.8 Kbaud). Three-position screw terminal connectors, electrically isolated.
- Two RS-232 ports. RJ-45 connectors.
- One LONWORKS port – FTT-10A (up to 78 kbps). Two-pin Weidmuller connector (maximum of 27 devices)

FEATURES

- Integral BACnet/IP and BACnet/Ethernet communications support.
- Integral LONWORKS communications support.
- Embedded RISC Microprocessor platform provides high computing speeds.
- Distributes real-time data across an Ethernet LAN.
- Cost effective for any size commercial building applications.
- Provides alarming, logging, scheduling, control, and custom HVAC applications.
- Multiple UNC stations can be used in larger multi-building system configurations, offering true peer-to-peer operation and full application sharing.
- Password-protected access.
- Optional Web User Interface supports many simultaneous users over Intranet or Internet, via standard Web browser.

ACCESSORIES

Part Number	Description
UNCC-405	RJ-45 socket to DB-9 socket adapter, null modem
UNCC-430	RJ-45 socket to DB-25 plug adapter, straight through
CBL-RJ45-4	Flat silver satin cable, 4 ft
CBL-RJ45-10	Flat silver satin cable, 10 ft
CBL-RJ45-25	Flat silver satin cable, 25 ft

MODELS

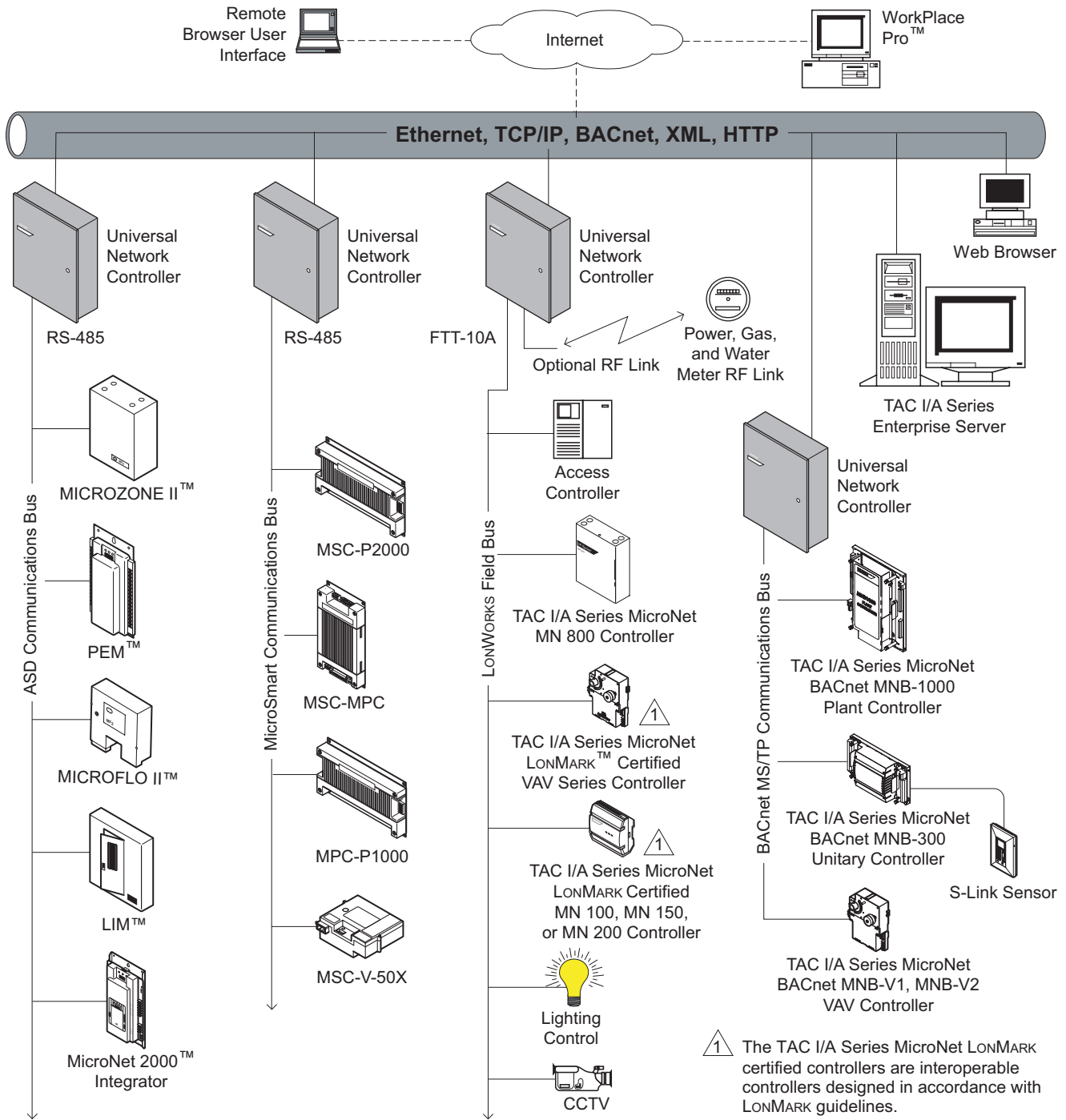
Part Number	Voltage	Description
UNC-520-2	120 Vac, 50/60 Hz, 25 VA Max.	Universal Network Controller, includes: <ul style="list-style-type: none"> • 10/100 Mbit Ethernet port • 2 RS-232 ports, RJ-45 connectors • 4 RS-485 ports, with two-pin Weidmuller connectors (electrically isolated) • 1 LonWORKS port, with driver • LON Tunnel service • BACnet driver • Wind River VxWorks with Jeode Java VM • Control Engine software • Web browser support • Six onboard Universal Inputs and four onboard Digital Outputs
UNC-520-2-N	240 Vac, 50/60 Hz, 25 VA Max.	
UNC-520-2 or UNC-520-2-N with UNC-520-WEB Option	Controller with Web browser support: Provides same functionality and features as standard UNC-520-2 or UNC-520-2-N controller, above, but includes browser support for operator interface.	

OPTIONS

Part Number	Description
UNC-410-MDM	Internal auto-dial/auto-answer 56k modem, RJ-11 connector for North American applications
UNC-520-WEB	Web user interface
IA-DRV-ASD	ASD device driver for direct ASD Bus support; includes tunnel support for XPSI
IA-DRV-DMS-E	DMS serial device driver; includes tunnel support for OPRIF
IA-DRV-MS31	MicroSmart™ device driver; for direct MicroSmart Bus support of 31 controllers on a single trunk; includes tunnel support for OPRIF, Level 9/10/11 firmware supported.
IA-DRV-MS62	MicroSmart device driver; same as above but supports 62 controllers
IA-DRV-MS93	MicroSmart device driver; same as above but supports 93 controllers
IA-DRV-MS124	MicroSmart device driver; same as above but supports 124 controllers
IA-DRV-LCM	Lighting Control Module (LCM) device driver; supports up to 31 LCMs on a single network
IA-DRV-MOD	Modbus device driver; direct Modbus support
IA-DRV-MOD-R	Modbus slave device driver; Modbus TCP support; UNC 520 acts as Modbus slave using Ethernet TCP
IA-DRV-MOD-S	Modbus slave device driver; UNC 520 acts as Modbus slave using RTU protocol
IA-DRV-MOD-T	Modbus master device driver; Modbus TCP support; UNC 520 acts as Modbus master using Ethernet TCP
IA-DRV-MST-P	BACnet MS/TP device driver for direct BACnet MS/TP Bus support of 31 controllers on a single trunk
IA-DRV-NW8-E	NETWORK 8000 serial device driver; includes tunnel support for XPSI
IA-DRV-SNM-P	Simple Network Management Protocol (SNMP) driver

Note: Be sure to verify compatibility with a vendor's devices before specifying third-party device drivers.

ARCHITECTURE



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