

Finally! Get rid of your old PDP-11 without giving up your existing applications or special equipment.

We understand your dilemma: you want to free yourself of the maintenance overhead of your PDP-11, but you want to retain your investment in application software and I/O equipment. Now you can have both. With NuPDPu your real-time applications can be running with a new modern system without the hassle of hardware reconfiguration or software modification.

Eliminate

- *Obsolete disks and tapes*
- *High maintenance costs*
- *Unreliable equipment*

Preserve

- *Existing applications*
- *Specialized Unibus I/O interfaces*
- *Existing I/O cables*

Improve

- *Significant performance increase*
- *New equipment, new warranty*
- *High performance disk*

Compatibility

- *Software compatible with existing applications*
- *Hardware compatible*
- *Diagnostic compatible*

Unibus Support

- *Support for multiple Unibus devices*
- *Follows all Unibus rules and specifications*
- *Both Unibus PIO and DMA data transfers are supported as well as three Unibus interrupts*
- *Unibus PIO and DMA data transfers occur at maximum Unibus speeds. Throughput is limited only by the Unibus device(s).*



PDU-3200 PDP-11 Replacement System

The PDU-3200 allows you to replace your entire system with an industry-standard platform offering updated versions of popular legacy Unibus interfaces. The PDU-3200 replaces the PDP-11 chassis, CPU, memory, mass storage, and Unibus controllers. Your current PDP-11 disk images can be transferred onto a modern system. Unibus controllers can be replaced with UP option modules, new controllers that are software and hardware compatible with Unibus interfaces such as DR11-W, DR11-C, IEU11, DELUA, and DHU. The UP option modules connect to your existing external equipment without software configuration changes. The PDU-3200 is a rack-mounted system for applications requiring up to five UP option modules. Proprietary Unibus controllers can optionally be retained in an external Unibus chassis.

PDU-3200

Unibus Replacement System

Replace your PDP-11 and Unibus controllers with brand new equipment. The PDU-3200 is a complete state-of-the-art system that replaces your outmoded PDP-11 with its slow memory and hard-to-maintain disks and tapes. PDU-3200 allows you to run your existing application software and offers updated versions of DEC I/O interfaces.

Complete State-of-the-Art System

- The PDU-3200 system offers a removable SATA system drive and an optional removable data drive.
- Includes up to 4 MB PDP-11 memory, one serial port, and one ethernet port.
- Supports Fast Ethernet adapters for 100 Mbps network connections to other systems.
- Offers your choice of DR11-W, DR11-C, DELUA, and IEU11 interfaces as well as serial communications interfaces. Other interfaces can be designed for your application. Ask your sales representative about any special requirements.

UP Option Modules

UP option modules are offered to replace popular DEC I/O interfaces. Custom modules can be designed for your application as special projects. Check with your sales representative for more information about special projects.

DR11-C	DUP-1300-AA
DR11-W	DUP-1100-AA Standard DUP-1100-AB Long Line
DHU11, DH11, DL11-A, DZ11-A	CCI1016AA
DELUA	CEI-1000-A
IEC11	DUP-3101-AA
IEU11	DUP-3100-AA
External Unibus Support Adapter	APU-2302-AA

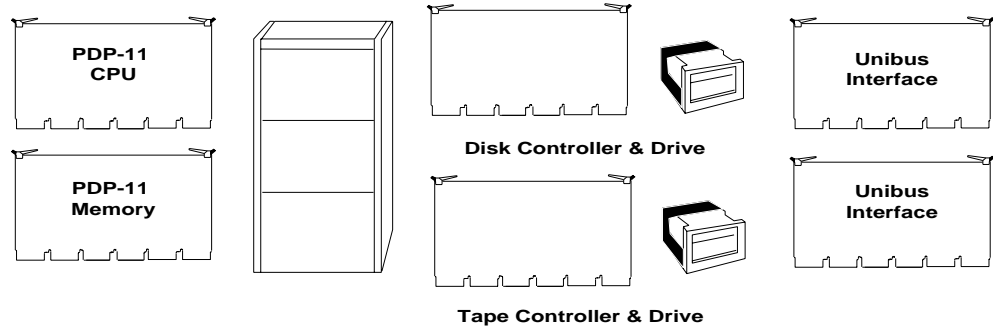


UP Option Module

PDU-3200

Unibus Replacement System

➤ **Replace all of these:**



➤ **With the PDU-3200 model that fits your application**



Model	PDU-3200-AA	PDU-3200-AB	PDU-3200-BA	PDU-3200-BB
Added Data Drive		√		√
External Unibus Support	Optional	Optional	√	√

➤ **Optional External Unibus support:**

Retain Unibus equipment with the APU-2302 external Unibus adapter and a Unibus chassis.

Ordering Information

Model	Features	Description
PDU-3200-AA	Standard System	PDP-11 replacement system with a removable system drive. Supports up to 5 UP option modules. Includes slides for rack mounting.
PDU-3200-AB	System with Removable Data Drive	PDP-11 replacement system with a removable system drive and a removable data drive. Supports up to 5 UP option modules. Includes slides for rack mounting.
PDU-3200-BA	System with External Unibus Support	PDP-11 replacement system with a removable system drive and support for an external Unibus. Supports up to 5 UP option modules. Includes slides for rack mounting and a Unibus interconnect kit. Order Unibus expansion chassis separately.
PDU-3200-BB	System with Removable Data Drive and External Unibus Support	PDP-11 replacement system with a removable system drive, a removable data drive and support for an external Unibus. Supports up to 5 UP option modules. Includes slides for rack mounting and a Unibus interconnect kit. Order Unibus expansion chassis separately.

PDU-3200

Specifications

Dimensions	Rack-mount system for a standard 19" RETMA rack
Weight	13.6 kg (30 lbs) representative system
Processors Supported	PDP-11/04, PDP-11/10, PDP-11/20, PDP-11/24, PDP-11/34a, PDP-11/40, PDP-11/44, PDP-11/45, PDP-11/60, PDP-11/70, PDP-11/84, PDP-11/94
Disks Emulated	RC11, RF11, RH11, RH70, RK11D, RK611, RL11, UDA50, RX11, RX211
Tapes Emulated	TA11, DL11+TU58, TC11, RH11/RH70+TE16 or TU45, or TU77, TS11, TSU05, M7454, TM11, KLESI, PC11
PDP-11 Memory	4 MB maximum
Clock	KW11-L emulation
Hard Drive	Removable 80GB SATA drive; one system drive, one optional data drive.
Ethernet	10/100 port for DELUA emulation
RS232 Serial Port (COM1)	Console (TT0) or DL11 (TT1)
• Speed	19.2 Kb maximum
USB	Reserved
Keyboard, VGA	Can be configured by the user to be the console (TT0)
Mouse	Not supported
Printer	LP11
Power Supply	300 W @ 115/230VAC, 50/60 Hz auto sensing
Operating Environment	
• Temperature	10° to 50° C (50° to 120° F)
• Relative Humidity	10 to 90% non-condensing
Storage Environment	
• Temperature	-40° to 60° C (-40° to 140° F)
• Relative Humidity	5% to 90% non-condensing



UP option modules are plug-and-play replacements for popular legacy Digital interfaces. Option modules install in a PDU-3200 system and offer the same functionality as the Digital equivalent, thus allowing users to migrate from their Unibus systems to PDU-3200 systems and maintain their investment in software and user equipment.



New Technology

- *State-of-the-art design*
- *New equipment, new warranty*



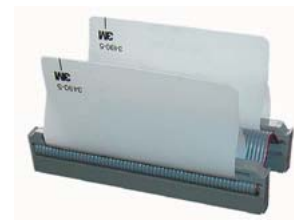
Software Compatible

- *Application compatible*
- *Diagnostic compatible*



Hardware Compatible

- *Signal compatible*
- *Connector & switch compatible*
- *Use existing user cables and equipment*



UP Interconnect

UP option modules install into a single slot and connect to the NuPDPu bus adapter and, optionally, other UP option modules by way of UP interconnects.

Digital Module	Digital Interface	Part Number
M3105	DHU11	CCI1016AA
M7277-M7279	DH11	CCI1016AA
M7819	DZ11-A	CCI1016AA
M7800	DL11	CCI1016AA
M7521	DELUA	CEI-1000-A
M8716	DR11-W	DUP-1100-AA
M7860	DR11-C	DUP-1300-AA
M7915	IEC11	DUP-3101-AA
M8648	IEU11-A	DUP-3100-AA

DUP-1100	
DEC Module	M8716
Interface Name	DR11-W
Function	16-bit parallel user interface for PIO and DMA transfers between a Unibus system and external equipment. It can also serve as a link between a Unibus system and another computer with a DRV11-WA or DR11-W compatible interface. 22-bit addressing capability and permits data transfers at rates up to 400 Kbps in burst mode
Power	0.5 amps @ +5V, 0.3 amps @ +3.3V
User Connection	Two 40-pin connectors
Part No: DUP-1100-AA	Standard package includes controller, UP interconnect, adapter panel, adapter cable, and test cable.



DUP-1300	
DEC Module	M7860
Interface Name	DR11-C
Function	16-bit parallel user interface for transfers between a Unibus system and parallel line TTL-based user equipment. It can also serve as a link between a Unibus system and another computer with a DRV11 or DR11-C compatible interface.
Power	0.5 amps @ +5V, 0.3 amps @ +3.3V
User Connection	Two 40-pin connectors
Part No: DUP-1300-AA	Standard package includes controller, UP interconnect, adapter panel, adapter cable, and test cable.



DUP-3100	
DEC Module	M8648
Interface Name	IEU11
Function	DMA controller that interfaces a Unibus system to two independent channels that are compatible with both the IEC and IEEE instrument buses. The instrument buses conform to both the European Standard IEC 625-1 and the U. S. Standard IEEE 488.1-1987. Each instrument bus can have up to fifteen devices, including the DUP-3100, in a sequential configuration.
Power	0.5 amps @ +5V, 0.3 amps @ +3.3V
User Connection	IEEE IEEE-488 standard 24-pin connector IEC IEC-625 standard 25-pin connector One connector per channel.
Part No: DUP-3100-AA	Includes controller, UP interconnect, and IEC to IEEE488 cables. Requires two rear-panel exit slots for two-line operation



PDU-3200

Option Modules

DUP-3101	
DEC Module	M7985
Interface Name	IEC11
Function	Non-DMA controller that interfaces a Unibus system to an instrument bus that conforms to both the European Standard IEC 625-1 and the U. S. Standard IEEE 488.1-1987. The bus can have up to fifteen devices, including the DUP-3101, in a sequential configuration.
Power	0.5 amps @ +5V, 0.3 amps @ +3.3V
User Connection	IEEE-488 standard 24-pin connector IEC-625 standard 25-pin connector
Part No: DUP-3101-AA	Includes controller, UP interconnect, and IEC to IEEE 488 cable,




CCI1016	
DEC Module	M3105, M7277-M7279, M7819, M7800
Interface Name	DHU11, DH11, DZ11-A, DL11
Function	16-port RS232/RS422 asynchronous communication controller with external DB25 user connection.
Power	0.6 amps @ +5V
User Connection	Sixteen DB25-F connectors
Line Parameters	Data bits: 5, 6, 7, 8 Stop bits: 1, 1.5, 2 Parity: Odd, even, or no parity Baud Rates: 50, 75, 110, 134.5, 150, 300, 600, 1200, 1800, 2000, 2400, 4800, 7200, 9600, 19.2K, 38.4K bps.
Part No: CCI1016AA	Standard package includes controller, distribution panel, interconnect cable, and test cables.



PDU-3200

Option Modules

CEI-1000	
DEC Module	M7521
Interface Name	DELUA
Function	Single-port Ethernet controller that enables higher-level software protocols, such as DECnet, to communicate over an Ethernet network. The CEI-1000 conforms with the IEEE Specification 802.3 for Local Area Networks
Power	1 amp @ +5V
User Connection	Standard RJ45 Ethernet connector
Part No: CEI-1000-A	PCI Ethernet controller.



APU-2302	
Function	External Unibus adapter allows Unibus controllers in an external chassis to be accessed from the NuPDPu system.
Power	2.5 amps @ +5V, 0.5 amps @ +3.3V
Part No: APU-2302-AA	Includes controller, UP interconnect, Unibus module, adapter panel and adapter cables.

