

<b>Product Model</b>	<b>Model 1068 Multi-Rate 16 Mbps VDSL Modem</b>		
<b>Product Name</b>	<b>Multi-Rate 16 Mbps VDSL Modem</b>		
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### Who are the customers for the Model 1068?

The Patton Model 1068DV Variable Rate VDSL Modem enables the utilization of existing copper infrastructure for the delivery of high-speed broadband services. The 1068DV includes seven asymmetrical and symmetrical settings, which include an option for line rates up to 16.67 Mbps!

The Model 1068DV's built in POTS/ISDN splitter allows users to simultaneously talk on the phone while surfing the web, downloading files, or receiving emails. This incredible bandwidth and line sharing capabilities are provided over a single twisted pair of voice-grade wire.



The Model 1068DV solution is targeted to users or service providers that need high-speed Ethernet data and voice links over their existing copper infrastructure. These organizations include but are not limited to CLEC's, ISP's, Educational Facilities (Campus), MTU/MDU's, and corporate/government offices. Popular applications for symmetrical VDSL include Ethernet extension, medical imaging, video-conferencing, Ethernet Bridging, and connecting remote devices or networks to a central LAN. The variable symmetrical data rates ensure the highest possible data rate is achieved over various lengths and types of copper wire and environments. Variable asymmetrical line rates make the Model 1068 ideal for service providers who want to differentiate their services and extend the reach of their customer base using VDSL services. The Model 1068DV allows service providers to offer unparalleled performance for applications such as: always on Internet access, real time bi-directional video streaming, and various multimedia applications.

Typical applications include:

**LAN-to-LAN Bridging:** The Model 1068 connects remote LANs over a high-speed, symmetrical or asymmetrical link. The 1068 CP unit is placed at the remote location and the 1068 CO unit is placed at the central site to provide a LAN-to-LAN connection over a voice-grade wire. This application will generally be made over a symmetrical link.

**Ethernet Extension:** The Model 1068 overcomes the 328 ft (100m) limitations of Ethernet with a symmetrical or asymmetrical data link at distances up to 6,656 ft (2.03 km) and speeds up to 16.67 Mbps. The Model 1068 point-to-point solution does not use or require Ethernet repeaters. This application will generally be made over a symmetrical link.

Dedicated Internet and Voice Services: The Model 1068 VDSL technology enables ISP's to deliver dedicated high-speed Internet access and voice services from a Point-of-Presence (POP) to a customer premise. A 1068CO is used at the POP and a 1068CP is used at the customer premise. The Model 1068DV's built-in POTS/ISDN splitter allows users to simultaneously use the phone or fax machine, while surfing the web, downloading files or receiving e-mails. The variable rates and asymmetrical and symmetrical settings allow the ISP's to sell differentiated services as well as increase the typical distances of their VDSL services. This application generally will be made over an asymmetrical link.

MTU/MDU Services: Using the Model 1068 rack chassis and the standalone solution, data and voice services can be extended to the hotel guest, apartment resident, and housing resident, etc. Patton's Model 1068 VDSL modems allow service providers to avoid the cost and trouble of wiring the individual hotel rooms with 4-wire twisted pair or Ethernet cabling by using the existing voice-grade 2-wire infrastructure. The service provider would place the 1001R rack system with multiple 1068RCDV/CO rack cards and an Ethernet switch in the basement or closet and the standalone 1068DV/CP in the individual hotel rooms. Once connected, the Model 1068 will automatically establish a high-speed Point-to-Point voice and data link. Bandwidth can be limited or distance increased by choosing various asymmetrical /symmetrical data rates on the CO and CP VDSL modems. This application generally will be made over an asymmetrical link.

**Model 1068 Features and Benefits**

<b>High-Speed line rates up to 16.67 Mbps.</b>	<b>Fast and reliable data transmission.</b>
<b>Switch selectable Asymmetrical or Symmetrical line rate options</b>	<b>Differentiated services and ability to adapt to different environments, distances, and multimedia.</b>
<b>Extends Ethernet beyond its current 328 ft (100m) limitation.</b>	<b>Inexpensively links remote devices or extends LANs up to 6,652 ft (2.03 km).</b>
<b>Full service integration (voice, video, and data) services over voice-grade telephone wire.</b>	<b>Eliminates the need to install/upgrade to new LAN-grade cable or expensive fiber.</b>
<b>Built-in POTS/ISDN Splitter</b>	<b>Provides "life-line" telephone services.</b>
<b>Operation transparent to high-layer protocols.</b>	<b>Lets higher-layer broadcast, cast and uni-cast data frames pass through, and supports VLAN tagged frames.</b>
<b>Auto-sensing 10 or 100Base-T and full or half-duplex Ethernet.</b>	<b>No configuration necessary, just Plug your Ethernet connections in and play.</b>
<b>Auto MDI-X</b>	<b>Automatically detects DCE/DTE eliminating the concern of which type of cable straight-through or crossover.</b>
<b>Seven status LEDs.</b>	<b>Monitoring your connection and operational status is made simple.</b>

### Switch Selectable Settings for the Model 1068:

Asymmetrical		
Line Rates		Distance (24 AWG)
Upstream (Mbps)	Downstream (Mbps)	
1.56	4.17	6,656' (2.03km)
1.56	9.38	5,756' (1.75km)
2.34	16.67	5,556' (1.69km)

Symmetrical		
Line Rates		Distance (24 AWG)
Upstream (Mbps)	Downstream (Mbps)	
6.25	6.25	4,956' (1.51km)
9.38	9.38	4,806' (1.46km)
<b>12.50†</b>	<b>12.50</b>	<b>4,656' (1.42km)</b>
16.67	16.67	3,956' (1.21km)

### Optional parts for the Model 1068

- DC Power Supplies
- Rack cards are compatible with Patton's Model 1001R High-Density Telco Rack Chassis and Cluster Boxes.
- Model 3324/DV/GE/UI 24 Port VDSL Concentrator

### Optional DC Power Supplies for Standalone Units

Part Number	Description
48V-PSM	-48 VDC power supply, 5VDC, 1A (optional)
24V-PSM	-24 VDC power supply, 5VDC, 1A (optional)
12V-PSM	-12 VDC power supply, 5VDC, 1A (optional)

If you require a DC power supply with the Model 2168, you must order the 2168 without power supplies and add the DC power supply as a separate line item.

#### EXAMPLE ORDER:

- 1 X 1068DV/E-2PK**      16 Mbps Multi-VDSL Set (Central Office and Customer Premise); No Power Supply
- 2 x 48V-PSM**              -48 VDC power supply, 5VDC, 1A

### Shipping/Export Information

**ECCN export number:** 8517.50.1000

**Country of origin:** United States of America, NAFTA

**Total weight boxed:** .96lbs (.44kg) without power supply

**Individual unit:** .4lbs (.18kg); without power supply

## MTBF/ Repair Information

**MTBF:** 126,000 Hrs. Calculation based on MIL-HDBK-217F, Notice 2 - "Parts Count Reliability Prediction"

**Mean time to repair:** 7–10 days

**Warranty:** 1-year parts and labor

**Out of warranty repair rate:** \$150, flat rate – contact Patton’s Tech Support for details.

## Physical Specifications

**Dimensions:**                   **Standalone:** 1.5” H x 4.13” W x 3.75” D (3.81 H x 10.5 W x 9.53 D cm)

**Rack Card:** 3.00” H x 0.83” W x 7.84” D (7.6 H x 2.1 W x 19.9 D cm)

**Color:**                           **Standalone:**   **Case:** Black    **Front and Back Panel:** Black with white letters

**Rack Card:**   **Front and Back Panel:** White with black letters

**Case material:**               **Standalone:** Plastic, Fire retardant   **Rack Card:** Iridite Aluminum

## Environmental

**Operating Temp:** 32 to 122°F (0 to 50°C)   **Storage Temp:** -40 to 185°F (-40 to +85°C)

**Relative Humidity:** Up to 90% RH, non-condensing

**Altitude:** 0 –15,000 feet (3,048 meters)

**Ventilation requirements:** None, units do not require cooling fans.

## Approvals

Safety	Emissions	Telecommunications
CE Marked per EMC directive 89/336/EEC and low voltage directive 72/23/EEC. ESD EN61000-4-2	FCC part 15, Class A EN55022 Class A, conducted and radiated emissions	

## Power Supplies

### Standalone Units Only

**AC:** 120VAC, 50-60Hz, external or Universal input, 100-240VAC, 50-60Hz, external

**DC:** -48VDC, -24VDC, or -12VDC external (optional)



Ordering Information-Model 1068	
Model	Description
1068DV/CO/E	16 Mbps VSDL Modem; Central Office (RJ45); No Power Supply
1068DV/CP/E	16 Mbps VSDL Modem; Customer Premise (RJ45); No Power Supply
1068DV/E-2PK	16 Mbps VSDL Modem Kit; Central Office and Customer Premise (RJ45); No Power Supply
1068DV/CO/EUI *	16 Mbps VSDL Modem; Central Office (RJ45); 100-240VAC
1068DV/CP/EUI*	16 Mbps VSDL Modem; Customer Premise (RJ45); 100-240VAC
1068DV/EUI-2PK*	16 Mbps VSDL Modem Kit; Central Office and Customer Premise (RJ45); 100-240VAC
1068DV/CO/TB45/EUI *	16 Mbps VSDL Modem; Central Office (Terminal Block & RJ45); 100-240VAC
1068DV/CP/TB45/EUI*	16 Mbps VSDL Modem; Customer Premise (Terminal Block & RJ45); 100-240VAC
1068DV/TB45/EUI-2PK	16 Mbps VSDL Modem Kit; Central Office and Customer Premise (Terminal Block & RJ45); 100-240VAC
1068DVRC/CO	16 Mbps VSDL Central Office Rack Card
1068DVRC/CP	16 Mbps VDSL Customer Premise Rack Card

- When ordering standalone units, it is recommended that the 1068DV be ordered in sets: one 1068DV/CO/E (Central Office) and one 1068DV/CP/E (Customer Premise). When ordering rack cards it is required to match a standalone CP (Customer Premise) with an CO (Central Office) rack card and if you order the standalone CO (Central Office), you must match it with an CP (Customer Premise) rack card.

- \* =You must specify a country specific power cord

Environmentally Hardened Models	
Model	Description
ET1068DV/CP/UI	Extended Temperature 16Mbps EnviroNET VDSL Modem; 100-240VAC; -40 to 85C; NEMA4
EC1068DV/CP/UI	Environmentally Controlled 16Mbps EnviroNET VDSL Modem; 100-240VAC; 0 to 85C; NEMA4
EH1068DV/CP/UI	Environmentally Hardened 16Mbps EnviroNET VDSL Modem; 100-240VAC; 0 to 50C; NEMA4