

Model 2701 and 2701RC Series Frequently Asked Questions

Applications

What are the applications for the Model 2701 Series?**Access for Point-to-Point Digital Leased Lines**

Enabling the enterprise customer to cost effectively connect their routers, multiplexers, or PBXs to central or remote sites using Clear Channel or G.704 services.

Dedicated Internet Access. An ISP uses E1 to deliver high speed Internet traffic from a Point-of-Presence (POP) to a customer premise. An NTU is used at each end of the link and converts the E1 to a serial interface format for use by a router or multiplexer.

**LAN-to-LAN Bridging** - The Model

2701/I connects remote LANs using standardized G.703 services. A 2701/I is placed at a remote location and another 2701/I, or a router, at a central location. Using RRP (Remote Router Porting), which combines the technology of bridging, with PPP for standards based transport, with a router configuration to offer a routed network connection with only one router.

Configuration and Features

Is the Model 2701 series available in rack card and standalone versions?

Yes, the 2701 is offered in a compact standalone unit, as well as 2U-high rack cards for the 1001 NetLink system.

How is the 2701 different from Patton's Models 2703 and 2707?

The Model 2701 is an E1 unit that operates in standard framed and unframed modes. In framed (G.704) mode the Model 2701 series provides nx64kbps rate an interface conversion. In G.703 mode the 2701 series connect to terminals at 2.048Mbps.

On the other hand, The Models 2703 and 2707 operate in unframed mode (G.703) only connecting to the network and terminals at 2.048Mbps.

How is the 2701 configured?

The Model 2701 is configured via DIP- switches located on the underside of the unit. Additionally rack cards are configured and managed via VT-100 terminals using a 1001CC card, or SNMP/HTTP by using a Model 1001MC proxy card.

Model	Configuration Options
2701 Standalone	Switches
2701RC Rack Card	Switches, VT-100, and SNMP/HTTP

What is required for rack card SNMP Management?

The Patton's 1001 rack system allows SNMP management of Models 2707RC and 2701RC, or xDSL cards via the Model 1001MC management card. The Model 1001MC connects to an Ethernet LAN, and can be accessed through the Internet from any location in the world. Up to 13 2701RC cards can be managed per rack, and a total of 120 cards can be managed cascading racks with a single 1001MC card and 1001CC control cards.

What Clock Modes are supported?

Internal, External, and Network Clock. The Model 2701 series of products are factory configured for network clock used in most G.703 field applications.

What Line Coding Options Does the Model 2701 series support?

The Model 2701 Series support AMI (Alternate Mark Inversion) and HDB3 (High Density Bipolar of Order 3) line codes. Generally, E1 G.703/G.7-04 services use HDB3 Line coding. The 2701 series is default configured for HDB3 line coding at the factory.

Does the Model 2701 support framed G.703 (G.704)?

The Model 2701 series are G.703/G.704 units, as such they can terminate framed and unframed E1 services. If only unframed G.703 is needed, use the models 2703 or 2707.

How are timeslots (channels) selected in the 2701 series?

The 2701 standalone offers switch configuration only, timeslots are selected contiguously, starting at timeslot one. Rack cards, when managed via VT-100 or SNMP, offer the user flexibility to select timeslots contiguously or non-contiguously, starting at any timeslot.

What Network interfaces does the 2701 Series support?

The 2701 Series offers both RJ-48C (120 ohm) and dual BNC (75 ohm) connectors for the X.21 and Ethernet versions of the product. The V.35 and EIA-530 versions offer RJ-48C connector only.

Model	Terminal Interface	Connector Type	DCE/DTE	E1 Network Connector
2701/B	EIA-530	DB-25F	DCE	RJ-48C
2701/C	M34F	M34F	DCE	RJ-48C
2701/D	X.21/V.11	DB-15F	DCE/DTE Selectable	RJ-48C & Dual BNC
2701/I	10Base-T	RJ-45F	DTE	RJ-48C & Dual BNC
2701RC/A/I	V.35	M34F	DCE	RJ-48C
2701RC/B/B	EIA-530	DB-25F	DCE	RJ-48C
2701RC/D/V	X.21	DB-15F	DCE/DTE Selectable	RJ-48C
2701RC/D/D	X.21	DB-15F	DCE/DTE Selectable	Dual BNC
2701RC/C/IA	10Base-T	RJ-45F	DTE	RJ-48C

What DTE interfaces does the 2701 series support?

The Model 2701 supports single DTE interfaces and comes in four versions: V.35 (M34 connector), X.21 (DB-15 connector), EIA-530 (DB-25F), and 10Base-T (RJ-45 connector). See table above for interface options.

Do I need special cables to connect to the 2701 Series?

No, the 2701 is equipped with industry standard interfaces, saving the user the extra cost associated with non-standard cables. The V.35 version uses a female M/34 (Winchester) connector. The Model X.21 version, uses a female DB-15 connector, and can be configured as DCE or DTE. The 10Base-T version uses a standard RJ-45F connector.

Can the serial interfaces be configured as DTE or DCE?

The X.21 interface can be configured as DTE or DCE; the V.35 and EIA-530 interfaces are fixed as DCE. 10Base-T Ethernet interfaces are wired as DTE for direct connection to a hub/switch.

Does the 2701 ship with terminal and network cables?

No, the 2701 ships with user's manual and power supply (standalone), no terminal or network cables are included.

What diagnostics are offered with the 2701?

The Model 2701 series offers V.54 compliant Local and Remote Loopbacks. In addition, the 2701 series is equipped with V.52 compliant 511 test pattern. Diagnostic tests can be activated via front panel switches, serial interface (Local and Remote Loopbacks), or through VT-100 and SNMP/HTTP options.

What distance does the Model 2701 reach?

The Model 2701 E1 interface reaches a maximum distance of 1.6km over 24AWG twisted pair wire.

What are the power options for the Model 2701?

The Model 2701 standalone offers options for Universal Input (100-240VAC), or 48VDC. The rack card version, which is housed in Patton's 1001 rack systems, operates at 5VDC provided internally by the rack's 120/230 VAC or -48VDC rack power supplies.

What certifications does the 2701 series carry?

The Model 2701 series complies with ITU-T recommendation G.703, G.704/G.723 and G.832. It is tested in accordance with CTR-12 and CTR-13, FCC part 15, and EN60950. The Model 2701 carries Australian A-tick and C-tick certification. The Patton's 2701 series of products are CE marked.