

KiloModem™ 2-Wire/4-Wire Baseband Modem



The Patton Model 1092A

FEATURES

- ◇ Synchronous data rates of 32, 56, 64 and 128 kbps in all clock modes (Asynchronous data rates to 38.4 kbps)
- ◇ Full duplex operation over one or two twisted pairs (**2 or 4 wires**)
- ◇ 4-Wire distances up to **18 miles** (all data rates) on 19 AWG twisted pair
- ◇ Replaceable interface modules: G.703, V.35, X.21, RS-422/530, V.24 (RS-232), Ethernet WAN bridge & data + voice
- ◇ **2B1Q** Modulation
- ◇ In-Band and Out-of-Band **remote management** capabilities

The **Patton Model 1092A KiloModem™** supports point-to-point, synchronous or asynchronous communication over one or two twisted pairs (2 or 4 wires). Offering switch selectable synchronous data rates of 32, 56, 64 and 128 kbps, the *KiloModem™* also supports asynchronous speeds up to 38.4 kbps. The *Kilo-Modem™* is an excellent choice for connecting two bridge/routers, or for similar networking applications at distances up to 11.4 miles/18.2 km (4 wires).

Using the 2B1Q modulation scheme, the *KiloModem™* is able to send remote management information on the "D" channel. This means that a terminal connected to the *KiloModem's* RS-232 control port can be used to send in-band

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DESCRIPTION

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configuration and control commands to both the local and remote *KiloModems™*. In addition, the *KiloModem™* is able to send an out-of-band alarm signal through its control port.

The *KiloModem™* incorporates local analog and remote digital loopback test modes, as well as a V.52 BERT pattern generator. Eight front panel LED indicators (TD, RD, CTS, CD, DTR, No Signal, Error, and Test Mode) provide real-time

diagnostic information. Extended distances are accomplished using automatic equalization, gain control and echo cancellation. Data integrity is enhanced by transformer isolation and surge protection. Synchronous clocking options include internal, external and receive recovered clock. For flexible connection of WAN hardware, the *KiloModem™* accepts replaceable *QuikConnect™* interface modules. These modules adapt to a variety of popular terminal interfaces (see below). Standard AC power supply options include 120/230VAC (switchable) or 85-256VAC (universal). A 48VDC power supply is also available.

SPECIAL FEATURE

QuikConnect™ Interface Modules

Patton's new IM1/J *QuikConnect™* Voice/Data Module allows network managers to provide voice and data connectivity without adding costly access devices, switching equipment, or wiring. The IM1/J combines PSTN voice, compressed voice, G3 fax and synchronous data traffic over a typical 2-wire circuit. As the user interface for Patton's 109x

Series baseband modems, the IM1/J transports combined traffic flow across distances up to 17.4 km and at speeds up to 768 kbps. Two RJ11 voice/fax ports offer FXS or FXO using just 64kbps of bandwidth! Each IM1/J also provides a single data port that is user-configurable for V.35, X.21, RS-485, V.24/RS-232, and RS-530 Interfaces.



64K G.703



WAN Bridge



Voice + Data



V.35



X.21



RS-232, 422, 530



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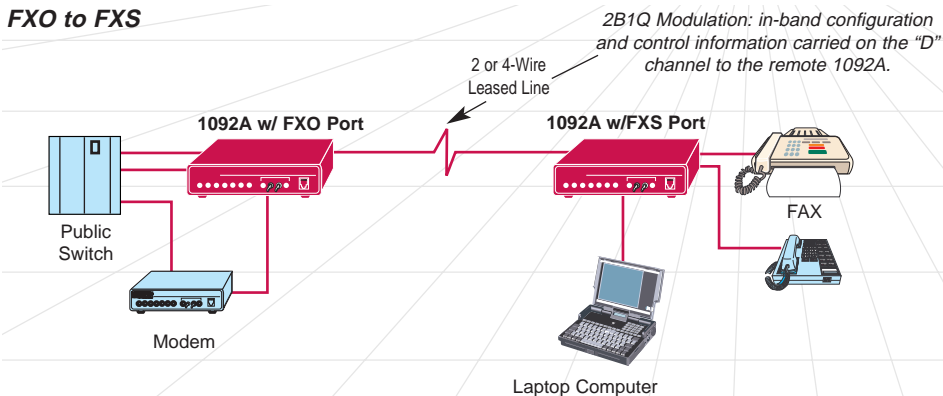
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APPLICATIONS

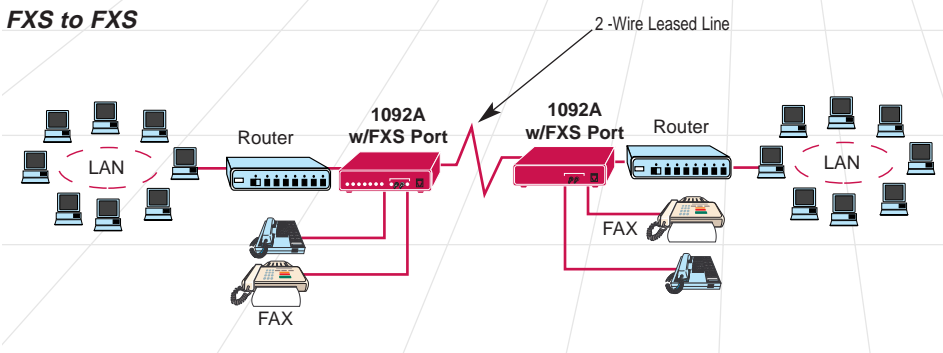
The IM1/J Voice/Data Module is perfect for connecting remote branches or satellite offices which require voice and fax communications as well as high-speed data. Use a pair of IM1/Js to connect a telephone and a fax machine in a remote branch office to a PSTN Switch in the head office. Serial data traffic shares the same 2-wire interface.

In small office/home office (SOHO) environments, the IM1/J sits in front of a low-cost router to combine LAN traffic with voice and fax across one circuit. The voice/fax traffic "rides for free" on the available bandwidth when no data is being transmitted. The IM1/J is an excellent cost-effective solution for high-speed data, voice and fax communications. Call Patton today for more about the IM1/J Voice Module or 1092A Series baseband modems.

FXO to FXS



FXS to FXS



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SPECIFICATIONS

Transmission Format: Sync or Async
Transmission Line: Full duplex over one or two unconditioned twisted pairs (2 or 4 wires)
Line Encoding: 2B1Q with Integrated Echo Cancellation.
Clocking: Internal, external or receive loopback
Distance: Up to 11.4 m/18.2 km (see table below)
Data Rates: 32, 56, 64, 128, synchronous (switch selectable); 0 - 38.4 kbps, asynchronous
Carrier Control: "Constantly on" or "Contr. by RTS"
RTS/CTS Delay: no delay, short delay (4-8 ms), or long delay (33-58 ms)
Diagnostics: local analog loopback, remote digital loopback, V.52 compliant bit error rate pattern (511/511E pattern) generator and detector with error injection mode
LED Status Indicators: Dual red/green LEDs for TD, RD, CTS and DC; green for DTR; red for ER, TM and NS
Isolation & Protection: 1500V RMS (gas tube surge protection optional)
DTE Interface: Depends upon interface module

Twisted Pair Interface: RJ-45 jack
Power: 120/230 VAC (switch selectable), 50/60 Hz; 100 - 240 VAC, 50/60 Hz (universal input option); 48 VDC (option). 5 watts.
Compliance: CE Marked per EMC Directive 89/336/EEC and Low Voltage Directive 73/23/EEC. UL and cUL Safety Approvals.
Dimensions: 7.3" x 6.6" x 1.62" (185mm x 168mm x 41mm)
Weight: 2.02 lbs.

Model 1092A 2-Wire Distances - Miles (Km)				
Data Rate (kbps)	Wire Gauge (AWG/mm)			
	19 (.7mm)	22 (.6mm)	24 (.5mm)	26 (.4mm)
128	10.8 (17.3)	7.2 (11.5)	5.0 (8.0)	3.4 (5.5)
64	10.8 (17.3)	7.2 (11.5)	5.0 (8.0)	3.4 (5.5)
56	10.8 (17.3)	7.2 (11.5)	5.0 (8.0)	3.4 (5.5)
32	10.8 (17.3)	7.2 (11.5)	5.0 (8.0)	3.4 (5.5)
0 - 38.4	10.8 (17.3)	7.2 (11.5)	5.0 (8.0)	3.4 (5.5)

Model 1092A 4-Wire Distances - Miles (Km)				
Data Rate (kbps)	Wire Gauge (AWG/mm)			
	19 (.7mm)	22 (.6mm)	24 (.5mm)	26 (.4mm)
128	11.4 (18.2)	7.6 (12.1)	5.3 (8.5)	3.6 (5.7)
64	11.4 (18.2)	7.6 (12.1)	5.3 (8.5)	3.6 (5.7)
56	11.4 (18.2)	7.6 (12.1)	5.3 (8.5)	3.6 (5.7)
32	11.4 (18.2)	7.6 (12.1)	5.3 (8.5)	3.6 (5.7)
0 - 38.4	11.4 (18.2)	7.6 (12.1)	5.3 (8.5)	3.6 (5.7)

ORDERING INFO

Factory Part Numbers:

1 0 9 2 A / I M / P S / Z



Interface Modules:

- IM** = A = V24, DB25F
- B = RS422/RS530, DB25F
- C = V35, M34F
- D = X21, DB15F

Examples:

- 1092A/A/120/A (V.24 DB-25F interface module, 120 VAC power supply, US power cord)
- 1092A/E/230/D (G.703 RJ-48S interface module, 230 VAC power supply, UK power cord)

Model 1092A KiloModem™, 2/4-wire, sync/async baseband modem

- F = G703, RJ45
- G = V.24, DB-25F (Async 57.6/115.2 kbps)
- I = Ethernet WAN Bridge, RJ-45F
- J = Data + Voice Combination (modular ports)

Power Supplies:

- PS** = 120 = Switchable 120/230 Configured 120V
- 230 = Switchable 120/230 Configured 230V
- UI = Universal Input Supply 100-240VAC
- 48 = 48 VDC

Power Cord Sets:

- K**=American, **A**=European CEE 7, **D**=United Kingdom,
- C**=Australia, **E**=Denmark, **F**=France/Belgium, **G**=India,
- H**=Israel, **J**=Japan, **L**=Switzerland. (Others Available)



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