

Product Model **3086FR**

Product Name **3086FR Frame Relay/PPP over ATM IAD**

Who is the customer for the 3086FR IAD?

The Patton Model 3086FR IAD combines the latest advances in high speed DSL technology with a potent IP, Frame Relay (FR), PPP and ATM core enabling seamless connection of ANY Frame Relay devices and LAN services to high-speed ATM networks.

Based on European Telecommunications Standardization Institute (ETSI) and International Telecommunications Union (ITU) G.SHDSL standards – G.991.2, the Patton 3086FR ipRocketLink enables 2.3 Mbps symmetric nx64 (n=1..36) data rates over a single pair of wires while combining standards based ATM transmission with Synchronous-Serial, Ethernet, and high speed IP routing...all in one compact package. The 3086FR can be connected to either third party DSLAMs or in back to back applications over the DSL port.



Target customers for this product are:

Carriers & Enterprise: Carriers and enterprises connecting FR /PPP- based sites over DSL links running ATM are key targets for the Model 3086FR IAD. Enterprise customers can also exploit the speed and abundant IP features included with the 3086FR to deliver routed or bridged branch Internet services. Both FR conversion to ATM as well as multi-protocol encapsulation and routing from any-to-any port, can be used concurrently.

Internet Service Providers : In addition to FR/PPP to ATM conversion, the 3086FR offers an IP rich feature set that includes RIP, RIPv2, DHCP, NAT/NAPT, DNS, Firewall/IDS, and flexible Layer 2 multi-protocol encapsulation. Armed with these features, the 3086FR IAD is an extremely attractive proposition as a customer premises router in Business Internet services applications.

For other DSL and router options consider Patton’s complete line of IP and DSL products including:

T1/E1/X.21/V.35	IPLink 2603, 2621, 2635
G.SHDSL	3096RC, 3224, 3201, 3241, 3086
VDSL	1058, 1058RC, 1068, 1068RC
mDSL	3095, 1088, 1095, 1095RC
iDSL	3196RC, 3092, 1082, 1092A, 1092ARC

What are the Key Features and Benefits of the Model 3086FR?

<i>Key Features</i>	<i>Benefit</i>
<i>Simultaneous Frame Relay to ATM conversion, routing and multi-protocol encapsulation</i>	Supports for both FRF.5 and FRF.8 Interworking Agreements for non-routed FR to ATM conversion. Use the IP router to route from any-to-any port using Ethernet, PPP, FR, or ATM encapsulation. Offers both services simultaneously!
<i>Advanced IP routing features</i>	Powerful features include IP routing, NAT/NAPT, DNS, Firewall/IDS, and DHCP making shared Internet connectivity simple, secure and easy.
<i>Dual Simultaneous User Interface Ports</i>	Customers have a 10/100 Ethernet port <u>and</u> either a serial or T1/E1 port for simultaneous transmission over the same DSL line. Bandwidth for each port is user configurable. Each port can be shutdown if required.
<i>FlexIP™ technology eliminates the need for multiple pieces of equipment at the customer premise to provide multiple service</i>	Patton's FlexIP™ technology transports simultaneously the serial frame relay data from any serial device and the IP data from the 3086's Ethernet port over a single DSL connection. For simultaneous serial and IP data, the 3086FR IAD operates in "split DSL bandwidth mode," so it is sharing one DSL connection for both types of data.
<i>User selectable Standards-based G.SHDSL</i>	The DSL port meets ITU-T standard G.991.2 including Annex A and Annex B operation and supports G.Handshaking (G.994.1).
<i>High-speed 2-wire DSL from 64kbps to 2.3 Mbps</i>	Support for nx64 kbps for n = 1 to 36 and ix8 kbps for l = 0 to 7 per G.991.2.
<i>Long Reach DSL</i>	Using just 2 wires of ordinary twisted pair telephone wire, the 3086FR can reach distances greater than 30,000 ft (9 km).
<i>Auto-sensing 10 or 100BaseT and full or half-duplex Ethernet.</i>	No configuration necessary, just Plug your Ethernet connections in and Play.
<i>10/100 Ethernet with MDI-X</i>	Eliminate the need for crossover Ethernet cables with the built-in MDI-X crossover switch. Easily connect to any computer or hub/switch with any available Ethernet cable.
<i>Flexible management options</i>	A built in Web/SNMP management system allows the operator to configure the 3086FR locally and remotely, manage each DSL link, and perform initial test loops all with just a web browser. Setup is likewise a snap with the command line interface (CLI) accessible via either the VT-100 console port or a telnet session. Manage the unit from anywhere in the world through an IP network.
<i>Convenient desktop modem</i>	Patton packs all these features including an internal power supply in a small compact package that makes this product easy to fit into almost all customer environments.
<i>Front mounted LED's</i>	Front mounted LED's provide a quick look at the 3086FR status. LED's provide information on Power, DSL port status, WAN status and Ethernet status.

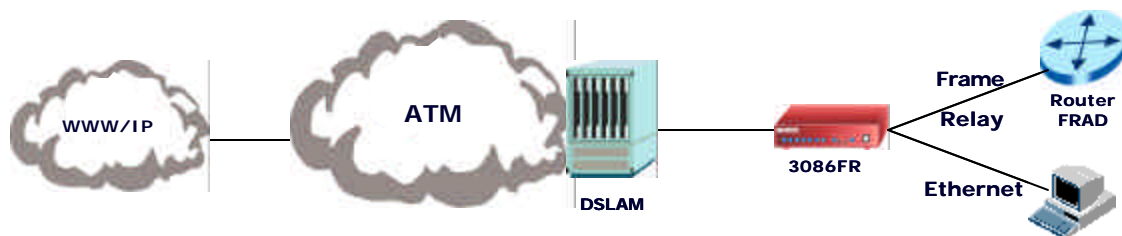
Applications

The abundance of networking features in the 3086FR enables a variety of applications.

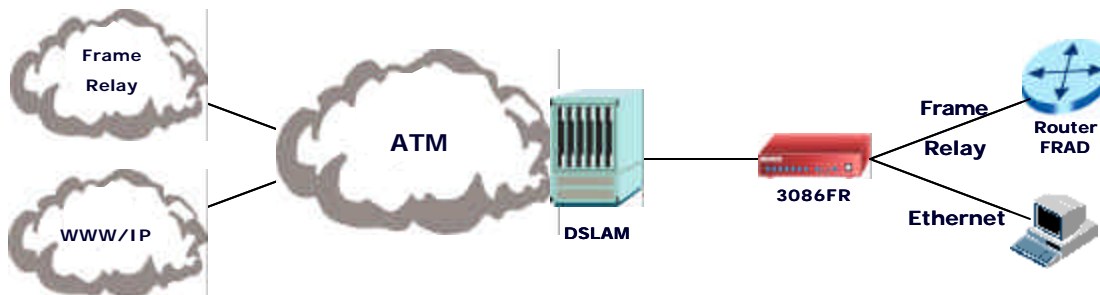
- Service providers can use the 3086FR to provide frame relay service over existing DSLAM networks using FRF.5 and FRF.8 Frame Relay to ATM Interworking. Frame Relay data from the Serial port is either converted or encapsulated into ATM cells and sent over the DSL link. Frame Relay DLCIs are mapped to ATM VPI/VCIs.



- Service providers can use the 3086FR to provide LAN extension, Internet Access, and other value added router services. IP Routing or Ethernet bridging is concurrently supported over any PPP, FR or ATM link. Traffic can be sent out through the serial port, the 10/100 Ethernet port, and the G.SHDSL port at the same time making the 3086FR a versatile three port router. The 3086FR additionally boasts a variety of value added networking and routing features including Intrusion Detection System (IDS), DHCP, NAT/PAT, and IP address and port filtering.



- Service providers can offer multiple *simultaneous* services using the 3086FR. Map all IP traffic to one VPI/VCI in order to offer Internet or LAN extension service and map multiple frame relay DLCIs to unique ATM VPI/VCIs to provide end-to-end Frame Relay service.



Included Parts

The Model 3086FR comes with the following items:

One 3086FR IAD

Software including operating system and drivers, IP routing engine, and frame relay to ATM conversion engine

An RJ-45-to-RJ-45 cable for use with the console and Ethernet ports

A DB9-RJ45 (EIA-561) adapter for connecting a PC's serial port to the IAD's console port

Power supply as specified

CD-ROM containing User Manual

- **NOTE: The 3086FR Internal UI power supply uses the new style two-pronged power cord. This power cord is identified with a -2 appended to the standard Patton power cord part number. For Example: A standard three-pronged (IEC320) Euro Power cord would have the catalog number of 0805EUR. The NEW 2-pronged power cord is a 0805EUR-2. The external UI power supply still uses the standard three-pronged IEC320 style power cord.**
- **NOTE: Country specific power cords are also specified separately.**

Shipping/Export Information

ECCN export number: 8517.50.1000

Country of origin: United States of America, NAFTA

Total weight boxed: 3.1 lbs. (1.4 kg)

Individual unit: 1.15 lbs. (0.52 kg)

MTBF/Repair Information

MTBF: 3086FR/RIC/UI:	58,000 hours	3086FR/RID/UI:	66,000 hours
3086FR/RIK/UI:	57,500 hours	3086FR/RIT/UI:	57,500 hours

Calculation based on MIL-HDBK-217F, Notice 2 - "Parts Count Reliability Prediction"

Mean time to repair: < 2 hours

Warranty: 1-year parts and labor.

Out of Warranty Repair Rate: Contact Tech Support for details: +1 (301) 975-1007 or support@patton.com

Physical Specifications

Dimensions: 7.25” W x 1.5” H x 6.5” D in. (18.4 cm W x 3.8 cm H x 16.5 cm D)

Color: Case: black.

Front overlay: black with white lettering.

Rear overlay: black with white lettering.

Case material: Plastic, Fire retardant (V0 rating or Better)

Environmental

Operating Temp: 32 to 122°F (0 to 50°C)

Storage Temp: -13 to 185°F (-25 to +85°C)

Relative Humidity: 5 to 95% RH, non-condensing

Altitude: 0–15,000 feet (4,572 meters)

Ventilation requirements: None.

Approvals

Safety	Emissions	Telecommunications
Patton Internal Safety and UL/CSA testing per: UL1950 (MET), Canadian cMET ESD EN61000-4-2 EN60950	RTTE 99/5/EC FCC Part 15 Sub Part B, Class A	FCC Part 68 CE Mark RTTE 99/5/EC Canadian CS-03 CTR12 (RIK versions only) CTR13 (RIK versions only)

Australia Specific Approvals:

- TS-001
- TS016 (E1 Telecom) – 3086FR/RIK only.
- AZ/NZS 3260 Safety
- AZ/NZS 35-48 EMC

Power Supply

Internal: UI (100-240VAC, 50-60Hz), 2-pronged AC power connector
DC (36-60VDC) 3 position - Clamp type terminal Block

External: UI (100-240VAC, 50-60Hz)
2.5mm barrel type Conn. Output: 5 VDC, 2A (Center pin is +)
DC (36-60VDC) 3 position - Clamp type terminal block input:
2.5mm barrel type Conn. Output: 5 VDC, 2A(Center pin is +)