



# Product Guide

## Broadband ASAP™

System 7.1A Core Software



### Bridging the Digital Divide

Over 40% of all network subscribers will get their broadband services outside of Central Office (CO) service areas ...

#### Broadband to Any Subscriber's Access Point

Crossing the digital divide – A complete ATM to-the-edge solution

A scalable, affordable and easy-to-deploy DSL solution for any service provider

## 40% and Growing...

... "Total access lines served from DLC systems will increase from 35 percent in 1999 to 53 percent in 2003."  
Source: RHK February 2000

### *Cross the Digital Divide* – with System 7.1 Broadband ASAP™

Your subscribers are on the move and demanding information that moves with them – information that keeps up with them. People are living and working outside of urban centers, far from the network core. This demographic trend is an opportunity.

Will you seize it? Will you generate new revenue streams if you do? Will you cross the "digital divide," and bring broadband to the newly defined last mile? Will you – or will your competition?

System 7.1 Broadband ASAP from AFC answers these questions now. That's because Broadband ASAP brings broadband to Any Subscriber Access Point. Any location. Any Subscriber. Right now.

System 7.1 Broadband ASAP is the core software that enables a complete ATM at-the-edge solution that crosses the digital divide. Learn how it helps you offer broadband under any circumstances you can envision.

### **System 7.1 Broadband ASAP is the Most Flexible, Adaptable Solution Available for DSL Deployment**

System 7.1 is AFC's core software release for enabling broadband services from any installed or new AccessMAX multi-service access platform, including UMC®, DMAX™, EMAX™, EMAXplus™, and FibreMAX™ products.

#### **Generate New Revenues**

System 7.1 Broadband ASAP eliminates the Central Office/DSLAM barrier, enabling DSL deployment from any remote anywhere in your service area. Reach a much higher percentage of your subscriber base with high-speed data services – and make more services available at the same time – via new or existing cabinets or in multi-dwelling units.

#### **Build Your Subscriber Base**

Don't just protect your existing subscriber base. Build on it while you match the actual pace of demand for DSL. Fully scalable Broadband ASAP enables immediate and incremental expansion of DSL service so you can economically accommodate growing DSL service densities as your market expands. Quick deployment also means you reach subscribers faster than cable modems can.

#### **Reduce Costs and Build for the Future**

System 7.1 Broadband ASAP enables scalable, on-demand DSL with a low entry cost that meets your expansion needs and long-term DSL evolution. AccessMAX platforms, driven by System 7.1 Broadband ASAP will deliver the only ATM at-the-edge service over existing TDM networks. One 19 inch (48.3cm) shelf supports ATM, ADSL, G.Lite and HDSL plug-ins – in addition to a full suite of TDM services.

ATM concentration at each Remote Terminal reduces transport and backhaul costs, aggregates subscriber bandwidth and optimizes transport utilization. A migration path to ATM networking for remote concentration and an ATM over TDM transport solution makes widespread ADSL deployment fast and inexpensive.

## Broadband ASAP™ – ADSL for the Loop from the Leading DLC Supplier

*Future-proof Today's  
Investment with Tomorrow's  
Solution*

System 7.1 Broadband ASAP™ enables a highly scalable, flexible architecture that assures the long-term need of telecommunications service providers to meet the swelling demand for data services merged with voice.

Broadband ASAP from Advanced Fibre Communications is your weapon against the encroachment of cable modems.

Its low cost of entry means it is not only affordable, but your capital is used efficiently.

Because there is no costly delay to upgrade the TDM network, you can rapidly achieve compatibility and concentration over existing copper or SONET fiber transports.



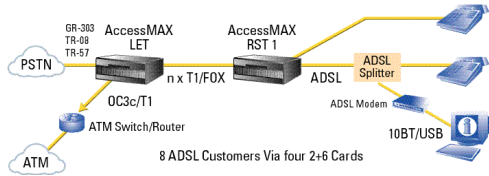
### **System 7.1 Broadband ASAP and AccessMAX™ vs. Alternatives**

Most DSLAM alternatives are not environmentally hardened, requiring expensive, cumbersome huts. And their high costs require high take rates for profitability.

Remote Access Multiplexers (RAMs) are limited to ADSL only. RAMs are a poor allocation of precious cabinet space because they do not offer a full suite of services, and they are just not flexible or scalable. Without integrated POTS, DSL service requires time-consuming cross-connect wiring in the cabinet.

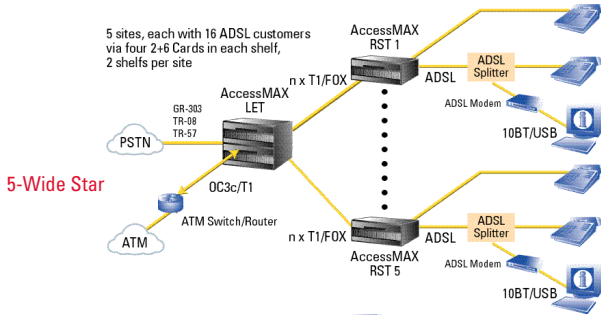
AccessMAX, driven by System 7.1 Broadband ASAP, is an integrated multi service access platform that assures coverage of all data convergence needs – Video on Demand, Voice over DSL, Transparent LAN service and HDSL2 Symmetric Data Service. It incorporates all traditional TDM services – T1, HDSL, POTS, PAY and ISDN. With this highly integrated architecture you get EMS, Central Office interworking, ATM concentrations and ADSL service.

# System 7.1 Broadband ASAP – Valuable for any Network or Concentration Ratio



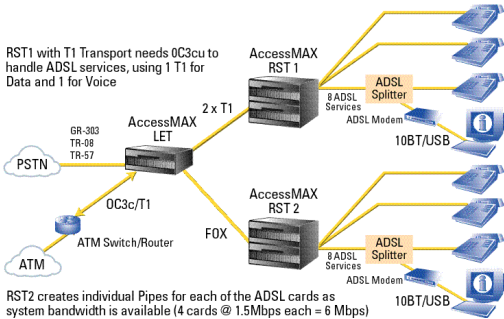
Point-to-Point, Small Line Deployment

Here are typical configurations possible with AccessMAX and System 7.1 Broadband ASAP



5-Wide Star

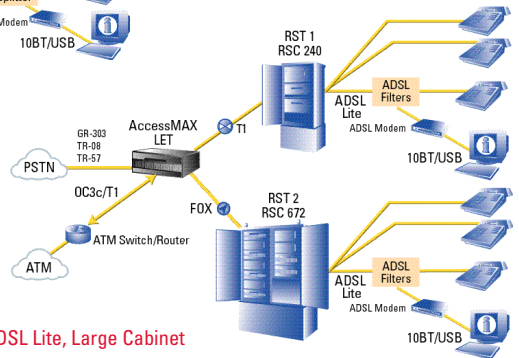
RST1 with T1 Transport needs OC3cu to handle ADSL services, using 1 T1 for Data and 1 for Voice



3-Mixed Transport

RST2 creates individual Pipes for each of the ADSL cards as system bandwidth is available (4 cards @ 1.5Mbps each = 6 Mbps)

AFC's AccessMAX family of access platforms (UMC, DMAX, EMAX, EMAXplus, and FibreMAX) support any concentration ratio you want to deploy. Using ATM statistical multi-plexing, many ATM user data streams can be put through a single ATM pipe.



4-ADSL Lite, Large Cabinet

# **System 7.1 Broadband ASAP™ – Economical, Fast-to-Deploy ATM Anywhere in an Existing TDM Network**

## *Upgrade, Retrofit, Scale, or Integrate Services with System 7.1 Broadband ASAP*

- Upgrade any TDM transport – copper or fiber – to ATM using only one plug-in card
- Manage DSL service with AFC's integrated Panorama™ element management system
- EMAXplus kits enable remote DSL deployment from any existing remote terminal
- Modular design allows you to deliver pay-as-you-grow scalability in service drops and transports as DSL demand grows
- DSLx+y™ plug-in cards integrate POTS lines so DSL deployment does not sacrifice POTS density
- Drop and insert topology enables simple installation with seamless network integration of new DSL remotes anywhere in the service area
- Accommodates any existing fiber or copper transport and network topology

## *Benefits of Broadband ASAP*

- Integrating ATM and TDM on a single shelf means rapid revenue for existing TDM services while DSL take-rates mature
- Elegant, low-cost migration to ATM networking on a node-by-node basis
- Demand-based deployment minimizes risk in network planning using DSL plug-ins for capturing subscriber loyalty without overhanging demand with costly DSLAMs
- Fully scalable solution for accommodating demand as it matures
- Both service plugs and ATM transports offer incremental migration options to protect investment
- Broad scope of DSL revenue services
- Full network integration with Panorama – AFC's Element Management System.

## *The Business Advantages of Broadband ASAP*

Build a comprehensive arsenal to counter aggressive cable modem and competitive vendors with a full suite of DSL services that are now economically available at any edge...

- DSL service for high-speed Internet
- VoD using 6Mb/s DSL modems
- VoDSL for multi-line expansion

Broadband ASAP does not sacrifice POTS density. One ADSL2+6™ plug-in card enables two full-rate DSL circuits plus six POTS circuits. When you install the DSL card in place of a POTS card, POTS density remains constant. The same holds true for AFC's ADSL6+6™ G.Lite plug-in card delivering six ADSL lite ports.

The integral POTS splitter delivers lifeline POTS plus DSL over the existing service drop to speed installation.

Plug-in DSL cards let you pace demand on a region-by-region basis.

Panorama element management system allows remote provisioning of both service rates and concentration levels without a truck roll.

System 7.1 Broadband ASAP is compatible with industry-standard G.DMT and G.Lite DSL modems, enabling data transport downstream to today's "modem of choice," and upstream to ATM switches.

System 7.1 Broadband ASAP also enables new ATM uplinks at OC3c or T1 rates. ATM traffic is aggregated using the OC3cu card at the remote to enable ADSL subscribers over limited transport. And traffic is further aggregated at the central office for lower switch port costs.

The Cellenia chip DSL cards enables ATM network over existing TDM infrastructure.

System 7.1 Broadband ASAP is the core software for AFC's AccessMAX product family, enabling broadband services in the last mile. Retrofit an existing cabinet with EMAX and System 7.1 for instant broadband service capability. Or, install any new AccessMAX platform (UMC DMAX, EMAX, EMAXplus, or FibreMAX) to immediately deploy broadband services to all customers. AFC's AccessMAX, driven by the System 7.1 Broadband ASAP core software, is the last mile solution for broadband.

# Specifications

## Main System Components

The ADSL2+6™ card simplifies deployment because no external splitters are required at the ADSL remote terminal.

- Two ADSL and Six POTS circuits
- Alcatel chipset ensures compliance with other vendors who use the chipset
- Bi-lingual support (G.Lite and G.DSL)
- Every 2+6 card contains its own Cellenia ASIC
- Each card can concentrate two ADSL circuits up to 2:1 without any special provisioning

The ADSL6+6™ card also simplifies deployment because no external splitters are required at the ADSL remote terminal.

- Each ADSL circuit is coupled with one of the POTS circuits through an integrated band-splitter, allowing independent operation of the POTS or simultaneous POT and ADSL on a single twisted wire pair
- Six ADSL Lite and six POTS circuits
- Centillium chipset that is fully compliant with any G.992.2 compliant modems
- ADSL G.Lite only
- Every 6+6 card contains its own Cellenia™ ASIC, and each card can concentrate the six ADSL circuits up to 6:1 without any special provisioning

OC3cu can be a concentrator or an uplink to the ATM network.

- OC3 concentrator and uplink card
- Connects at an OC3 rate
- Designed to interface with ATM switches, routers or BRAS
- Singlemode, Short Range Equivalent optics make for easy integration
- Aggregates services on to a single ATM pipe, allowing for:
  - T1 or Fiber transport to the Central Office
  - Aggregation of multiple remote terminals to one Central Office terminal network uplink
  - Optimal use of bandwidth

Cellenia™ is AFC's ATM switch-on-a-chip technology.

- Our largest and most complex Application Specific Integrated Circuit (ASIC) chip
- Enables cell traffic to move seamlessly between TDM and ATM domains
- Manages cell queuing, bus arbitration, cell mapping and QoS

Seize the opportunity to cross the digital divide. Generate new revenues. Grow your subscriber base. Reduce costs. Build for the future. With Broadband ASAP – from AFC.

## About AFC

Advanced Fibre Communications, Inc. (AFC)™ designs and manufactures worldwide broadband access solutions for the last mile. AFC's OmniMAX™ is a global product family consisting of industry-leading multi-service access platforms with integrated optics and intelligent CPE. AFC's OmniMAX™ products can quickly and cost-effectively upgrade legacy networks, ubiquitously delivering narrowband, wideband and broadband services to all subscribers regardless of their geographic location from a carrier's central office.

AFC's OmniMAX™ product portfolio consists of: AccessMAX™, a variety of broadband multi-service access platforms that provide local loop voice, data and broadband solutions; PremMAX™ a series of integrated access devices (IADs) that provide integrated voice and data at the customer premises; and TransMAX™, a Sonet/SDH optical transport system for metro ring solutions. AFC is also a leading designer and manufacturer of environmentally hardened outside plant cabinets and technology, ranging from 48 to 2,048 lines, as well as indoor cabinets ranging from 48 to 480 lines.

AFC is a corporate member of NMSDC (National Minority Supplier Development Council), a member of TIG (Telecommunications Industry Group) and a participant in the Northern California Supplier Development Council.

Additional information about AFC can be found at <http://www.afc.com>. Learn more about System 7.1 Broadband ASAP and how it can help you bring broadband data delivery to the last mile by calling 800.690.2324 today.