

# Ascend

## Pipeline 15

**Pipeline 15 List Price: \$450**  
**Estimated Street Price: \$310 – \$350**

### Target Market

The Ascend Pipeline® 15 is a new external ISDN terminal adapter targeted at the home and professional users that need high-speed, cost-effective network or Internet access as well as the full functionality of the dual analog ports for phones and fax machine support.

### Market Positioning

The Pipeline 15 is the most cross-platform, feature-rich ISDN terminal adapter available. Cross-platform support is provided via a standard serial port interface for PC, Macintosh or UNIX workstations while a graphical user interface (GUI) supplies a standard, easy-to-use application for all platforms. The combination of ISDN BRI, dual analog phone ports with CLID, and Dynamic Bandwidth Allocation™ make the Pipeline 15 the most feature-rich and highly integrated terminal adapter on the market today.

### Applications

The Pipeline 15 is an ideal device for:

- **Telecommuting** – with full data and analog phone and fax support for the complete home office
- **Internet access** – with dynamic bandwidth for cost-effective, yet high-speed web access
- **On-line services access** – with compatibility with all the major service providers such as the Microsoft Network, AOL, and Compuserve.
- **Peer-to-peer networking** – for direct file transfers between small offices or remote customers.
- **Remote access** – with up to 128 Kbps for high-speed file transfers.

### Key Competitors:

- Motorola BitSURFR Pro
- 3Com Impact IQ
- USR Databurst
- Adtran Express XTR
- ZyXEL Elite 2864I, Omni TA128, & Omni.net

### Key features of the Pipeline 15 are:

- External, serial port design
- Support for V.120 and V.110 rate adaption
- Auto ISDN switch and SPID detection
- Dual analog ports with advanced calling features such as call hold, drop, transfer and caller ID
- Support for EZ-ISDN provisioning
- Support for MP+ and Dynamic Bandwidth Allocation, and BACP for inverse multiplexing/ 2 B-channel calls
- Comprehensive OS Support – Windows 3.X, Windows 95 and Windows NT, Macintosh and UNIX
- Support for Microsoft ISDN Accelerator Ver. 1.1
- Support for Microsoft Dial-up Networking
- Robust Security Support – PAP and CHAP.
- FLASH EEPROM for simple firmware upgrades
- Java-based configuration application
- CD-ROM with MAXLink Pro™ client, MS Internet Explorer, Microsoft Network, QuickLink II Fax, TurboComm/2, full documentation, etc.



An S/T version will also be available with the same functionality as the Pipeline 15 for integration with other ISDN products – ISDN phones or videoconferencing products, for example.

## Pipeline 15 Competitive Advantages:

- Value – A more complete feature set at a better price
- Advanced calling features off dual analog phone ports – true caller ID support
- Multiple OS support – Windows 3.x, Windows 95, Windows NT
- CD with full compliment of Internet software, client software and documentation
- Flash memory support for ease of new feature upgrades
- Ease-of-use, and configuration

## Selling Against the Competition

**Motorola BitSURFR Pro**

**List: \$495**

**Street Price: \$350 – \$400**

### Motorola BitSURFR Pro Weaknesses

### Pipeline 15 Advantages

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|---|--|
| <ul style="list-style-type: none"> <li>• BitSURFR Pro offers fewer features at a higher price</li> </ul>  | <ul style="list-style-type: none"> <li>• Pipeline 15 offers a much better price/performance ratio. The Pipeline 15 is approximately 10% lower in price with significantly more features.</li> </ul>  |
| <ul style="list-style-type: none"> <li>• BitSURFR Pro lacks support for Dynamic Bandwidth Allocation. Users must choose one or two B-channels (64 or 128 Kbps) at the start of each call and cannot change the bandwidth being used during the call; flexibility is limited and telephone and online charges are much higher than necessary.</li> </ul> | <ul style="list-style-type: none"> <li>• Pipeline 15 supports Dynamic Bandwidth Allocation so when more bandwidth is needed (or no longer needed) a second B-channel is automatically added (or dropped). You save money by only using the bandwidth that you need.</li> </ul>   |
| <ul style="list-style-type: none"> <li>• BitSURFR Pro forces users to find out and enter all the detailed ISDN line information such as central office switch type and SPIDs.</li> </ul>  | <ul style="list-style-type: none"> <li>• Pipeline 15 automatically determines the central office switch type and SPIDs – saving users time and hassle. Installing and configuring the Pipeline 15 is much faster and easier.</li> </ul>  |
| <ul style="list-style-type: none"> <li>• BitSURFR Pro lacks automatic switch and SPID detection – forcing the user into a more complex and lengthy installation process.</li> </ul>   | <ul style="list-style-type: none"> <li>• Pipeline 15 has automatic switch and SPID configuration, making setup extremely easy.</li> </ul>  |
| <ul style="list-style-type: none"> <li>• BitSURFR Pro uses the arcane language of the AT command set for configuring many parameters of the BitSURFR's operation. This complex string of letters and characters must be used for many of the simplest tasks such as setting up a PPP or Multilink PPP call.</li> </ul>                                  | <ul style="list-style-type: none"> <li>• Pipeline 15 simplifies the configuration by using a very simple point and click interface that doesn't force users to to remember, or look-up, complex AT command sets. Pipeline 15's comprehensive support for Windows built-in dial-up networking eliminates the need for use of the AT command set.</li> </ul> |
| <ul style="list-style-type: none"> <li>• BitSURFR Pro is optimized for Windows-based applications and has very poor support for Macintosh and no support for UNIX platforms.</li> </ul>   | <ul style="list-style-type: none"> <li>• Pipeline 15 includes a GUI configuration application that provides ease of use and configuration across PC, Macintosh and UNIX platforms.</li> </ul>  |
| <ul style="list-style-type: none"> <li>• BitSURFR Pro has very little software of any value bundled as part of package – non-standard browser, BBS Access software, etc.</li> </ul>   | <ul style="list-style-type: none"> <li>• Pipeline 15 includes a comprehensive array of software applications to increase Internet and network access productivity. Bundled software includes: MAXLink Pro™ client, MS Internet Explorer, Microsoft Network, QuickLink II Fax, TurboComm/2, etc.</li> </ul>   |
| <ul style="list-style-type: none"> <li>• Motorola has a proprietary software application that you must run on your PC to get caller ID features.</li> </ul>   | <ul style="list-style-type: none"> <li>• Pipeline 15 fully supports industry standard caller ID for full interoperability with 3rd party caller ID devices.</li> </ul>   |

**3Com Impact IQ****List Price: \$499****Street Price: \$350 – \$400****3Com Impact IQ Weaknesses****Pipeline 15 Advantages**

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|--|--|
| <ul style="list-style-type: none"> <li>• Impact IQ offers fewer features at a higher price.</li> </ul>   | <ul style="list-style-type: none"> <li>• Pipeline 15 offers a much better price/performance ratio. The Pipeline 15 is approximately 10% lower in price with significantly more features.</li> </ul>  |
| <ul style="list-style-type: none"> <li>• Impact IQ lacks support for Dynamic Bandwidth Allocation. Users must choose one or two B-channels (64 or 128 Kbps) at the start of each call and cannot change the bandwidth being used during the call.</li> </ul>                         | <ul style="list-style-type: none"> <li>• Pipeline 15 supports Dynamic Bandwidth Allocation so when more bandwidth is needed (or no longer needed) a second B-channel is automatically added (or dropped). You save money by only using the bandwidth that you need.</li> </ul> |
| <ul style="list-style-type: none"> <li>• Impact IQ has no support for the commonly used advanced calling features like call waiting, call hold, call transfer and caller ID severely limiting its value in the home office application where users expect these features.</li> </ul> | <ul style="list-style-type: none"> <li>• Pipeline 15 supports the most frequently-used advanced calling features (such as call waiting, call hold, call transfer and caller ID) making it ideal for home office, personal or professional use.</li> </ul>                      |
| <ul style="list-style-type: none"> <li>• Impact IQ can only perform CHAP authentication on a single B-channel, thereby limiting CHAP calls to a single B-channel (see PC Magazine review, February 1997).</li> </ul>   | <ul style="list-style-type: none"> <li>• Pipeline 15 supports CHAP on two B-channels, allowing full 128 Kbps CHAP authenticated calls for maximum security and throughput.</li> </ul>  |
| <ul style="list-style-type: none"> <li>• Impact IQ is optimized for Windows-based applications and has very poor support for Macintosh and no support for UNIX platforms.</li> </ul>   | <ul style="list-style-type: none"> <li>• Pipeline 15 includes a GUI configuration application that provides ease of use and configuration across PC, Macintosh and UNIX platforms.</li> </ul>  |

**Responses to 3Com's Claims and F.U.D.**

**3Com Claim:** Impact IQ offers built-in Stac LZS/Hi/fn compression for up to 230 Kbps throughput

**Ascend Response:** Users must upgrade their serial port with a high-speed serial card (an additional cost of \$100 to \$200). Very few users will go through the hassle of buying and installing such a product. Ascend's much more efficient method of addressing this problem has been to support Microsoft Dialup networking and ISDN Accelerator pack with Microsoft data compression.

## US Robotics DataBurst

List Price: \$279

Street Price: \$260

### USR DataBurst Weaknesses

### Pipeline 15 Advantages

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|--|---|
| <ul style="list-style-type: none"> <li>• DataBurst's lack of analog phone ports eliminates value in most home/office environments because most users will want to share their ISDN lines with regular phones and fax machines.</li> </ul>                    | <ul style="list-style-type: none"> <li>• Pipeline 15 provides two analog phone ports so as to provide the complete small office/home office telecommunications package. Each phone port supports several analog devices such as regular phones, fax machines or even modems thereby saving you the expense of separate analog phone lines.</li> </ul> |
| <ul style="list-style-type: none"> <li>• DataBurst lacks support for Flash memory for easy feature upgrades and bug fixes.</li> </ul>  | <ul style="list-style-type: none"> <li>• Pipeline 15 incorporates Flash memory for quick and easy firmware upgrades with new features or bug fixes. The useful lifetime of the Pipeline 15 is therefore likely to be considerably greater than the Databurst.</li> </ul>  |
| <ul style="list-style-type: none"> <li>• DataBurst lacks support for Dynamic Bandwidth Allocation. Users must choose one or two B-channels (64 or 128 Kbps) at the start of each call and cannot change the bandwidth being used during the call.</li> </ul> | <ul style="list-style-type: none"> <li>• Pipeline 15 supports Dynamic Bandwidth Allocation so when more bandwidth is needed (or no longer needed) a second B-channel is automatically added (or dropped). You save money by only using the bandwidth that you need.</li> </ul>  |
| <ul style="list-style-type: none"> <li>• DataBurst lacks automatic switch and SPID detection — forcing the user into a more complex and lengthy installation process.</li> </ul>   | <ul style="list-style-type: none"> <li>• Pipeline 15 has automatic switch and SPID configuration, making setup extremely easy.</li> </ul>   |
| <ul style="list-style-type: none"> <li>• DataBurst is optimized for Windows-based applications and has very poor support for Macintosh and no support for UNIX platforms.</li> </ul>   | <ul style="list-style-type: none"> <li>• Pipeline 15 includes a GUI configuration application that provides ease of use and configuration across PC, Macintosh and UNIX platforms.</li> </ul>   |
| <ul style="list-style-type: none"> <li>• DataBurst lacks support for automatic and switch type detection.</li> </ul>   | <ul style="list-style-type: none"> <li>• Pipeline 15 provides automatic switch speed detection to simplify installation and configuration.</li> </ul>   |

## Adtran Express XTR

List Price: \$469

Street Price: \$320

### Adtran Express XTR Weaknesses

- Adtran Express XTR uses the arcane language of the AT command set for configuring many parameters of the XTR's operation. This complex string of letters and characters must be used for many of the simplest tasks such as setting up a PPP or Multilink PPP call.
- XTR lacks support for Dynamic Bandwidth Allocation. Users must choose one or two B-channels (64 or 128 Kbps) at the start of each call and cannot change the bandwidth being used during the call.
- XTR only supports a single analog device off each of two phone ports.
- XTR has only a minimal software bundle as part of package

### Pipeline 15 Advantages

- Pipeline 15 simplifies the configuration by using a very simple point and click interface that doesn't force users to remember, or look-up, complex AT command sets.
- Pipeline 15 supports Dynamic Bandwidth Allocation so when more bandwidth is needed (or no longer needed) a second B-channel is automatically added (or dropped). You save money by only using the bandwidth that you need.
- Pipeline 15 supports several analog devices off each of the two analog ports thereby saving you the expense of separate analog phone lines.
- Pipeline 15 includes a comprehensive array of software applications to increase Internet and network access productivity. Bundled software includes: MAXLink Pro client, MS Internet Explorer, Microsoft Network, QuickLink II Fax, TurboComm/2, etc.

## Responses to Adtran's Claims and F.U.D.

**Adtran Claim:** Express XTR offers built-in Stac LZS/Hi/fn compression for up to 230 Kbps throughput

**Ascend Response:** Users must upgrade their serial port with a high-speed serial card (an additional cost of \$100 to \$200). Very few users will go through the hassle of buying and installing such a product. Ascend's much more efficient method of addressing this problem has been to support Microsoft Dialup networking and ISDN Accelerator pack with Microsoft data compression.

**Adtran Claim:** Unique serial port pass-through connector allows connection of modem.

**Ascend Response:** Most user are replacing their modem with the ISDN TA – making the passthrough port an additional cost for most people.

**ZyXEL****List Price: \$449****Street Price: \$370****ZyXEL Elite 2864i Weaknesses****Pipeline 15 Advantages**

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|--|---|
| <ul style="list-style-type: none"> <li>• Only a single analog phone port limits user's ability to share both ISDN B-channels with phone and faxing applications.</li> </ul>  | <ul style="list-style-type: none"> <li>• Pipeline 15 provides two analog phone ports so as to provide the complete small office/home office telecommunications package. Each phone port supports several analog devices such as regular phones, fax machines or even modems thereby saving you the expense of separate analog phone lines.</li> </ul>   |
| <ul style="list-style-type: none"> <li>• Elite 2864i uses the arcane language of the AT command set for configuring many parameters of the Elite's operation. This complex string of letters and characters must be used for many of the simplest tasks such as setting up a PPP or Multilink PPP call.</li> </ul> | <ul style="list-style-type: none"> <li>• Pipeline 15 simplifies the configuration by using a very simple point and click interface that doesn't force users to remember, or look-up, complex AT command sets. Pipeline 15's comprehensive support for Windows built-in dial-up networking eliminates the need for use of the AT command set.</li> </ul> |
| <ul style="list-style-type: none"> <li>• Difficult/impossible to configure parallel port (documented in PC Magazine review, February 1997)</li> </ul>  | <ul style="list-style-type: none"> <li>• Pipeline has a single, easy to use serial port interface which simplifies your installation and configuration tasks.</li> </ul>  |
| <ul style="list-style-type: none"> <li>• Buggy/nonfunctional configuration software (documented in PC Magazine review, February 1997)</li> </ul>   | <ul style="list-style-type: none"> <li>• Pipeline 15's configuration software is functional and easy to use.</li> </ul>   |
| <ul style="list-style-type: none"> <li>• XTR has only a minimal software bundle as part of package.</li> </ul>   | <ul style="list-style-type: none"> <li>• Pipeline 15 includes a comprehensive array of software applications to increase Internet and network access productivity. Bundled software includes: MAXLink Pro client, MS Internet Explorer, Microsoft Network, QuickLink II Fax, TurboComm/2, etc.</li> </ul>   |
| <ul style="list-style-type: none"> <li>• No support for automatic switch type detection.</li> </ul>  | <ul style="list-style-type: none"> <li>• Pipeline 15 provides automatic switch detection to simplify installation and configuration.</li> </ul>   |

**Responses to ZyXEL's Claims and F.U.D.****ZyXEL 2864 Claim:** Users need integrated fax/modem functionality**Ascend's Response:** 99% of people using ISDN are modem users that have become unsatisfied with the throughput and have upgraded to ISDN for that reason. The integrated modem adds unnecessary cost and complexity to the product.

**ZyXEL Omni TA128****List Price: \$399****Street Price: \$330****ZyXEL Omni TA128 Weaknesses**

- Omni TA128 does not support the commonly used advanced calling features like call waiting, call hold, call transfer and caller ID.
- Omni TA128 uses the arcane language of the AT command set for configuring many parameters of the BitSURFR's operation. This complex string of letters and characters must be used for many of the simplest tasks such as setting up a PPP or Multilink PPP call.
- Omni TA128 is able to use Windows 95 software compression resulting in lower throughput.
- Omni TA128 has only a minimal software bundle as part of package.
- Omni TA128 does not support automatic switch type detection.

**Pipeline 15 Advantages**

- Pipeline 15 supports the most frequently-used advanced calling features (such as call waiting, call hold, call transfer and caller ID).
- Pipeline 15 simplifies the configuration by using a very simple point and click interface that doesn't force users to remember, or look-up, complex AT command sets. Pipeline 15's comprehensive support for Windows built-in dial-up networking eliminates the need for use of the AT command set.
- Pipeline 15 supports Microsoft software data compression for maximum throughput.
- Pipeline 15 includes a comprehensive array of software applications to increase Internet and network access productivity. Bundled software includes: MAXLink Pro client, MS Internet Explorer, Microsoft Network, QuickLink II Fax, TurboComm/2, etc.
- Pipeline 15 provides automatic switch detection to simplify installation and configuration.

**Responses to ZyXEL's Claims and F.U.D.**

**ZyXEL Omni TA128 CLAIM:** Users want dual serial port interfaces on their TA so as to support two PCs at once.

**Ascend Response:** Most users are single computer configurations, use of ZyXEL's Omni TA128 in dual serial port mode disables one of the analog ports – limiting the value in home office/small office applications where both analog ports are frequently needed for fax machines and additional phones.

**ZyXEL Omni.net**

**List Price: \$299**

**Street Price: \$230**

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**ZyXEL Omni.net Weaknesses**

- Omni.net has no support for the commonly used advanced calling features like call waiting, call hold, call transfer and caller ID.
- Omni.net uses the arcane language of the AT command set for configuring many parameters of the BitSURFR's operation. This complex string of letters and characters must be used for many of the simplest tasks such as setting up a PPP or Multilink PPP call.
- Minimal software bundle as part of package
- Unable to use Windows 95 software compression resulting in lower throughput.
- No support for automatic and switch type detection.

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**Pipeline 15 Advantages**

- Pipeline 15 supports the most frequently-used advanced calling features (such as call waiting, call hold, call transfer and caller ID)
- Pipeline 15 simplifies the configuration by using a very simple point and click interface that doesn't force users to remember, or look-up, complex AT command sets. Pipeline 15's comprehensive support for Windows built-in dial-up networking eliminates the need for use of the AT command set.
- Pipeline 15 includes a comprehensive array of software applications to increase Internet and network access productivity. Bundled software includes: Internet Explorer, Microsoft Network client, as well as an array of other capabilities.
- Pipeline 15 supports Microsoft software data compression for maximum throughput.
- Pipeline 15 provides automatic switch detection to simplify installation and configuration.

**Worldwide and North American Headquarters**

One Ascend Plaza  
1701 Harbor Bay Parkway  
Alameda, CA 94502, United States  
Tel: 510.769.6001  
Fax: 510.747.2300  
North American E-mail:  
info@ascend.com  
International E-mail:  
air-info@ascend.com  
Toll Free: 800.621.9578  
Fax Server: 415.688.4343  
Web Site: <http://www.ascend.com>

**European Headquarters**

Rosemount House  
Rosemount Avenue  
West Byfleet  
Surrey KT14 6NP, United Kingdom  
Tel: +44 (0) 1932.350.115  
Fax: +44 (0) 1932.350.199

**Japan Headquarters**

Level 19 Shinjuku Daiichi-Seimei Bldg.  
2-7-1 Nishi-Shinjuku  
Shinjuku-ku, Tokyo 163-07, Japan  
Tel: +81.3.5325.7397  
Fax: +81.3.5325.7399  
Web Site: <http://www.ascend.co.jp>

**Asia-Pacific Headquarters**

Suite 1419, Central Building  
1 Pedder Street  
Central, Hong Kong  
Tel: +852.2844.7600  
Fax: +852.2810.0298

**Latin, South America and the Caribbean Headquarters**

One Ascend Plaza  
1701 Harbor Bay Parkway  
Alameda, CA 94502, United States  
Tel: 510.769.6001  
Fax: 510.747.2669

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