



# Express 5200 Series

## Voice & Data Frame Relay Remote Devices

### Product Features

- Two unit series supports voice and data over Frame Relay or point-to-point networks
- Voice options include FXS, FXO, and E&M
- Integral 56/64k DSU/CSU
- Express 5200 supports two serial data ports
- Express 5210 supports one serial and one 10BaseT data port
- RFC 1490 encapsulation for IP & LLC2
- SDLC local port spoofing
- Dial backup options include 4-wire Switched 56, V.34, and ISDN
- Time of day and weekend dial backup lockout options
- Supports IQ Frame Relay performance monitoring
- SNMP/Telnet Management
- Easy-to-use VT100 interface for configuration
- Standard 5-year warranty

The ADTRAN® Express 5200 is a family of Frame Relay access devices that provide a cost-effective means of transporting voice and multi-protocol data over Frame Relay and point to point networks. For customers looking for disaster recovery solutions, the units provide optional dial backup.

The Express 5200 series is an economical means of providing high-quality voice and fax capabilities to remote locations without expensive toll charges. Voice options are supported through plug-in voice cards. Voice and data can share the same Permanent Virtual Circuit (PVC) eliminating unnecessary PVC charges.

The Express 5200 provides multi-protocol support through two serial interfaces that can support EIA-232 and V.35 operating at rates from 2.4k to 512k. The series supports SNA, SDLC, SLIP, IP, PPP (both synchronous and asynchronous), Frame Relay, BOP, and asynchronous protocols. The DTE ports can be configured independently, providing support for multi-protocol applications. The Express 5210 provides the same multi-protocol support through a single serial interface but also includes an integrated 10BaseT Ethernet port that supports full IP routing.

The Dial Backup (DBU) feature allows automatic or manual backup upon interruption of Frame Relay or DDS services. The addition of DBU is accomplished through plug-in cards: 4-wire Switched 56, V.34 modem, and 1B+D ISDN. The units monitor both the physical link and the Frame Relay signaling to determine if an inter-

ruption has occurred. Once detected, the host unit initiates a dial-up call around the Frame Relay network and merges backup traffic, with the primary traffic still being received from unaffected remote sites. The DTE device still receives all data as Frame Relay traffic, allowing a transparent backup transition. Once the failed condition has been cleared and the Frame Relay interruption is over, the unit automatically restores traffic to the primary link.

In addition to voice and dial backup, the Express 5210 also supports IQ Frame Relay performance monitoring. This includes statistics on throughput and utilization per port and PVC; availability; lost frames and PVC state; excess bursting above CIR; network congestion (FECN, BECN, and DE); and end-to-end delay on any or all PVCs. SNMP is provided with support for RFC 1315 and MIB II. The units can be configured, monitored, and diagnosed using standard SNMP network management programs such as HP OpenView, IBM's NetView, and SunNet Manager.

Complete control, configuration, and diagnosis are available through a 16-position keypad and a two-line by 16-character LCD display. VT100 terminal configuration and control mode are also available through the control port. Flash download capability is implemented for installation of new features and enhancements.

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## Voice & Data Frame Relay Remote Devices

### Product Specifications

#### WAN Interface

##### Built In DSU/CSU

- DDS (RJ-48S)
- Data Rates: 56 and 64 kbps

##### With External DCE Card

- Data Rates: Up to 512 kbps
- EIA-232 (DB-25)
- V.35 with adapter cable

#### DTE Interfaces

- Asynchronous Rates: 2.4 to 57.6 kbps
- Synchronous Rates: 2.4 to 512 kbps
- EIA-232 (DB-25)
- V.35 with adapter cable

#### Network Interface

- 10 Mbps 10Base-T Ethernet (RJ-45)

#### Voice Support

##### Compression

- G.723.1 (MP-MLQ)
- Netcoder
- Silence suppression
- 6.3 - 9.6k compressed voice
- MOS-3.9

##### FAX Support

- Group III 0.3-14.4 kbps

##### Dual/Quad FXS

- Loop Start 2-wire voice
- Line current and ring voltage supplied
- R.E.\*. - 3
- TIA 464A DTMF decode and regeneration
- G.165 echo cancellation

##### Dual FXO

- Loop start 2-wire voice

##### Dual E&M

- 2- or 4-wire
- Type I and II E&M signaling

#### Protocol Support

##### Concentrator

- Frame Relay

##### IBM Support

- SNA/SDLC with local spoofing
- SDLC/HDLC transparent
- SDLC-LLC2 translation
- Supports up to 20 SDLC PUs/port

##### Routed Protocols

- IP

##### Routing Support Protocols

- RIP versions 1 and 2
- ARP
- ICMP
- IARP

#### IP Datalink Layer Protocols

- SLIP
- PPP asynchronous
- PPP synchronous

#### Transparent

- Asynchronous transparent
- BOP transparent

#### Protocol Encapsulation

- IP and LLC2 using FRF 3.1
- All other protocols use proprietary formats and require ADTRAN devices at each UNI

#### Configuration and Administration

- Local RS-232 Craft Interface
- Integral SNMP Agent
- Telnet
- Remote config
- Built in Ping Utility
- PVC Loopbacks
- DSU and CSU Loopbacks

#### Agency Approvals

- Emissions: Part 15 Class A
- Safety: UL 1950, CUL
- Telecom: FCC Part 68, Industry Canada CS-03

#### Environment

- Operating: 0° to 50°C (32° to 122°F)
- Storage: -20° to 70°C (-4° to 158°F)
- Relative Humidity: Up to 95%, non-condensing

#### Physical

- Dimensions: 2.4" H, 8.0" W, 10.4" D
- Weight: 4.5 lbs
- Power: 115 VAC, 60 Hz, 10 watts

#### Product Includes

- Express 52xx
- DDS network cable
- RJ to DB-25 adapter and cable for control port
- Users manual

### Ordering Information

Equipment	Part #
Express 5200	1202175L1
Express 5210	1200208L1
Dual FXS Card	1202188L1
Dual FXO Card	1202187L1
Dual E&M Card	1202189L1
Quad FXS Card	1200653L1
4-Wire Switched 56 DBU Card	1204001L1
V.34 DBU Card	1204002L1
ISDN DBU Card	1204004L1
V.35 Adapter Cable Male (6')	1200193L1
V.35 Adapter Cable Female (6')	1200194L1



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