High Speed Data Cards

Features

- **Available in 2 or 4 port versions for cost effective deployment.**
- **Supports V.35, RS530 or V.11 interfaces.**
- **Broadcast functionality for point to multi-point operation.**
- **V.35/X.21 trunk interface versions for Nx64K network access.**
- **56kbps/64kbps, Nx56kbps/64kbps up to 1.536Mbps/2.038Mbps.**
- **Extensive diagnostic support including multiple loopback selections, integral Bit Error Rate Tests (BERT) on a per port basis, and end-to-end QoS measurements.**

The IMACS supports six (6) types of HSU cards for support of high speed digital data:

820260 High-Speed Unit (HSU) Card	2 Port	ITU V.35, V.11, RS 530
820360 High-Speed Unit (HSU) Card	2 Port	ITU V.11/X.21 trunk interface
821260 High-Speed Unit (HSU) Card	2 Port	ITU V.35 (Red Book Spec)
821460 High-Speed Unit (HSU) Card	2 Port	ITU V.35 trunk interface
821570 High-Speed Unit (HSU) Card	4 Port	ITU V.35, V.11, RS 530
821660 High-Speed Unit (HSU) Card	4 Port	ITU V.35, V.11, RS 530, Tail Circuit

All of the HSU Card's can be installed in any User slot of an IMACS chassis.
Each port on a HSU can be independently configured to operate at any N x 56 Kbps or N x 64 Kbps speed where N is between 1 and 31 in E1 mode or 1 and 24 in T1 mode. In addition to the data rate, each synchronous port's Transmit Clock can be programmed for Internal ("int") or External ("ext") modes and both the Clock and Data Polarity may be Inverted ("inv") through software.

Software-initiated diagnostics supported include the setting of local loopbacks towards either the network ("net") or the attached DTE equipment ("dte"). In addition, a remote loopback function allows the HSU card to generate and respond to both latching and non-latching DDS-format OCU, CSU and DSU loopback codes initiated from the remote end of the circuit. The card can also generate and recognize two industry-standard in-band loop-up and loop-down codes that act on the entire super-rate circuit. Those are the ITU (CCITT) V.54 ("v.54") code and the ANSI Fractional T1 ("ft1") code, respectively.

In addition, the integral Bit Error Rate Tester (BERT) can be used to generate test patterns and route those towards the WAN facility. These test patterns can then be used to verify synchronization and measure circuit quality.

ZHONE
Bandwidth Changes Everything™

High Speed Data Cards

Card Specifications

Number of Ports	2 or 4	
Data Speeds	Nx56K and Nx64K	where N = 1 to 31 (up to 1984 Kbps)
Physical Interfaces	Model 820260	2 female 25-pin DB25 D-connectors
	Model 820360	2 female 25-pin DB25 D-connectors
	Model 821260	2 female 25-pin DB25 D-connectors
	Model 821460	2 female 25-pin DB25 D-connectors
	Model 821570	4 female 26-pin DB26 D-connectors
	Model 821660	4 female 26-pin DB26 D-connectors
Electrical Interfaces	Model 820260	ITU-T V.35, V.11, RS530, RS232, V.24*
	Model 820360	V.11 Trunk Interface (External Timing)
	Model 821260	ITU-T V.35**
	Model 821460	V.35 Trunk Interface *** (External Timing)
	Model 821570	ITU-T V.35, V.11, RS530, RS232, V.24*
	Model 821660	ITU-T V.35, V.11, RS530, RS232, V.24*

* Note: external adapter is required
** Note: full V.35 Red Book Std.
*** Note: full V.35 Blue Book Std.
[Cable specs detailed in Premisys Cable & Equipment Guide]

Trunk Interfaces					
Line Framing	Frame Relay based - requires 881160 Frame Relay Server card				
Data Format	Synchronous				
Data Protocol	Transparent				
Diagnostics	V.54 or DOS format local and remote loopbacks with automatic timeout				
Software-Configurable Options					
Data Rate per DS0	Nx56Kbps or Nx64Kbps				
Number of DS0s per port	1 to 31				
Transmit clock per port	Internal or External				
Clock polarity per port	Normal or Inverted				
Data polarity per port	Normal or Invented				
RTS/CTS Delay: per port	0, 30, 60, or 100 milliseconds				
RTS handshake per port	Permanent, local, ignore, rlocal				
BERT per port	Active or inactive		All Marks	All Spaces	QRSS
Local Loopback per port	None		DTE	Network	
Loopback Generation per port	off	CSU	DSU	OCU-DP	V54
Loopback Detection per port	Disable		Enable	Enable timeout	

Standards Compliance
Telcordia TR 41304, EN 50081-1 12/12/9, EN 50082-1 10/12/9, EN 60950/Al, EN 61 000-4-2, EN 61 000-4-4, EN 61 000-4-5, ENV 50 140 1993, ITU-T V.35, ITU-T V.11, ITU-T V.24, ITU-T G.704, ITU-T V.22bis, EIA RS422, G.823, EIA RS-449, EIA RS-530 EIA RS-366.

Product Numbers

820260 - 2 Port RS530/V.35	820360 - 2 Pont X21/V11 Trunk Interface.
821260 - 2 Port V.35	821360 - 2 Pont V.35/RS530 - 2 Dial Ports RS366, V25 bis
821460 - 2 Port V.35 Trunk Interface	821560 - 4 Port RS530/V.35

Physical Specification

Card Height	8 inches (20 cm)			
Card Width	15/16 inches (2.35cm)			
Card Depth	71/2 inches (18.75cm)			
	Model 820260	Model 821260	Model 821460	Model 821570
Power Con	3.4 Watts	2.5 Watts	2.5 Watts	3.5 Watts
BTU/hr	11.61	8.54	8.54	11.94
Oper.Temp	0 to 50 C. 32 to 122 F			
Storage Temp	-20 to 80 C, -4 to 176 F			
Humidity	0 to 95% Humidity. Non-Condensing			

IMACS Platform

IMACS Chassis	891630 IMACS 600, 891830 IMACS 800 or 891930 IMACS 900
Control CPU Card	880460 supports all models except 820360 and 821460 880370 supports all models
System Host Code	3.6.y & 6.0.0 or later
Interface Card	
Release 3.6.y	892060 support all HSU models
Release 6.x.y	892260, 892360 & 892460 support all HSU models
Power Supply Options	All AC and DC power supplies supported