

## WorldDSL™ G.S

### Single Pair Rate Selective G.SHDSL for CO and Customer Premises



ADC's WorldDSL G.S is a family of high-speed SHDSL access devices complying with the ITU-T G.991.2 G.SHDSL standard. These modems are specifically designed for the diverse telecommunication needs of global markets. Ideal for telco and enterprise networks, WorldDSL G.S products conform to international standards to ensure compatibility, performance and safety within your network environment.

The new G.SHDSL modems are part of the broad family of WorldDSL HDSL modems and share common chassis, enclosures, management software and accessories. They are fully G.SHDSL compliant including 36 timeslot operation and all required performance monitoring statistics. Both G.821 and G.826 statistics are provided for E1 ports giving users maximum flexibility. Each WorldDSL G.S modem is software-selectable as a communication master or communication slave, so any two units can be used for a point-to-point circuit. The modems are part of a fully managed system, interfacing with a VT100 compatible terminal or a PC. The units can be managed via their local craft port or a central management card installed in a CO shelf. ADC's Windows or UNIX-based SNMP management software can be used to provision the system, collect alarm and performance data, and conduct diagnostic tests locally or from a remote management station. In any of these modes, the NTU can be programmed and managed through the CO, minimizing travel to the outdoor site.

#### Features:

- Fiber optic quality (BER  $10^{-10}$ )
- Single-pair operation—uses only one pair with a max. user data rate of 2.304 Mbps
- Nx64K rate selectable from 192 kbps to 2.304 Mbps
- E1 and fractional FE1 capable
- Automatic protection of TS0 and TS16 for fractional E1 use
- Menu oriented craft screens for ease of use
- Software programmable data port—V.35/V.36/RS-530/X.21
- E1/FE1 and dataport simultaneous operation sharing the 2.304 Mbps bandwidth
- Downloadable software for easy upgrade
- ADC quality and reliability

## Ordering Information

Catalog No.	Part No.	Type	User Interface	Nx64K
UTU-911	150-2800-01	Plug-in Card	Full or fractional E1 (FE1)	32
UTU-912	150-2800-02	Plug-in Card	V.35/V.36/RS-530/X.21	36
UTU-914	150-2800-04	Plug-in Card	E1/FE1 and V.35/V.36/RS-530/X.21	36
ETU-911A*	150-2810-01	Desktop AC Unit	Full or fractional E1 (FE1)	32
ETU-912A*	150-2810-02	Desktop AC Unit	V.35/V.36/RS-530/X.21	36
ETU-914A*	150-2810-04	Desktop AC Unit	E1/FE1 and V.35/V.36/RS-530/X.21	36

\*Available Summer 2002.

**SHDSL Interface** Line Code: 16 Level Trellis coded PAM  
 Line Data Rate: user selectable from  
 192 kbps to 2.304 Mbps  
 Range: (see chart at right)  
 Connector: DB9F (adapters available)  
 Protection: ITU-T K.20 and K.21 compliant  
 Compliance: ITU-T G.991.2

**E1 Interface** Line Code: HDB3  
 Data Rate: 64 kbps to 2048 kbps  
 Operation: full or fractional  
 Blocking: per 64 kbps channel  
 Idle Code Insertion: user selectable word  
 Impedance: 120  $\Omega$  balanced or  
 75  $\Omega$  unbalanced  
 Framing: structured with or without  
 CRC-4 or unstructured  
 Connectors: both D15F (balanced) and  
 BNC (unbalanced)  
 Timing: internal, external, G.703  
 Compliance: ITU-T G.703, G.704, G.706, G.821, G.823, G.826, CTR12

**Data Interface** User software selectable as: V.35, V.36, RS-530, X.21  
 Data Rate: 64 kbps to 2304 kbps  
 Connector: D25F (adapters available)  
 Timing: internal, external, loop, Nx64  
 Compliance: Net 2

**Performance Monitoring** DSL PM: ES, SES, UAS, CV, LOSW seconds  
 DSL Alarms: noise margin, loop attenuation, errored seconds, loss of synch word  
 DSL Alarms Thresholds (user settable): noise margin, loop attenuation, errored seconds  
 E1: G.821 and G.826  
 Performance Measurements: ES, SES, UAS, BBES, ESR, SESR, BBER  
 E1 Alarms: LOS, LFA, RAI, RAIS  
 PM History: 96x15 minute increments, 7x24 hour increments for both HDSL and E1 performance. Indefinite  
 resettable alarm log showing first and last occurrence date and time, and number of occurrences for each alarm type  
 Alarm Relay: Form C relay contacts NO, NC and COM  
 Loopbacks: local or remote towards customer or central office  
 Test pattern: PRBS generator and BER meter from the customer premise or CO ends

**Power** Input Power: DC -36 to -72 VDC or AC 90 to 264VAC 47 to 63 Hz.

**Chassis/Enclosure** Chassis: EMS-830 or EMS-832; Enclosure: ERE-811 L5, L6 or L7 single-slot enclosure

**Environmental** Operating Temperature: -5°C to +50°C; Storage Temperature: -40°C to +85°C  
 Humidity: up to 95% RH non-condensing

**Safety/Emissions Compliance** CE Marked  
 Safety: EN60950; Emissions, Susceptibility and Immunity: EN 300386-2. CO IN EMS-83x,  
 Other Locations in ERE-811 or ETU versions

**WorldDSL G.S Reach Chart**

DSL Rate	0.4mm		0.6mm		0.8mm	
	With Noise <sup>1</sup>	No Noise <sup>2</sup>	With Noise <sup>1</sup>	No Noise <sup>2</sup>	With Noise <sup>1</sup>	No Noise <sup>2</sup>
2304	2.2	3.8	4.4	7.6	6.3	9.3
2048	2.4	3.9	4.8	7.8	6.8	11.1
1792	2.5	4	5	8	7.2	11.8
1536	2.7	4.1	5.4	8.4	8.2	12.3
1280	2.9	4.3	5.8	8.6	9	12.8
1152	3	4.4	6	8.8	9.5	13.2
1024	3.2	4.5	6.4	9	10.2	13.6
768	3.7	4.8	7.4	9.6	11.7	14.1
640	4	4.9	8	9.8	12.7	14.7
512	4.2	5	8.4	10	13.5	15.3
384	4.8	5.5	9.6	11	14.7	15.7
256	5.5	5.8	11	11.6	16.8	16.8
192	6	6.3	12	12.6	17.1	17.1

1- with worst case ITU-T G.991.2 noise  
 2- noiseless with 6dB margin



**Web Site: [www.adc.com](http://www.adc.com)**

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