

An advanced signaling protocol converter designed to facilitate interoperability between incompatible world-wide networks.



SP230™ Signaling Gateway

The SignalPath™ 230 (SP230) is an advanced signaling protocol converter designed to facilitate interoperability between incompatible world-wide networks. The SP230 enables a seamless interface between in-band and out-of-band networks, and between out-of-band networks and other out-of-band networks.

Different types of telephony communication protocols, both in-band and out-of-band, circuit-switched and packet, exist globally. In fact, there could be as many as six or seven protocols variants simultaneously in use within one network. The SP230 breaks down the communication barriers presented by these different protocols and enables the flow of information between networks. A typical scenario is a next-generation, SS7-based packet network connecting to an older network based on in-band CAS signaling.

In addition, our proprietary address translation technology enables the SP230 to be positioned virtually anywhere within a network for routing ISUP messages between switches located in different SS7 networks. This technology allows the SP230 to support both symmetric and asymmetric network configurations, allowing for greater flexibility in building revenue-producing networks.

With the SP230, not only can you increase your potential to connect to a larger portion of the world market, but you can also eliminate charges you may be currently paying to one or more companies for network connections. That means you can offer bigger savings to more customers, which translates to more revenue in your corporate pocket.



SignalPath™ 230

EXTENSIVE PROTOCOL SUPPORT

Multiple protocol support in a single platform means better inventory management and lower overall operating costs. Protocols supported are:

- ▶ R1, R2, DTMF
- ▶ ANSI SS7 (ANSI), ITU-T C7, ETSI ISUP, Spanish ISUP, NOM112, C7 variants (e.g., Argentina, Chile, Peru, Spain)
- ▶ NI2 and ETSI PRI-ISDN
- ▶ Custom variants of both in-band and out-of-band protocols are available

SUPERIOR MAINTENANCE AND DIAGNOSTICS

- ▶ Multiple maintenance features enable quick and cost-effective resolution of network problems.
- ▶ Trace functionality is available to aid in troubleshooting configuration and network problems.
- ▶ Visual and dry contact alarms allow for remote and local monitoring.
- ▶ The "hot plug-in" feature enables insertion and removal of modules without affecting operation.

REDUNDANCY

- ▶ Redundant common module capability translates to less equipment down-time.
- ▶ Redundant power supplies are input and output isolated.

SCALEABLE ARCHITECTURE

- ▶ The SP230 has a modular design, with a capacity of up to 52 E1 or T1 interfaces, allowing users to scale the product to fit small or large applications while incurring a low upfront investment.
- ▶ Address translation that enables support for both symmetric and asymmetric network configurations.

OTHER FEATURES

- ▶ Standard connections (RJ48, BNC)
- ▶ Up to 52 E1 or T1 trunks (full duplex, 104 ports)
- ▶ Up to 1,612 DS0s per chassis
- ▶ Dynamic bi-directional μ -Law/A-Law T1/E1 conversion
- ▶ 19 in. (48.26 cm) rack-mountable chassis

TECHNICAL SPECIFICATIONS

ARCHITECTURE

High performance RISC-based

STANDARDS CONFORMANCE

R1:	Q.310–Q.331
R2:	Q.400–Q.490
DTMF:	BellCore TR-TSV-002275, Subsection 6.13
SS7:	BellCore TR-NWT-00246, ANSI T1.111a, T1.112, T1.113a, T1.114, T1.116, T1.234–T1.236
C7:	ITU-T White Book: Q.767, Q.701– Q.704, Q.705, Q.708, Q.709, Q.780– Q.782, Q.784, Q.788
ETSI ISDN:	ETSI 300-102, Q.931, Q.921
N12 ISDN:	BellCore TR-NWT-001268, TR-NWT-002343; Q.931, Q.921

AGENCY COMPLIANCE

Safety:	EN 60950, European Safety (CE Mark) UL 1950 3rd Edition, U.S. Safety C22.2 No. 950, Canadian Safety
EMC:	EN 300 386-2: 1997 EU EMC (CE Mark)
Emissions:	FCC Part 15, Sub-part B, Class A

PHYSICAL SPECIFICATIONS

Height:	10.5 in. (26.7 cm)
Width:	19 in. (48.26 cm)
Depth:	14 in. (35.6 cm)
Power:	-48 to -56 VDC
Temperature:	32° to 122° F (0° to 50° C)
Humidity:	Up to 95% non-condensing
Altitude:	Up to 10,000 ft. (3,048 m)

SYSTEM CAPACITY

Aggregate Cards:	Up to 13 per chassis
Interfaces:	Up to 8 E1 or T1 trunks per Aggregate card; up to 104 full duplex trunks per chassis
Channels:	Up to 31 per trunk; up to 248 per Aggregate card; up to 3,224 per chassis
SS7/C7:	Four per AGC card
Signaling Links:	Eight per card set; Up to 52 per chassis
Destination Point Codes:	Four per card set; Up to 56 per chassis

INTERFACE SPECIFICATIONS

Framing:	E1: G.732 or G.706; T1: D4SF or D4ESF
Bit Rate:	E1: 2,048 Mbps; T1: 1.544 Mbps
Clocking:	E1: ± 30 ppm internal; E1: ± 100 ppm external; T1: ± 30 ppm internal T1: ± 150 ppm external
Impedance:	E1: 120 ohm balanced; E1: 75 ohm unbalanced; T1: 100 ohm balanced
Coding:	E1: AMI or HDB3 T1: AMI or B8ZS
Alarms:	E1 loss of carrier signal, multi-frame carrier signal, sync; alarm indication signal (AIS); receipt of remote alarm; receipt of multi-frame remote alarm T1 loss of carrier signal; loss of frame; receipt of alarm indication signal (AIS); receipt of remote alarm
Diagnostics:	E1/T1: signaling state report, digit report
Performance:	E1: G.703, G.706, G.732, G.823 T1: ATT Pub. 62411

Specifications subject to change

