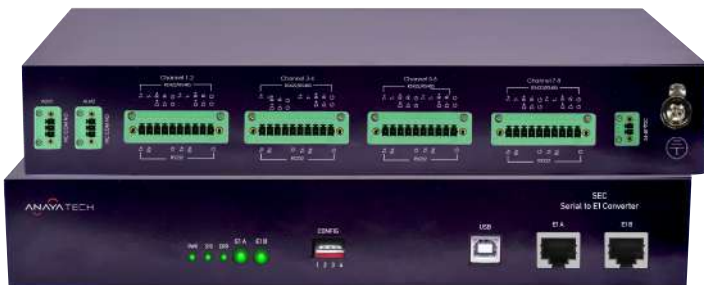


# SERIAL TO E1 CONVERTER



- Extends the transmission over SDH/PDH Network.
- Framed and Unframed E1 support.
- High data rate up to 384K.
- In-band and out-of-band management.
- Supports 1+1 protected E1s.
- Protection on Serial and E1 ports.
- Software upgrade support.

## HIGHLIGHTS

- ☑ E1 complies with ITU-T G.703, G.704 Standards
- ☑ Supports Framed (PCM31/PCM30) and Unframed E1.
- ☑ Supports internal, recovered (loop-timed) clock and external 2MHz clock support.
- ☑ Enable/disable CRC option.
- ☑ Supports 120Ω RJ45 balanced E1.
  - Also supports 75 Ohms BNC E1 with external adapter.
- ☑ Jitter and Wander complies to ITU-T G.823 standards.
- ☑ Supports up to 8 serial ports.
- ☑ ESD and EFT protection for the RS-232/422/485 data lines.
- ☑ In-built long range resilient 12-48VDC or 110-265VAC, 50-60Hz power supply.
- ☑ In-built protection on power input.
- ☑ Dry Contact alarm relay output.
- ☑ Wide operating temperature range from -40 to 85°C.
- ☑ Hardened metallic chassis.
- ☑ A make in India product. Designed and developed indigenously.
- ☑ Full technology control, customization support available.

# OVERVIEW

The Serial to E1 converter converts the serial interface into E1 line that can be extended to a long distance over E1, PDH or SDH links, to form a communication link between the equipment having serial interface. The Serial to E1 converter allows you to seamlessly transition between full-duplex RS-232, half-duplex/full-duplex RS-485/RS-422 over a single or 1+1 redundant E1 link/s.

## SPECIFICATIONS

### Serial Interface

Protocol	RS-232, RS-485/RS-422
Ports	2/4/8
Standard	EIA/TIA RS-232C, RS-485 and RS-422
Distance	RS-232: up to 16 ft (5m) RS-485/RS-422: up to 4000 ft (1.2km)

### Power Supply

Option 1	12-48VDC
Option 2	110-265VAC, 50/60Hz

### E1 Interface

Interface	120 $\Omega$ Balanced • 75 $\Omega$ Unbalanced with external adaptor
Framing	Framed – PCM30 and PCM31 Unframed
CRC	Enable / Disable option
Line-code	HDB3
Connector	RJ45 • BNC with external adaptor

## PROTECTION

### Power

Reverse Polarity	YES
Over Current / Short-circuit	YES
Under Voltage / Over Voltage	YES
Surge Protection	UL1449 compliant 4.5kA

### Other

Weather Proofing	Conformal coated PCBs
Mechanical	Ingress Protection – IP30

### Serial Ports

Surge Protection	IEC-61000-4-2 ESD - 30kV (Air), 30kV (Contact)
	IEC-61000-4-4 EFT

### E1 Interface

Protection	1.5kV Galvanic Isolation with surge protection
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## Applications

- ☑ SCADA
- ☑ Data Acquisition
- ☑ Remote Monitoring and Control
- ☑ Industrial Automation and Control
- ☑ Security and Surveillance

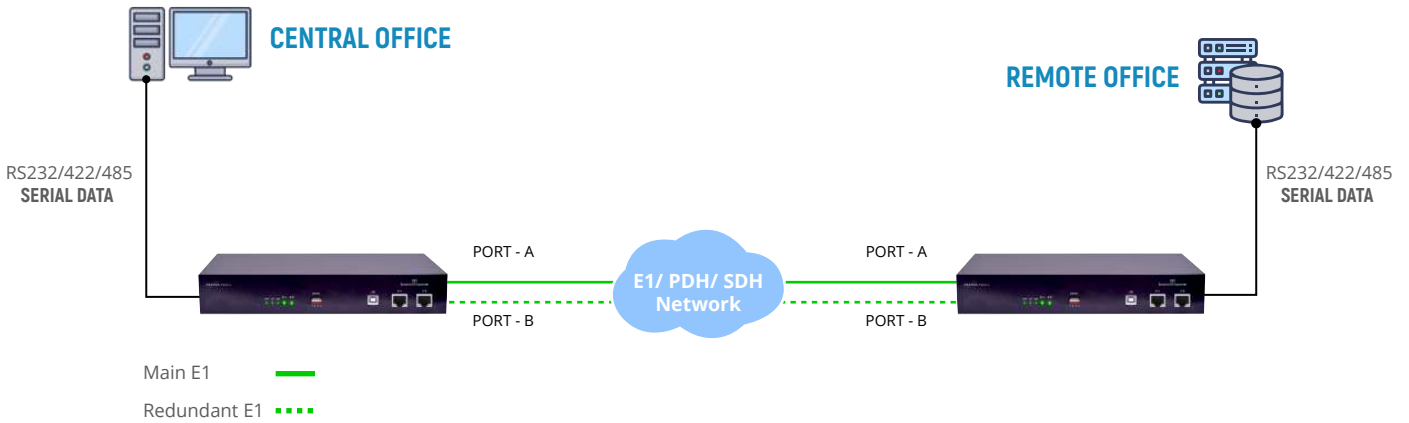
## Industries

- ☑ Railways
- ☑ Power
- ☑ Telecommunications
- ☑ Oil and Gas
- ☑ Heavy Industries

# APPLICATION DIAGRAMS

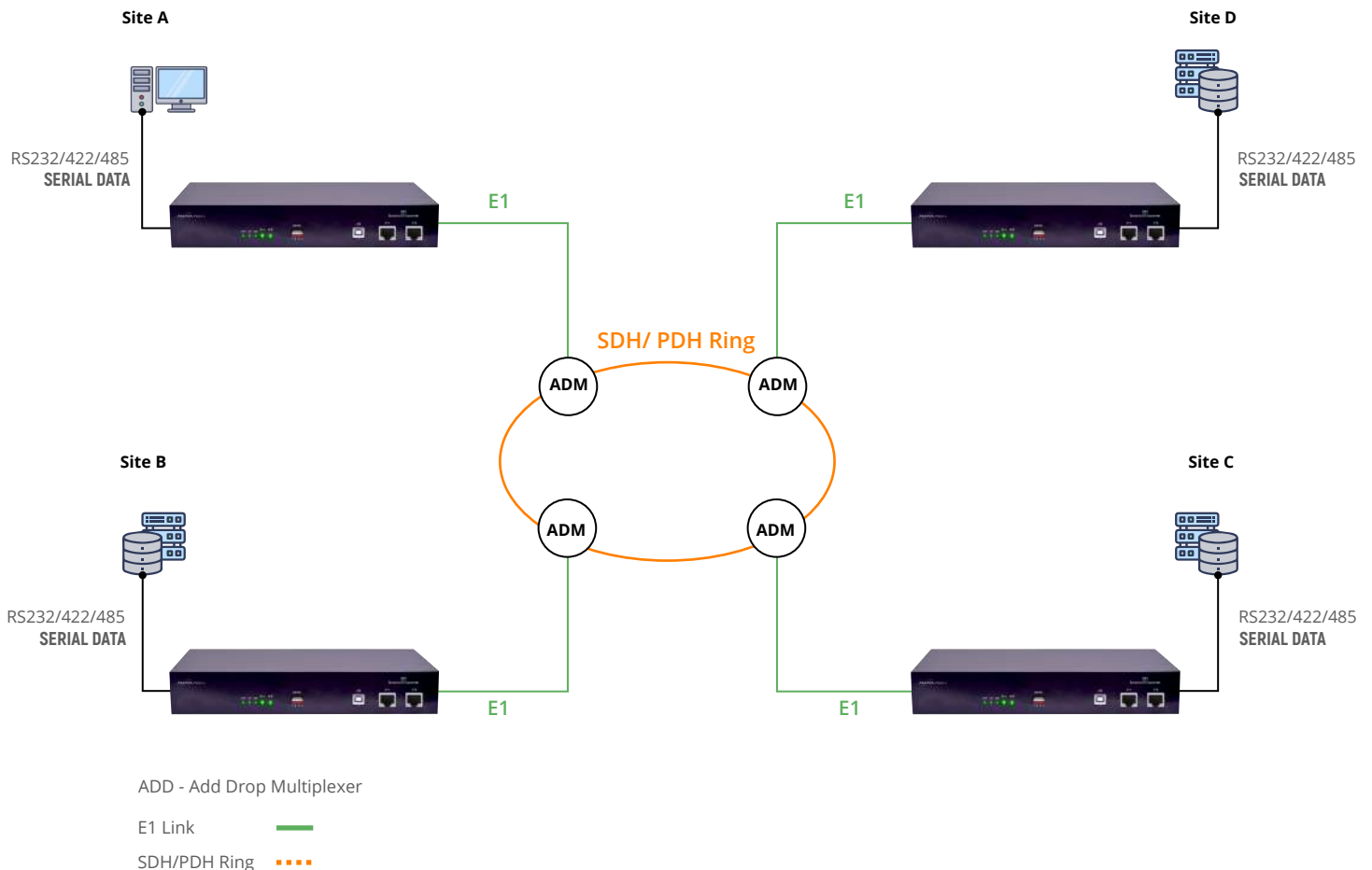
## Point-to-point Application

The Serial to E1 converter seamlessly bridges serial devices over E1 line/s, enabling direct and efficient communication over long distances.



## Ring Application

The Serial to E1 converter may also be connected over an SDH/PDH network to establish a seamless integration of serial devices over an existing SDH/PDH network.



Alarms & Indicators	
PWR	System Power
SYS	System Health
ERR	Error detected
E1 A	E1-A SYNC
E1 B	E1-B SYNC

Mechanical	
Chassis	Heavy Duty Metal Housing
Type	Desktop
Height	1RU (44mm)
Dimensions (HxDxW)	44x160x269 (in mm)
Weight	1.35 Kg

Environmental	
Operating Temp.	-40°C to 85°C
Storage Temp.	-40°C to 85°C
Humidity	5% To 95% - No Condensation

Quality And Certifications	
Product Safety	CE, RoHS
Quality Management	Manufactured in ISO certified factory

## ORDERING INFORMATION

Model	Description	
	No. of E1 Ports	No. of Serial Ports
SEC-01-18	1	8
SEC-01-14	1	4
SEC-01-12	1	2
SEC-02-28	1+1*	8
SEC-02-24	1+1*	4
SEC-02-22	1+1*	2

\*For redundancy

### Ordering Options

- ✓ **Serial Interface:** RS-485/RS-422, RS-232, and RS-232 + RS-485/RS-422 – Please mention in order
- ✓ **Power:** AC:110-265VAC, DC: 12-48VDC



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