



# AND-OR LOGIC PAKISTAN (PVT) LTD



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## BULK Encryption Unit BEU-261



BULK Encryption Unit, (BEU-261) is a high speed full duplex encryption system. It operates an 2.048 MB stream but adjust to any incoming low data rate automatically. The ultra high grade customisable error extension free crypto algorithm in the BEU distinguishes the equipment for all the existing bulk encryption equipment available in the market. The strong synchronization scheme enables the equipment to work under severe atmospheric conditions. It supports all types of communication network like multiplexer, multichannel radio relay, microwave and optical fiber. The equipment has been specially designed for military field application. The system is highly reliable, rugged and user friendly

### Technical Specification

#### » General Data

- » Communication interfaces
  - Data rate Eurocom D/1  
256 kbps to 2048 kbps  
(Auto adjustable)
  - Line coding AMI (130 ohm)
- » Synchronization time  
Less than 500 micro-seconds
- » reliability  
15000 hour
  - MTBF 30 minutes (field repair)
  - MTTR
- » Power supply 220VAC  $\pm$  10%  
24VDC  $\pm$  4V
- » Power consumption 8W (Nominal)  
23 W (Max)
- » Environmental -20°C to + 55°C
- » Specification -40°C to + 70°C
  - Operating temperature 95% RH at 400C( non condensing)
  - Storage temperature 1.5G peak,
  - Humidity 20-55Hz
  - Vibration Rain/Shower protected
  - Water protection

### Cryptographic Data

- » Key diversity Upto 256 bits
- » Key memory Upto 5000 communication keys (on board)
- » Key management Key and configuration data distribution by fill gun in encrypted form Key Management System (KMS)
- » Access control Elector mechanical lock password based authentication
- » Key memory storage Atleast 5 years
- » Emergency erasure Quick destruction of all keys concerning security related and data programs

## Ethernet Link Encryptor Model LEU 250- Fast Ethernet 100MBPS Model LEU 1250 -Gigabit Ethernet 1GBPS



The Ethernet Link Encryptor is a high speed full duplex data encryption system.

## IP Euro Link IPEL 262



The IPEL 262 (IP EURO LINK) interface converter is used to convert ethernet (10/100 Mbps) to EUROCOM D1 (2.048 Mbps). Allowing the user to transport ethernet over EUROCOM D 1 communication links. The equipment is used in pairs with one unit being installed on either side of the network.

The IPEL 262 is a network extension device, which provides Ethernet access to a vast area using EUROCOM D1 PATCOM links.

### IPEL Features

- » Provides maximum bandwidth of 2.048 Mbps for transporting ethernet data over D1 link
- » Automatic ethernet negotiation function
- » Supports 10M/100M and working modes of both full-duplex and half-duplex
- » Provides error detection for AMI and ethernet data
- » Loopback testing capability for D1 (AMI) data
- » Extended operating temperature range for harsh environmental conditions

# AND-OR LOGIC PAKISTAN



## Integrated PC Information Security System (ISS-7000)



Integrated PC Information Security System ISS-7000 series is a combination of on-line end-to-end ciphering machine for secure messaging (through e-mail server or direct transfer), Net shield VPN tele-access client and file security system. It provides a comprehensive suite of data security services including data encryption, data integrity check, peer machines authentication, anti-spooling, multi-layer access control for users and comprehensive audit trail. The key to its reliability and trustworthiness stems from hacking-proof hardware based cryptographic processing and smart card based advanced key management and access control mechanism. The system is extremely user friendly, flexible and deeply customizable to any organization's peculiar needs. Most importantly, it is comparatively inexpensive and affordable.

## Integrated Cipher Module A-80 for AN/PRC 77A



The CIPHER MODULE A-80 is a new high grade digital voice cipher system for the VHF narrowband FM radios AN/PRC77A. This module was specifically designed as an integrated module for PRC77A and utilizes robust multi carrier modem technology. The CIPHER MODULE A-80 requires very low transmission speeds and enables optimal connections even under extreme conditions.

## Line / Access / Gateway



Line Access Gateway is a software defined electronic field telephone exchange using DSP technology. LAG is designed on modular architecture for easy repair and maintenance.

It acts as a gateway between legacy communication devices and new technologies such as IP and E1. Hence converting traditional telephone devices into IP / E1 devices.

The exchange is fully rugged and conforms to military standards. It provides extensive user facilities which can be configured as per subscriber's request / demand. It is also man-portable and vehicle mountable for easy mobility. Moreover it is lightweight and user-friendly.

## Transcoder D-100



The Transcoder D-100 provides tactical network extension of EUROCOM DI CPX switches by providing seamless connectivity through IP Networks. The equipment is used in pairs with one unit being installed on each side of the network. On the transmitting side it converts Eurocom stream to IP traffic. On the receiving end incoming IP traffic is converted to Eurocom stream.

### Product Features

- » Provides capability for transporting EURO COMA streams from CPX switch over IP network
- » Fully compatible with EURO COMA D1/IB6
- » Provides extension for tactical CPX switch network
- » Supports 10M/100M and working modes of both full-duplex and half-duplex
- » Extended operating temperature range for harsh environmental conditions
- » Loopback testing capability for DI (AMI) data
- » Automatic ethernet negotiation function
- » Reconfigurable network topology



## Link Encryption Unit LEU-221E / 222E / 224E

Link Encryption Unit, LEU is a high-speed full duplex data encryption system. It can handle single E1 (LEU-221E) Double E1 (LEU-222E) and four E1 (LEU-224E) data streams simultaneously. It operates on 2.048 Mbps with CEPT-E1 interface. The system is useful for high security applications on microwave, satellite, line of sight multi channel radio relay and optical fiber based communication networks. The crypto algorithm (customizable) coupled with advanced automated key management system provides ultra high security to the communication network. The system is user friendly, easy to install, operate and maintain.



### Technical Specifications

Application	High speed full-duplex data encryption on radio relay, microwave, satellite and optical fiber based communication links
Implementation	One part encryption processing unit in standard 19" instrumentation rack
Communication	CEPT-E1 2.048 Mbps ITU-T G703
Interfaces	Frame format ITU-T G.704 including PCM 30, PCM31, PCM 30CRC, or unformatted frame format Line coding HDB3
Synchronization time	Less than 500 micro-second
Reliability	MTBF: 1000 hour MTTR: 30 minutes (Field repair)
Bite	Comprehensive built-in testing and log maintenance facilities
Power supply	220 VAC +/- 10%, 17 V-85 V DC
Power consumption	Less than 50 Watts
Weight	Less than 10 Kg
Dimensions	6.5Hx19Wx17.75D Inches
Environmental	-20°C to +55°C
Specifications	-40°C to +70°C
Operating temp	90% (non-condensing) at 25°C
Storage temp	1.5 G peak. 20 Hz -55 Hz
Humidity	Rain / Shower
Vibration	
Water protection	
Cryptographic	Standard AES 128 bit counter mode
Algorithm	encryption
Implementation	Algorithm resides in tamper proof high security module
Keys diversity	128/256 bits
Keys memory	2000 communication keys expandable up to 90000 Keys
Keys management	Key and configuration data distribution on smart card / Key fill device in encrypted form
Access control	Electro-mechanical lock
Keys memory	Smart card authentication token with 2 level PIN protection
Storage	At least 5 years