KGET4/8/16S

ETHERNET ACCESS INTERFACE CONVERTOR
Ethernet over up to 16x E1 with GFP, VCAT, LCAS and Encryption

■ Transparent Ethernet connection over existing TDM infrastructure with built in AES Encryption

■ Per E1 port configurable AES128/192/256 encryption module with flexible key and access management

■ Provides Ethernet connection over up to 16 E1

■ GFP, VCAT and LCAS encapsulation and bonding for up to 16 groups

■ QoS and SLA Support for Ethernet subscribers

■ Feature rich diagnostics and fault management on all TDM and Ethernet ports

■ Monitoring and Configuration via embedded Web Server and SNMP

Access Systems

IRITEL
bright connections

Applications

- Secured High Capacity Transparent Ethernet Service over existing PDH/SDH networks for government, financial and other institutions that requires secured data transmission over public telecommunication network.

- IP DSLAM, WiMAX and Mobile Base station backhaul for public and private users

- Secured remote corporative networks LAN connection

Basic features

- KGET16S complies to the latest NG-PDH standards

- KGET16S provides transparency for all higher order protocols (TCP-IP, XNS, ISO,...)

- Advanced Encryption Standard (AES) provides high confidence level of data security over public telecommunication network. Each E1 link at the device is possible to configure to perform data encryption with different key length, key management and key schedule. Encryption procedure includes key exchange, authentication and user data encryption. Each phase of encryption procedure uses their own key.

- Generic Framing Procedure (GFP) enables efficient Ethernet packet encapsulation and TDM bandwidth utilization

- Virtual Concatenation (VCAT) provides flexible bandwidth allocation for different subscribers by bonding multiple E1 links into single virtual pipe

- Link Capacity Adjustment Scheme (LCAS) enables smooth virtual pipe capacity change, by adding or removing E1 links from the pipe, without traffic loss

- VLAN capabilities includes stacking and striping for both ingress and egress traffic for all ports independently thus keeping user VLAN settings unchanged. Management traffic can be isolated from user traffic with separate VLAN

- QoS support includes per port VLAN based priority or QoS based on IEE802.1p enabling fine traffic shaping in order to fulfill user requirements for delay sensitive real time voice or video applications

- KGET16S provides local port and in band capacity for remote management via embedded Web Server. For TMN purposes device provides SNMP agent

- E1 port test facility includes loop tests and signal generation and error measurements. All E1 ports under tests are excluded from VCAT LCAS groups thus preventing Ethernet loop storms

TECHNICAL DATA

E1, G.703 (2 Mbit/s)

Number of ports	4,8,16
Connector	RJ45

Input

Signal type	2048 kbit/s ±50 ppm (HDB3)
Impedance	75 Ω/120 Ω
Cable attenuation	0 to 6 dB at 1024 kHz
Input jitter	according to ITU-T G.823
Reflection attenuation	according to ITU-T G.703/9.3

Output

Signal type	2048 kbit/s ±50 ppm (HDB3)
Impedance	75 Ω/120 Ω
Impulse level	2.37 V ±0.237 V, 75 Ω
	3 V ±0,3 V, 120 Ω
Impulse width	244 ns
Impulse shape	according to ITU-T 15/G.703
Output jitter	according to ITU-T G.823

Ethernet 10-100 BaseTX

Number of ports	2,4
Transport type	duplex
Electrical characteristics	IEEE 802.3
Transmission	symmetrical
Section length	(UTP cable class 5)
	up to135 m
Connector	RJ45

Ethernet 100 BaseFX SFP plug-in module

Number of ports	0,2
Transport type	duplex
Optical characteristics	IEEE 802.3
Transmission	singlemode optical fibre
Section length	up to 2000 m
Connector	SC

Protocols

Encapsulation	GFP, G.7041
	GFPoPDH, G.8040
Bonding	VCAT G7043
	LCAS, G.7042
Delay Compensation	up to 250 ms
AES	NIST, FIPS197