



iMAP™ CES8 (AT-TN-119-B)

8-Port T1/E1 Circuit Emulation Channel Unit

Circuit Emulation Service Enables Delivery of T1/E1 over Ethernet Transport

Migration from TDM to a converged Ethernet-based network requires a means to complement the delivery of next-generation packet-based services with the delivery of traditional TDM-based services. The Allied Telesis integrated Multiservice Access Platform (iMAP™) CES8 gives the iMAP the ability to provide transparent transport for eight T1/E1 circuits over an Ethernet network.

TDM to Ethernet interworking is achieved using the same industry standards for TDM Circuit Emulation Service over Packet (CESoP) being defined by the IETF, Metro Ethernet Forum, MPLS Forum and ITU-T. This interworking technology is extremely robust and overcomes the challenges of delivering TDM services over an all-IP packet network.

The iMAP CES8 automatically compensates for packet network congestion, blocking, QoS prioritization and multiple signal paths with varying latency which can lead to jitter, lost packets, duplicate packets and out-of-sequence packet delivery.

The iMAP CES8 is used to deliver Private line T1/E1 services, subtend a channel bank for derived 2W/4W legacy special circuits or for Business LAN services. Whatever the application, Service Provider SLAs will be honored when deployed with Allied Telesis Ethernet Protection Switched Ring (EPSRing™) network topology. Expect five 9's (99.999%) reliability of SONET, but with the simplicity, efficiency and cost savings of Ethernet.

Part of the Allied Telesis IP Broadband Access Family

Whether it's broadband ADSL2+, FTTH or T1/E1 circuits, the iMAP family is the ideal platform for last-mile service delivery. The iMAP CES8 channel unit can be used with any of the iMAP family of carrier-grade, IP Access platforms:

- ▶ iMAP™ 9700 (9RU, 16 service slots)
- ▶ iMAP™ 9810 (3RU, eight service slots)
- ▶ MiniMAP™ 9100 (1RU, three service slots)

Provisioning, management and diagnostics of subscriber ports can be accomplished from either the iMAP command line interface or the NMS.

The iMAP CES8 has been designed to survive the most rugged environmental conditions. It can be confidently deployed in either a central office or in outdoor enclosures, withstanding extremes of heat, cold and light exposure.

Specifications

Interface Specifications

Number of ports: Eight
Connector: RJ-21 (Female)

T1 Specifications

Line rate: 1.544Mbps
Line code: AMI or B8ZS
Framing: Unstructured mode
Jitter: ANSI T1.102, T1.403, GR-499-CORE
Wander: T1.403

E1 Specifications

Line rate: 2.0484Mbps
Line code: AMI or HDB3
Framing: Unstructured mode
Jitter: ITU-T G.823
Wander: ITU-T G.823

CES Specifications

Packetization: 16 to 1023 bytes
PDV Buffer: 74.432ms for T1, 56.112 for E1

Key Features

- ▶ Eight T1/E1 ports
- ▶ Pseudo-wire compliant to the SAToIP standard
- ▶ T1 reach is selectable for short-haul DSX-1 or long-haul T1
- ▶ Integrated jitter buffers absorb packet network delay variation
- ▶ Provides Layer 2 services using existing E1/T1 circuits

Timing and Synchronization

Timing Source: Loop timed or pseudo-span timed
Holdover Accuracy: Stratum 4 local oscillator

Power Requirements

Maximum Power: 23W

Environmental Conditions

Operating Temp: -40°C to 65°C (-40°F to 149°F)
Storage Temp: -40°C to 75°C (-40°F to 167°F)
Relative Humidity: 5% to 95%, non-condensing

Regulatory Approvals

FCC Part 15 Class A/ANSI C63.4
EN 300 386 V1.3.1:2001-09/EN 55022:1998, Class A
VCCI Class A; ITE/ CISPR 22:1997 Class A
EN 300 386 V1.3.1:2001-09/EN 55022:1998, Class A
EN 300 386 V1.3.1:2001-09/EN 61000-4-3:1998
EN 300 386 V1.3.1:2001-09/EN 61000-4-6:1996
EN 300 386 V1.3.1:2001-09/EN 61000-4-4:1995
EN 300 386 V1.3.1:2001-09/EN 61000-4-5:1995
EN 300 386 V1.3.1:2001-09/EN 61000-4-2:1999
UL/cUL 60950: IEC60950
NEBS Level 3, GR-1089 Issue 3, GR63 Issue 2
USDA RUS

Ordering Information

iMAP CES8
8-ports, T1/E1 Circuit Emulation Service Module
Part number: AT-TN-119-B