Alcatel·Lucent Enterprise

Alcatel-Lucent 10BT-SPE Adapter

Modernize communication networks with Single Pair Ethernet

The Single Pair Ethernet (SPE) technology, based on the IEEE 802.3cg (10BASE-T1L) standard, is ideally positioned to reconcile the requirements of digital modernization with the physical and economic constraints of existing buildings.

10BT-SPE Adapter

Today, organizations face a costly dilemma: completely replace their legacy cabling with structured Ethernet (Category 6 or higher) or find a way to leverage what they already have. SPE technology, which enables IP traffic and power injection over a single twisted copper pair on long distance (up to 1,000 meters), offers an alternative technological solution to workarounds such as VDSL, Wi-Fi or private 5G.

Alcatel-Lucent Enterprise delivers a solution that leverages SPE technology to bring value in different strategic areas:

- **Operational performance**, guaranteeing the quality of service (QoS) required for modern Voice over IP (VoIP) devices and the critical synchronization of specific equipment such as IP-DECT (IP-Digital Enhanced Cordless Telecommunications) radio base stations and terminals
- **Security**, by isolating critical voice equipment from the rest of the IP network, creating a separated, independent and resilient voice network in the event of a failure of the main IP network or a cyberattack
- **Economic viability**, by drastically reducing investment in cabling and operating losses related to construction or renovation work. In addition, it gives the opportunity to continue using existing equipment such as DECT handsets.
- **Environmental excellence**, by promoting a circular economy approach that minimizes the carbon footprint associated with copper mining and the production of new plastics.

The 10BT-SPE Adapter equipment supplied by ALE allows you to connect an IP-based device (such as an IP-DECT radio base station or a terminal) on one side and the network switch connecting to the LAN on the other side.

Features	Benefits
Usage of existing legacy cabling	Simplified cabling and installation using just one pair of wires instead of IP standard multi-pair Ethernet cables. Connect modern VoIP equipment without re-cabling obligation.
IP long range	Extended reach beyond conventional Ethernet limits (up to 1000 meters in 10BASE-T1L standard), useful for large premises or distributed equipment.
Remote power feeding	Remote power feeding capability to simultaneously supply power along with data to devices, reducing the need for separate power lines and associated costs.
VoIP device connection	Connect any IP/SIP phone or ALE IP-DECT base station to replace legacy telephony equipment (such as analog phones or non-IP compatible DECT base stations).
Integration within ALE IP-xBS base station	Modernize the DECT infrastructure by replacing legacy ALE IBS or RBS DECT base station with modern ALE IP-xBS base station designed to embed the SPE adapter.
IP on secured network	Increased security and resiliency for VoIP devices physically separated from the LAN IP network: reduces the risk of voice communications being cut off in the event of a cyberattack and preventive network shutdown.

Technical specifications

Physical characteristics

- 10BT-SPE ADAPTER – SWITCH SIDE
  Box contains adapter, spacer and safety sheet
- 10BT-SPE ADAPTER – DEVICE SIDE
  Box contains adapter, spacer, CAT5e 30cm Ethernet cable and safety sheet
- Color: Black

Adapter dimensions

- Height: 23 mm (0.91 in)
- Width: 44.5 mm (1.75 in)
- Depth: 87 mm (3.43 in)
- Weight: 52 g (1.83 oz)

Spacer dimensions (wall and ceiling mountable)

- Height: 130 mm (5.12 in)
- Width: 118 mm (4.65 in)
- Depth: 41 mm (1.61 in)
- Weight: 138 g (4.87 oz)

Network interface

- Ethernet interface 10BASE-T, IEEE802.3i
- RJ45 connector
- SPE interface 10BASE-T1L, IEEE802.3cg
- RJ45 connector
- CAT 3,5,6 UTP cabling

Power feeding

- Remote power feeding on 802.3at
- PoE class 3 supports powering class 2 device (6.49W maximum)

Serviceability

- Bi-color LED status indicator for SPE and 10BASE-T traffic

Regulatory

- EU directives
  - ¬ 2011/65/EU & 2015/863 (EU RoHS)
  - ¬ 2012/19/EU (WEEE)
  - ¬ 94/62/EC (Packaging and Packaging Waste) and amendment 2004/12/EC & 2005/20/EC
- EU Regulations
  - ¬ N° 1907/2006 (REACH)
  - ¬ N° 2019/1021 (Persistent Organic Pollutants)
- Safety
  - ¬ IEC/UL/CSA/EN 62368-1:2018
- EMC standards
  - ¬ EN 55032:2022
  - ¬ EN 55035/A11:2022
  - ¬ EN 61000-3-3:2013 + A1:2019/ IEC 61000-3-3:2013 + AMD1:2017
  - ¬ Specific requirements for Brazil
  - ¬ Specific requirements for India
  - ¬ IEC 61000-6-1:2019
  - ¬ IEC 61000-6-2:2019
  - ¬ IEC 61000-6-3:2022
  - ¬ IEC 61000-6-4:2020
  - ¬ IEC 62236-4:2018 (Railway)
  - ¬ FCC – Title 47 CFR Part 15: 2025-08
  - ¬ ICES-003, Issue 7: 2020-10
  - ¬ ANSI C63.4a:2017
  - ¬ EN 60945:2003 (Maritime)
  - ¬ IEC 60945:2002 (chapter 9 and 10)

Environmental

- Operation: ETS 300 019 part 2-4 class 4.2H: Stationary use at non-weather protected locations
- Storage: ETS 300 019 part 2-1 class 1.2: Weather protected, not temperature-controlled storage locations
- Transport: ETS 300 019 part 2-2 class 2.3: Public transportation
- IP Class: EN 60529 IP30

Operating environment

- Operating temperature:
  -20° C to +55°C (-4°F to +131°F)
- Storage temperature:
  -25°C to +55°C (-13°F to +131°F)
- Transport temperature:
  -40°C to +70°C (-40°F to +158°F)

Ordering information

Adapters

- 3EH77313AA 10BT-SPE ADAPTER – DEVICE SIDE
- 3EH77316AA 10BT-SPE ADAPTER – SWITCH SIDE

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