

Voice over Internet Protocol (VoIP) equipment fact sheet

This fact sheet has been written in conjunction with the ACIF Working Committee on Telephony Speech Performance and provides information about labelling and compliance under the telecommunications regulatory arrangement for suppliers of equipment used for voice over internet protocol (VoIP) telephony services.

This equipment includes, but is not limited to:

- VoIP telephone handsets and
- integrated access devices (IADs), including analogue terminal adapters (ATAs) and SIP (session initiated protocol) boxes.

The Australian Communications and Media Authority (ACMA) has made mandatory technical standards for equipment used to provide telephony services over a telecommunications network.

The information in this fact sheet should be read in conjunction with the TLN and the companion booklet published by ACMA, *Telecommunications Labelling and Compliance – Information for suppliers of telecommunications equipment and cabling in Australia*.

There may also be requirements under ACMA's electromagnetic compatibility, radiocommunications or electromagnetic radiation regulatory arrangements that are applicable to VoIP equipment.

Traditionally, telephony services are provided by way of a direct connection to an analogue or digital exchange interface (PSTN, ISDN). These services may also be provided through other equipment such as customer switching systems (CSS) or customer access equipment (CAE)*.

Telephone equipment has evolved from analogue through various forms of digital technology including VoIP. In addition, the development and spread of the internet and the availability of broadband has increased the number of voice services offered using VoIP technology. VoIP technology, which was originally employed in corporate networks, is now becoming common in many homes in a wide variety of offerings.

There are various configurations used to provide telephony services over a broadband network that take advantage of VoIP. Some of the more common ones used are:

- an analogue telephone connected via an ATA or IAD
- a VoIP telephone connected via a CAE
- a telephone function provided in conjunction with a personal computer and
- a cordless telephone connected by a wireless local area network, or other air interface.

The connection of CAE to a carrier supplied broadband service is often by a digital subscriber line or hybrid fibre coaxial service, but interfaces such as wireless, ISDN, power line communications or others can also be used.

*CAE is customer equipment with multiple ports (local or network) that provide access (gateway functions) to a telecommunications network and which is capable of switching, storage, processing, conversion, integration, line isolation/coupling or multiplexing of analogue or digital voice or voice equivalent communications.

VoIP telephones

VoIP telephone is considered to be 'system integral' to the device(s) it is connected to; it cannot operate in isolation. These devices may be any combination of modem, personal computer, router, gateway or CSS (collectively referred to as CAE).

Category C33 of Schedule 1 of the Labelling Notice lists system integral equipment.

The applicable standards are *Safety of information technology equipment AS/NZS 60950* and *Voice frequency performance requirements for Customer Equipment AS/ACIF S004*.

A VoIP telephone is subject to the standards listed in Category C33 of the TLN and must be labelled with the A-Tick compliance mark.

Currently the regulatory arrangements only require a VoIP telephone to comply with electrical and acoustic safety parameters.

Testing of a VoIP telephone must be carried out by a recognised testing authority (RTA). Suppliers may need to supply other equipment, with which the VoIP telephone would be commonly deployed, to facilitate testing. This should be discussed with the RTA concerned.

Integrated access devices

IADs come in many varieties with numerous possible interfaces. These may include simple devices that convert analogue telephony signals to IP up to large devices with many connections. IADs can also be identified as Analogue Terminal Adapters (ATA), SIP Boxes and ISDN NT1 devices. The applicable standards for any IAD are determined by the types of interface that appear on the IAD and the appropriate categories for those interfaces in Schedule 1 of the TLN.

Suppliers need to be aware that a device that has a 'Local Port (On Premises)' as defined in AS/ACIF S003:2005 will, irrespective of other interfaces on the device, need to comply with the requirements of category B31.

An analogue IAD is subject to the standards listed in Category B31 of the TLN and must be labelled with the A-Tick compliance mark.

Where other interfaces on that device are scoped by other categories within the TLN there will be other applicable standards that must be met.

IADs incorporating other port types will be subject to the relevant standards listed in the TLN for the port type concerned.

An IAD with provision for a connection to an analogue telephone line is subject to the standards listed in Category A2 of the TLN in addition to the standards listed in Category B31.

IADs can have a variety of interface types, with some IADs incorporating multiple ports and types. The port types currently in use include but are not restricted to RS-232, POTS Local, POTS Network, 4-wire E&M, 2-wire DID Network, ISDN BA, ISDN PRA, 10/100 Base-T, 25,6 Mbit/s ATM and USB.

The current regulatory arrangements direct that clauses in listed standards prefixed by “STS CE” or “for CE used in the supply of a Standard Telephone Service” are not applicable until further notice. However, all remaining clauses must be assessed for applicability.

Testing of an IAD must be carried out by an RTA. Suppliers may need to supply other equipment, with which the IAD would be commonly deployed, to facilitate testing. This should be discussed with the RTA concerned.