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SERIES L: ENVIRONMENT AND ICTS, CLIMATE
CHANGE, E-WASTE, ENERGY EFFICIENCY;
CONSTRUCTION, INSTALLATION AND PROTECTION
OF CABLES AND OTHER ELEMENTS OF OUTSIDE
PLANT

Universal power adapter and charger solution for mobile terminals and other hand-held ICT devices

Recommendation ITU-T L.1000

ITU-T L-SERIES RECOMMENDATIONS

ENVIRONMENT AND ICTS, CLIMATE CHANGE, E-WASTE, ENERGY EFFICIENCY; CONSTRUCTION, INSTALLATION AND PROTECTION OF CABLES AND OTHER ELEMENTS OF OUTSIDE PLANT

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Universal power adapter and charger solution for mobile terminals and other hand-held ICT devices

Summary

Recommendation ITU-T L.1000 provides high level requirements for a universal power adapter and charger solution that will reduce the number of power adapters and chargers produced and recycled by widening their application to more devices and increasing their lifetime.

The solution also aims to reduce energy consumption. The longer life cycle and possibility of avoiding device duplication reduces the demand on raw materials and waste.

The universal power adapter and charger solution is designed to serve the vast majority of mobile terminals and other ICT devices.

History

Edition	Recommendation	Approval	Study Group	Unique ID*
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Charger, ecodesign, energy-efficiency, power adapter, universal charger solution.

* To access the Recommendation, type the URL <http://handle.itu.int/> in the address field of your web browser, followed by the Recommendation's unique ID. For example, <http://handle.itu.int/11.1002/1000/11830-en>.

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The World Telecommunication Standardization Assembly (WTSA), which meets every four years, establishes the topics for study by the ITU-T study groups which, in turn, produce Recommendations on these topics.

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In some areas of information technology which fall within ITU-T's purview, the necessary standards are prepared on a collaborative basis with ISO and IEC.

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Introduction

This Recommendation defines the requirements of a universal charger solution for mobile terminals and other hand-held ICT devices. Further study is required to extend the solution to other ICT devices.

This Recommendation also takes into consideration energy efficiency, emissions reduction and the use of scarce and raw materials. In 2011, it has been estimated that the widespread adoption of a universal charger solution for mobile phones will result in a 50 per cent reduction in standby energy consumption and approximately 14 million tons of greenhouse gas emissions each year. The universal power adapter and charger solution will be more convenient and simpler to use for consumers who will be able to charge their mobile phones from any available universal mobile charger and use the same power adapter for many future handsets, thus eliminating up to 50 000 tons of duplicate power adapters and chargers.

It is noted that the environmental impact of any universal charger solution should be considered over the entire life cycle and that the transition towards a universal charger solution does not aim to replace existing chargers immediately; this is because, according to the 2018 ITU-D Measuring the Information Society Report – Volume 1 (<https://www.itu.int/en/ITU-D/Statistics/Pages/publications/misr2018.aspx>), there are around 8 billion mobile-cellular subscriptions in the world.

The GSMA report [b-GSMA] states that in 2017 only 66% of world population had a mobile phone. This data shows that there is a large margin for growth in the number of devices in the coming years and, therefore, in the number of chargers.

This Recommendation was drafted with support from and in consideration of activity in other SDOs and other types of organizations.

This Recommendation is designed to ensure the universal charger solution operates within recognized current and voltage safety parameters by adopting existing mobile terminal technologies such as computer USB output or recharging solutions in cars. Battery safety and lifetime issues have been considered in the drafting of this Recommendation.