Certification: The Right Cables for Mobile Batteries

In the era of fast charging of the mobile phones used everywhere, charging may involve the use of incorrect voltages and cables that are not up to the drawn currents, or replacement batteries that do not support fast charging. Measures must be taken to enable users to charge their smartphones faster – no matter what combination of charger, cable or handheld device is available for. So-called Electronically Marked Cable Assemblies (EMCA – also called E-Markers), for example, can prevent problems that can arise if too much power is passed through a USB cable. These are small active circuits embedded in one or both ends of a USB-C cable. These communicate properties to the downstream facing port (DFP) and only when the fast charging functionality has been confirmed is the configuration of the requested higher currents and voltages.

In order to prevent problems with the use of "inferior" chargers and cables, the USB-IF has also created an authentication specification for USB-C implementation. This should enable mobile devices to recognize whether the charging port used (for example, at a foreign airport) is really certified. What is considered certified can be configured either by the manufacturer of the product, by the user himself, or even by the IT department of a company. Authentication also extends to the authentication of USB products, such as flash drives.

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