MULTOS tm

TRUST HUB


# MULTOS Trust Hub
# Security & Flexibilty in USB Dongle Form

**For convenient development usage, or actual device enhancements**

Dongles can be plugged into hardware devices such as a computer and television to authorise the use of software, hardware, online services, etc. or to extend the functionality of the host, such as providing mobile internet access.

### Why use a dongle?

The highly standardised (and ubiquitous) physical interface makes these popular, as well as well-defined “profiles” specifying communication protocols for different sorts of devices plugged into USB ports such as mice, keyboards and printers.

The Serial port profile makes the USB device appear to be a serial port from the view of the host (computer), regardless of what the dongle actually does or contains. This simplifies driver writing and makes for highly portable code.

The usual form factor for a secure element (SE) device such as MULTOS, is a smartcard; that is the chip is embedded into a plastic carrier and connected to the outside world with a contact plate and/or NFC antenna. To use the smartcard, a plug-in interface is required, a “Smartcard Reader”. Some laptops have readers built-in, but it is far from usual and external readers can be relatively bulky due to the size of a standard smartcard.

Another option is to incorporate the SE into the host’s hardware either directly on the motherboard or connected via an expansion port.

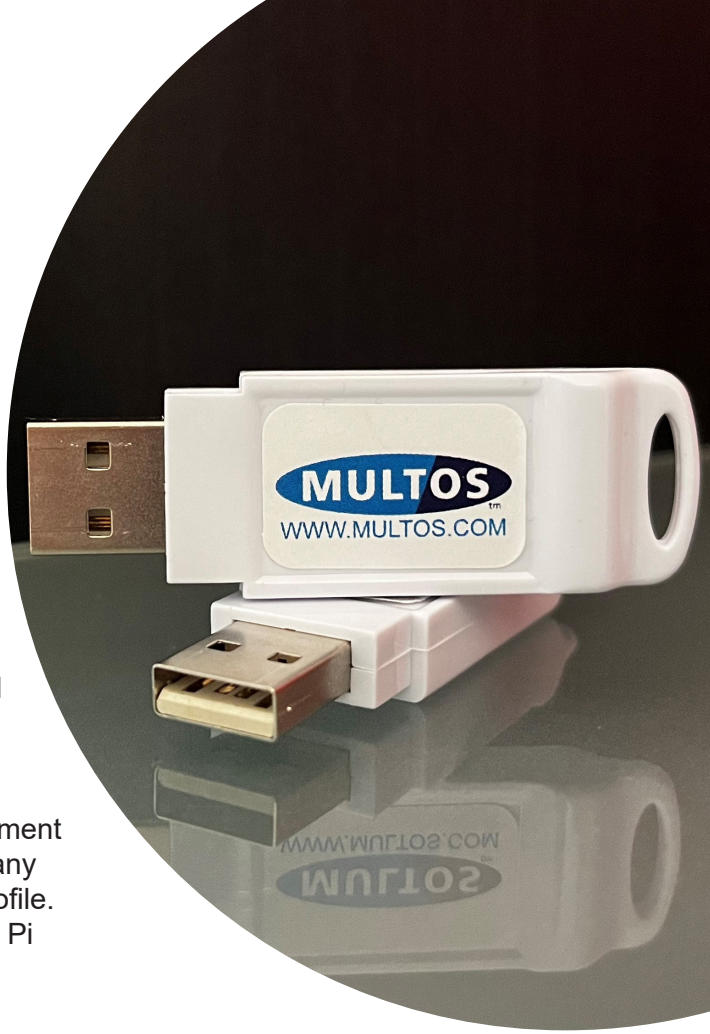
However, by combining a SE with an interface chip inside a USB dongle form factor, it is possible to do away with a separate reader or need for custom hardware and provide smartcard functionality in a truly convenient form. The drivers for the dongle can even be written such that the dongle appears as a smartcard reader in the operating system.

Because MULTOS is programmable and can securely store and run many different apps, it is possible to utilise a single MULTOS Trust Hub for many purposes. For example:

- user authentication
- secure storage of digital keys and certificates
- software licensing
- access control
- as a miniature HSM for performing cryptographic operations
- to establish a cryptographically secure channel for communication
- digital signing
- message encryption

MULTOS M5-P22 customers are already using USB dongle form factors to enable them to add strong authentication and digital signing capabilities to off the shelf devices that would otherwise not be able to perform those functions securely.

“MULTOS Trust Hub” dongles are available for both development and deployment in live scenarios. They can be deployed to any device with a USB port that supports the USB Serial Port Profile. Interface code is supplied for Java, Windows and Raspberry Pi (the latter should also be usable on other LINUX platforms).





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