

MP60/MP65

Laboratory Range

A low cost multiprotocol reader for contact smart card tests and validation



- ✓ Fast multiprotocol smart card reader:
ISO 7816-3:T=0 and T=1
USB 2.0, interchip USB (optional)
SWP/SHDLC
- ✓ Ideal for validation and quality inspection

MP60/MP65 Overview

The MP60/MP65 is an attractive and easy to use smart card reader, which can be used for the development of applications in R&D as well as test inspections in production units. This compact desktop contact reader embeds all the communication protocols that matter today (ISO/IEC 7816, SWP, USB 2.0, and USB-IC (optional)), and gives you the flexibility to test your smart card accurately defining your conditions (among others voltages, frequency are adjustable). Its multi task operating system gives you the possibility to communicate with your smartcard using several protocols at the same time, and thus check the correct operation of your device under test under simultaneous access.

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Technical specifications

■ Protocols

ISO/IEC 7816-3
T=0 and T=1 protocols implemented by firmware, communication managed by hardware
USB 2.0 (Low speed/full speed) and USB IC (optional) : ISO 7816-12, mass storage, custom,...
SWP
SWP and LLC layers managed by firmware
Raw mode
Gives the possibility to exchange frames without any protocol encapsulation
Support of out of standard chips
Benefit from Micropross' experience in smartcard programming

■ Programmable parameters

Voltages
Vcc: 1 to 6V (step: 10mV) Vol/Voh: 0V/Vcc Vil/Vih: 15% Vcc / 70% of Vcc
Frequency
Clock frequency: 10kHz to 10MHz (step: 10Hz) Clock duty-cycle: 50%
Pin States
All pins are independent from each other, and can be directly managed
ISO 7816 Communication Parameters
Clock divider: from 1 to 4096 (bit sampling adjustable) BGT, Initial ETU width on ATR reception (clock cycles) BWT, CWT, EGT, RGT, WWT (ETUs) Clock stop high/low state, t_{ch} , t_{cl} adjustable (clock cycles) Parity control: force to 0, 1, odd, even. Possibility to disable parity checking Pull-up resistor adjustable: 5kΩ and 20kΩ
SWP communication parameters
Baudrate adjustable from 49kbit/s to 1.9Mbit/s (step: 10kbit/s) Definition of S1 high and low states duration Definition of S2 detection threshold (1nA to 1.1mA) Activation time, P2, P3 timigs adjustable
USB-IC parameters
Attachment managed by the firmware 1.8V and 3.0V classes supported

■ Others

Communication
USB 2.0
TCP/IP 10/100Mbit/s (MP65 only)
Development
Development in C, C++, VB, Java, .NET environments

■ Tests

Anti tearing
Timing measurement measure the response time of your chip
Simultaneous sending of data in ISO7816-3 and SWP
Parametric test (Vcc, Frequency adjustable)

■ Three versions available

	MP 60	MP 65	MP 65 (USB-IC)
TCP/IP interface		●	●
USB-IC support			●

■ Open platform

Micropross products are designed for an easy integration. Applications run on a host computer. The device can be managed by usual programming languages. High speed and simplified communications are ensured with USB connection.

■ Our service

We provide you not only an useful product but also an efficient technical support and our experience. Micropross is at your disposal for any user requirement and integration support.

Micropross is an ISO 9001 V 2000 certified company.