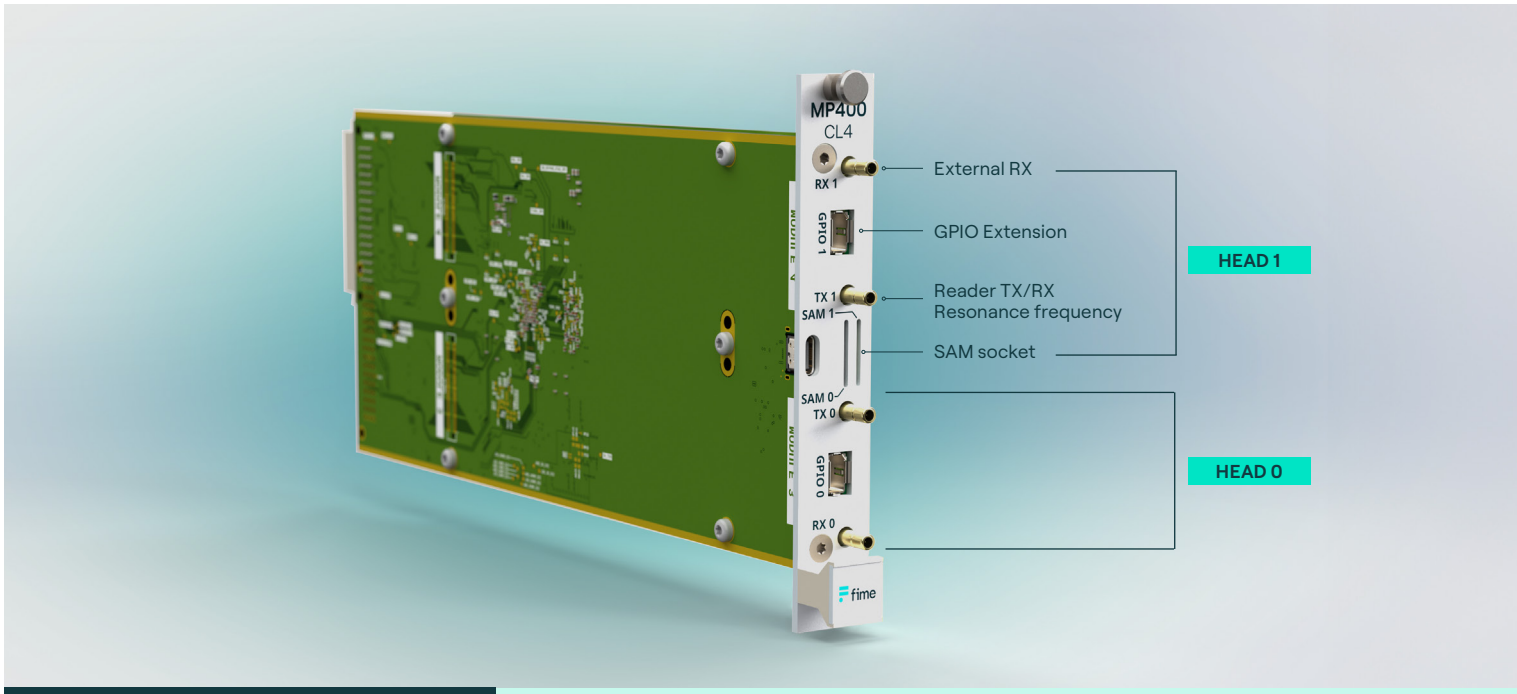
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Datasheet

MP400 CL4

A production tester for all types of contactless objects

Smartcards, micromodules, inlays, and NFC devices



New design

- New hardware architecture
- Based on powerful CPU ARM Dual-Core & FPGA
- GigaBit Ethernet
- OS Embedded Linux
- 2 test heads per tester

Supported protocols

- ISO 14443 A/B
- Innovatron™
- ISO 15693
- Mifare™
- FeliCa™

Application domains

- Personalization
- Pre-personalization
- OS loading
- Production test of smartcard & modules

Business areas

- Telecom
- Banking
- E-health
- M2M
- E-Passport
- E-ID (driver licences, ID cards, ...)
- Micro-module production
- NFC

Supported tests

- Resonance frequency, Q factor, S11 measurement
- Complex impedance (L, R, C)
- Hmin measurement
- Chip load-modulation
- Input sensitivity detection
- Accurate definition of test parameters
- SAM interface
- GPIO extension

Use cases

- Production line testing
- Personalization verification
- Inlay and micromodule quality control
- Module sensitivity assessement

Specifications

General	
NFC Simulation	Terminal emulation only
Testers	2 test heads
Rack	Compatible with rack x1, x4, x8, x16
Output terminal simulation	
Channel	2 TX per head
TX impedance	50Ω ± 1%
NFC Analog settings	
Field strenght, Carrier frequency, ASK Modulation, rise and fall times, pause width	
NFC Protocol settings	
FWT, Framing and bit-duration, data-rate	
Reception	
Channel	2 RX per head
NFC measurement	
Resonance Frequency, Q factor	
Complex impedance (chip/antenna), S11	
Load modulation amplitude	

Supported protocols

ISO/IEC 14443-3 (Proximity Cards) (Type A/B)	
Supported data rates	106, 212, 424, 848 kbps
	VHBR 1600, 3400, 6800 kpbs
	Asymetrical data rates supported
B' (Innovatron™)	
ISO/IEC 15693 (Vicinity Cards)	
Supported communication speeds	low data rate, high data rate (x1, x2, x4, x8) - One and Two Subcarrier
Mifare™	
Types supported	Classic, Light, Ultra Light, Ultra Light C
FeliCa™	
Mode supported	Polling, Read & Write without encryption
Available data rates	212 and 424 kbps

NFC Forum Tags	
Types supported	Tag types 2,3,4,5
ISO 18092 (NFC-IP1)	
Modes supported	Passive mode
Raw mode	
Implementation of custom protocols and support of out standard chips	

Key features

Scalable, compatible design

- **Modular architecture**: up to **32 test heads** per rack
- **Rack configuration**: compatibility with new **MP400** racks and **MP300** racks

Automated terminal simulation

- **Automation ready**: GPIO extension for external antennas and system automation (IX industrial connector)
- **Terminal simulation**: suitable for smartcard, NFC, banking, telecom, and e-ID device testing

Full-feature performance

- Multi protocol support
- Fully programmable parameters
- Advanced measurements
- High-speed performance

Application development

- Externally running application
- Support of Embedded application
- Multiprocessing
- Toolchain for cross-compilation provided

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