



Datasheet MC2+

The shortest path to a problem-free ADSL/ADSL2/ADSL2+ service

The MC2+ is a hand-held and battery-powered tester that enables you to verify the ADSL / ADSL2 / ADSL2+ connection in a very short time with minimum or no configuration. Using it is as simple as testing with a multimeter.

The tester is designed to be carried by field technicians and used for testing from almost anywhere without worrying about having a laptop or a connection to the mains.

Operating modes

The MC2+ can operate in two modes, autonomous and hosted.

Stand-alone

In stand-alone mode the tester automatically performs the following sequence of tests:

- Detect the presence of dc voltage on the line to confirm connection the exchange
- Detect the presence of a DSLAM at the exchange
- Indicate successful DSL synchronisation with the DSLAM
- Establish an ATM connection
- Establish and indicate successful PPP layer connection
- Ping a remote Internet URL and indicate successful reply

Hosted

In hosted mode, connected to a PC, via a USB or Ethernet connection, the MC2+ is capable of performing the same tests specified for stand-alone mode. In addition, the tester performs various test measurements made on the connection, and acts as an ADSL / ADSL2 / ADSL2+ modem to allow the PC to connect to the Internet. Hosted mode is also used to configure the test parameters of the tester.

Settings

The following parameter settings are provided in hosted mode:

- Connection Type: PPPoA, PPPoE, Bridged, Static, DHCP, and CLIP
- PPP Authentication type: Auto, CHAP and PAP
- PPP Authentication: Username and Password
- PPP Timers: Idle timeout and Keep Alive
- VC settings: VPI and VCI
- ATM traffic profile of transmitted traffic (UBR, CBR and VBR)
- Modulation: MMODE, T1413, G.dmt, G.lite
- Encapsulation: LLC/SNAP or VC mux
- IP ping settings (remote address, ping size, number of pings)

Results

The following results are provided in hosted mode:

- Upstream and downstream connection rate
- Upstream and downstream noise margin
- Upstream and downstream line attenuation
- Path Mode (Fast or Interleaved)
- Peak cell rate
- F4 and F5 near end loop-back count
- Transmitted and received PDUs
- Transmitted and received bytes
- Error counts
- IP address assignments
- IP ping test result
- System log

LED Indicators

The following LED indications are provided:

- Power

Colour	Indication
Off	No power
Green	Battery or external power applied

- Battery Low

Colour	Indication
Off	Battery level OK (when Power is On)
Red	Battery level low

- Line

Colour	Indication
Off	No DC voltage on line
Green	DC line voltage detected

- ADSL

Colour	Indication
Off	No DSLAM detected
Green, slow flashing	DSLAM detected (Training state)
Green, fast flashing	ADSL Synchronisation
Green	ADSL2 / ADSL2+ Synchronisation

- PPP / IP

Colour	Indication
Off	ATM and PPP layer not established
Green flashing	ATM and PPP layer established
Green	Successful reply to IP Ping

Power

- Power mode
 - External 9 – 12 V ac / dc
 - Internal Battery
- Battery type
 - 4 x AA (HR6) Alkaline cells
 - 4 x AA (HR6) rechargeable Ni-MH cells 2500 mAh

Batteries are removed for recharging in an external charger. Using a spare set of batteries, this allows the tester to be used continuously in locations where no mains power is available.

- Battery life: 3 hours continuous showtime/4 hours typical duty cycle
- Power control
 - Battery Power On
 - Battery Power Off (External power)

Connectors

- RJ11 Line connection
- USB for hosted mode
- RJ45 Ethernet for hosted mode
- DC jack for external power input

Relevant standards

The tester complies with the following standards:

- Telecomms
 - ANSI T1.413 Issue 2
 - ITU-T G.992.1 (ADSL, G.dmt)
 - ITU-T G.992.2 (ADSL, G.lite)
 - ITU-T G.992.3 (ADSL2, G.dmt.bis)
 - ITU-T G.992.4 (ADSL2, G.lite.bis)
 - ITU-T G.992.5 (extended bandwidth ADSL2, ADSL2+)
 - ITU-T G.992.3 Annex L (RE-ADSL2)
 - ITU-T G.992.x Annex A (ADSL over POTS), Annex B and Annex B/U-R2 (ADSL over ISDN)
 - RFC 1483 (bridged/routed protocol encapsulation over ATM)
 - RFC 2368 (PPPoA)
 - RFC 2516 (PPPoE)

- CE marking
 - EMC - EN 55022, EN 55024, EN 61000-3-2, EN 61000-3-3
 - Safety - EN 60950
 - WEEE Directive
- Environmental
 - EN 60529 Class 20
 - ETS EN 300 019-2-7 Class 7.2

General

- Dimensions 90 mm x 140 mm x 45 mm
- Weight: 400 g (batteries included)
- Operating temperature range 0 °C to +40 °C
- Storage temperature range -10 °C to +50 °C

Ordering information

Part Number	Description
121#-#-##-#	MC2+ Tester for ADSL(2+) complete with protective rubber boot, RJ Broadband connection cable, set of alkaline batteries, CD and user guide
121A-#-##-#	UK configuration of MC2+. Provides UK power plug (where applicable)
121B-#-##-#	European configuration of MC2+. Provides Euro power plug (where applicable)
121C-#-##-#	Australian configuration of MC2+. Provides Australian power plug (where applicable)
121T-#-##-#	TCL (USA) configuration of MC2+. Provides US power plug (where applicable)
121#-A-##-#	Annex A support for ADSL, ADSL2 and ADSL2+ over POTS only
121#-B-##-#	Annex B support for ADSL over ISDN only
121#-#-E#-#	English language configuration GUI
121#-#-#E-#	English language printed user guide
121#-#-#F-#	French language printed user guide
121#-#-#G-#	German language printed user guide
121#-#-#S-#	Spanish language printed user guide
121#-#-##-A	Deluxe accessory pack for MC2+ including high-capacity rechargeable batteries (in place of alkaline), carrying bag, Ethernet cable, mains power supply, and battery charger with cigar lighter cable

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