

# ARGUS<sup>®</sup> 141

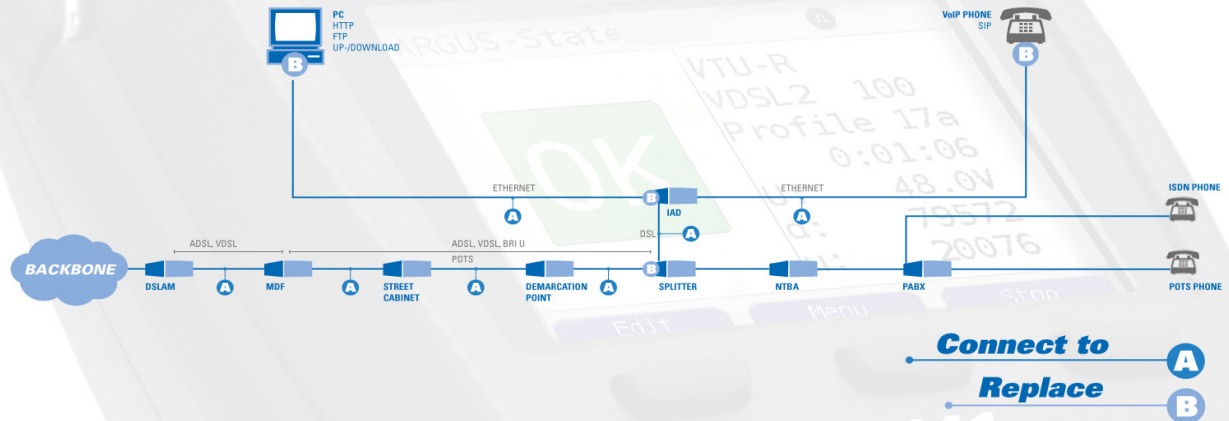
xDSL TESTER



**intec**

GESELLSCHAFT FÜR  
INFORMATIONSTECHNIK mbH

## Where to use the ARGUS?



### The ADSL + VDSL and service tester

Fast testing guaranteed: the ARGUS®141 xDSL Tester focuses on the key functions for testing VDSL2, ADSL and Ethernet and is ready to operate extremely quickly.

The user-friendly handheld tester is able to integrate both interfaces in a single device. Modern chip sets for ADSL and VDSL2 ensure optimum performance, thus providing a high level of interoperability and a long reach. The results are presented both in tabular or graphical form.

### Future-proof testing

Well equipped for the future: as an option, the ARGUS®141 can be upgraded to test Voice over IP (VoIP) and data services such as ping, trace route or download (HTTP, FTP) and upload (FTP) via xDSL and Ethernet – this upgrade is even available after purchase.

### Testing of services: Voice over IP (VoIP)

During VoIP testing, the MOS value is also calculated automatically. As a lineman's handset, the ARGUS®141 simulates terminal equipment such as a phone or replaces a PC and determines the relevant quality parameters. intec also supply the checker with bridge or router functions to test customer modems.

### Spectrum analysis

Using the DMT Analysis functionality, the user can analyse – in a low-impedance mode – the spectrum of the entire xDSL bandwidth (up to 30 MHz) and locate faults.

### Easy operation

The ARGUS®141 is extremely user-friendly thanks to its bright 320 x 240 pixel colour display and long-life Lithium-Ion battery pack, which can be replaced in the field.

### intec Gesellschaft für Informationstechnik

With more than 20 years of experience, intec GmbH is one of the leading suppliers of xDSL, ISDN and IP measurement technology in Europe. With the ARGUS® range, intec is offering practical solutions for installation and troubleshooting of xDSL and ISDN connections.

Developed specifically for the needs and daily use by technicians working for international network operators, service providers and installation companies.

More than 60 000 ARGUS® testers are already in the field with companies such as Deutsche Telekom, Vodafone, Telefonica, KPN, British Telecom and Telekom Austria who are completely satisfied in the quality of "Made in Germany" intec products.



## Service tester for VDSL, ADSL and Ethernet interfaces

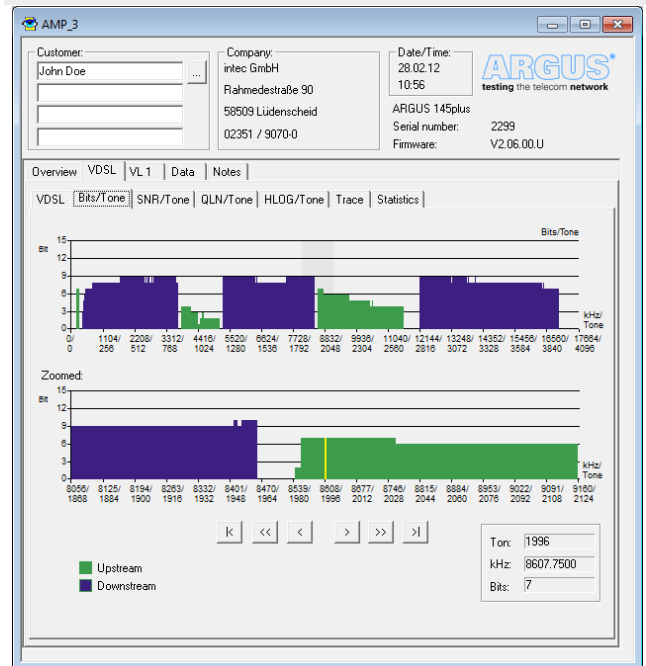
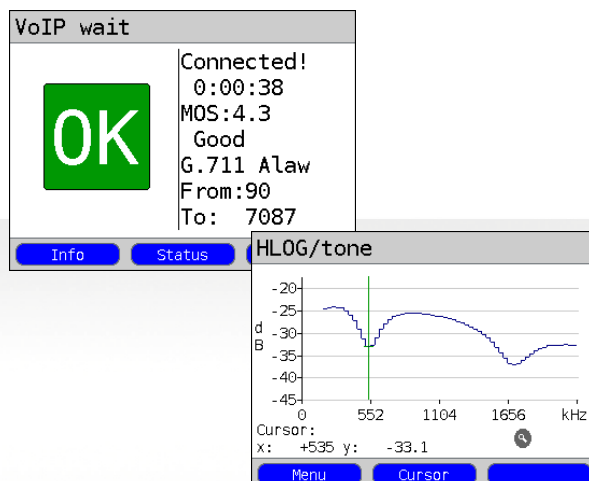
ARGUS®141 is a compact xDSL, Ethernet and service tester for troubleshooting ADSL, ADSL2/2+, VDSL2 and Ethernet accesses, including the measurement of the DC voltage on the line.

### Broadband interfaces:

- **ADSL2/2+** + modem simulation, ADSL tester, ATU-R
  - Supports ITU-T G.992.5 et alii; Annex A+B+J,+L+M; INP, SRA
  - Included bridge, router and PC replacement modes
  - Automatic measurement and display of all available up- and downstream parameters and error counters, like bit rate, attenuation, SNR margin, output power, INP, CRC, FEC, etc.
  - Display of Bits, SNR, QLN and Hlog/toner graphs
- **VDSL2** modem simulation, VDSL tester, VTU-R
  - Supports ITU-T G.993.2 (8, 12, 17, 30 MHz + var. bandplans)
  - Included bridge, router and PC replacement modes
  - Automatic measurement and display of all available up- and downstream parameters and error counters like bit rate, attenuation per stream, SNR margin per stream, Output power, INP, interleave delay, electrical length, CRC, FEC etc.
  - Display of Bits, SNR, QLN and Hlog/toner and stream graphs
- **Ethernet** interface for service tests (VoIP, Up-/Download)
  - 1 Ethernet interface (10/100 Base-T), RJ-45
  - Supports Ethernet terminal mode (PC replacement)
  - Ethernet-Loop (10/100 Base-T) across different layers

### Service testing via ADSL, VDSL2 and Ethernet:

- **ATM layer** tests when using ADSL2/2+
  - ATM OAM ping and ATM OAM cell loop, VPI/VCI scan
- **Data:** testing the data throughput, establishing a PPP login
  - IP ping and trace route tests (BRAS info, PPP trace, VLAN)
  - Download tests for throughput determination (parallel tests) (HTTP download, FTP up-/download)
  - FTP server test, up-/download from ARGUS to ARGUS
- **Voice:** testing VoIP connections based on SIP standard
  - VoIP terminal simulation, incl. acoustics (various codecs)
  - OK/FAIL evaluation and display of quality parameters
  - Evaluation of the VoIP speech quality (QoS) according to:
    - MOS<sub>CQE</sub> (ITU-T P.800) based on E model (ITU-T G.107)
    - Evaluation of quality (QoE) via the integrated acoustics (speaker, microphone) straight on xDSL and Ethernet



(VDSL test report, recorded with WINplus PC software)

### Copper testing (Cu tests):

- **Voltage measurement** straight on the DSL line
  - DC voltage measurement, UDC: up to +200 V; 0.1 V;  $\pm 2\%$
- **DMT Analysis:** Power spectral density (PSD) assessment helps detecting noise, using 4096 tones (e.g. VDSL2)
  - Impedance: 100  $\Omega$
  - Frequency range: 130 kHz - 30 MHz ( $-3$  dB); 4.3 kHz;  $\pm 0.1\%$
  - Level range:  $-140$  dBm/Hz to  $-40$  dBm/Hz;  $\pm 2$  dB

### Documentation and analysis:

- **Documentation** of all the parameters recorded via automatic access tests in test reports (in device and on PC)
- **Data transfer** to the PC via USB client interface (Mini-USB)
- **Update Tool** to carry out FW updates for free
- **WINplus** PC software for generating test reports and for configuring the ARGUS® via PC (optional)

### Further highlights:

- Brilliant QVGA colour display (LCD) with 320 x 240 pixels
- Lightweight, compact and easy to use
- Intuitive menu navigation and instant readiness for operation
- Free firmware and software updates (WINplus) from [www.argus.info/en](http://www.argus.info/en)



## Technical features:

- **Power supply** via Li-Ion battery pack or mains adaptor
- **Hotkeys** for quick execution of various single tests
- **Powermanagement**, user-defined
- **Keypad**: 18 keys, 4 cursor keys, 3 context-specific softkeys
- **LCD colour display** (QVGA - 320 x 240 pxs.), w/ backlight
- **LEDs**: 6 LEDs to indicate the status
- **Handset** with integrated earpiece and microphone
- **CE marking**: complies with CE directives
- **User safety**: EN 61010-1, EN 60950
- **RoHS** conformance according to WEEE directive

## Interfaces:

- **RJ-45** as line in-/output
- **Ethernet RJ-45** (10/100 Base-T) for bridge mode operation
- **USB client** interface (type Mini-B)

## Environmental conditions:

- **Operating temperature**: 0 °C (32 °F) up to +50 °C (122 °F)
- **Storing temperature**: -20 °C (-4 °F) up to +60 °C (140 °F)
- **Relative humidity**: up to 95 %, non-condensing

## Dimensions:

- **Size**: H x W x D: 235 x 97 x 65 mm (9.25 x 3.8 x 2.56 in)
- **Weight**: ca. 710 g (1.57 lbs) - incl. battery pack

## Standard package:

ARGUS®141 with Li-Ion battery pack, mains adaptor, xDSL interface with test leads, Mini-USB-cable, WINplus PC software (online) and english user manual and menu

## Basic package:

### ARGUS 141 VDSL2

Order number: 114102

### ARGUS 141 ADSL Annex A + L + M

Order number: 114112

### ARGUS 141 ADSL Annex B + J

Order number: 114132

### ARGUS 141 ADSL Annex A + B + J + L + M

Order number: 114152



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## Options:

### Additional interfaces:

(Additional test leads included, if required)

### ADSL Annex A + L + M interface

Order number: 014105 (interface) or 014145 (extension)

### ADSL Annex B + J interface

Order number: 014106 (interface) or 014146 (extension)

### VDSL2 interface

Order number: 014108 (interface)

## Additional test features:

(depends on interfaces installed)

### Ethernet loop (10/100 Base-T)

Order number: 014128

### ATM tests (via ADSL)

Order number: 014122

### Download package (via ADSL, VDSL, Ethernet)

Order number: 014129

### VoIP test (via ADSL, VDSL, Ethernet)

Order number: 014115

### DMT Analysis

Order number: 014131

## Additional PC software:

(for Windows operating systems)

### ARGUS WINplus (incl. CD + Manual)

Order number: 010012

\* We would be glad to provide further details and information about additional accessories on request.