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IN USE THROUGHOUT EUROPE

intec Gesellschaft für Informationstechnik mbh is successfully developing products for the international telecommunication markets for more than 35 years. Meanwhile specialized in high-quality telecommunication measuring devices, we belong to the leading suppliers of fiber optic, G.fast, xDSL and IP measuring technology in Europe and beyond.

Our ARGUS® testers are ideal for developing and documenting new fiber optic infrastructure for the rapid expansion of modern optical networks. They simplify day-to-day work in the maintenance and testing of modern copper-based broadband interfaces as well as in the fiber-optic sector and support troubleshooting and fault location.

Our customers have appreciated the quality of our products and services for many years. This trust in our products has enabled us to supply more than 100,000 ARGUS® testers throughout the world during the last 20 years – a large majority of which have been delivered to international companies such as Deutsche Telekom, Vodafone, Telefonica, KPN or A1 Telekom Austria.



UNIVERSAL FIBER TESTER

BROADBAND TESTER

ARGUS[®] 300





10GigE

SFP

WLAN•)



ARGUS F300 ...

Fiber tester with touch display: combines intuitive operation, familiar ARGUS® menu structure and maximum system performance

Establ. speed tests on numerous interfaces such as GPON, XGS-PON, Ethernet, WLAN, 10 GigE and many more

RFC 6349 Assists in the maintenance and testing of modern broadband interfaces in the fiber range

Many different SFP modules for fiber (FTTx) and ETH (Active Ethernet), opt. with SFP-

Features a 10 GBase-T interface and allows HTTP/FTP up/download tests, IP ping, traceroute

Free cloud functions, e.g. firmware update, configuration and test result upload

Supports easy configuration on the PC with the ARGUS[®] Configuration Tool

ARGUS F300 with optional ...

Selective OPM with automated detection of XGS-PON and GPON and readout of PON ID/ XGS-PON ID

PON powermeter extension with through mode, measures 5 wavelengths simultaneously, with Alien-ONT detection

Guided PON installation test, ONT simulation; display of PON ID in plain text, precise, calibrated attenuation measurement and much more

OTDR: highly precise last mile troubleshooting, auto mode + graph. route analysis event by event Fiber inspection tool for optical fiber inspection and pass/fail evaluation according to IEC 61300-3-35

2.5 Gigabit Ethernet interface for even faster in-service speed testing via IPv4 and IPv6

WLAN AP and WLAN client mode with WLAN scan for finding WLAN networks

ARGUS® 2G4 Scope for finding WLAN interferers in real time

ARGUS® WLAN Analyzer: Automated and graphical evaluation of found networks, even during the connection, and much more

iperf client/server mode, determines TCP throughput in down-/upload, also ARGUS® vs. ARGUS®

ARGUS® Real Speed Test with evaluation of TCP throughput acc. to RFC 6349 with up to 10 Gbit/s **ARGUS®** 260

G.fast VDSL ADSL Bor 0N 1D 2.5GigE ттн PON SFP Sel. OPM (()) WLAN•) FIT m ols 🔘 RFL

test

iperf

RFC 6349

ARGUS 260 ..

Broadband tester with touch display: combines intuitive operation, familiar ARGUS® menu structure and maximum system performance

Data Combines the functions of various fiber measurement devices and xDSL combi testers Many different SFP modules for fiber (FTTx) Ve 🔄

and ETH (Active Ethernet)

Establ. speed tests on numerous interfaces such as GPON, XGS-PON, Ethernet, WLAN, G.fast, xDSL and many more

Assists in the maintenance and testing of modern broadband interfaces in the copper and fiber range

Features a 1000 Base-T Ethernet interface and allows HTTP/FTP up/download tests, IP ping, traceroute; simulates at xDSL (opt.) bridge, PC and router mode

Offers numerous copper test options: e.g. with the line monitor in the time/frequency range for the detection of interferers on all telecommunication lines

Free cloud functions, e.g. firmware update, configuration and test result upload

Supports easy configuration on the PC with the ARGUS[®] Configuration Tool

Measurement on ADSL2/2+ (Annex B + J) + VDSL2 (up to profile 35b) incl. graph. Processing of the measured values, graph. Long-term trace, OK/Fail analysis and much more

ARGUS 260 with optional ...

Selective OPM with automated detection of XGS-PON and GPON and readout of PON ID/XGS-PON ID

PON powermeter extension with through mode, measures 5 wavelengths simultaneously, with Alien-ONT detection

Guided PON installation test, ONT simulation; display of PON ID in plain text, precise, calibrated attenuation measurement and much more

ARGUS GPON ONT: Replaces the customer ONT on-site, protocol setup (PPP) as well as speed and triple play tests, OLT port determination, separate GPON trace and PON level and attenuation measurement

Fiber inspection tool for optical fiber inspection and pass/fail evaluation according to IEC 61300-3-35

Optical Fault Finder: simple optical fault location, determines the distance to various fault events

2.5 Gigabit Ethernet interface for even faster in-service speed testing via IPv4 and IPv6

WLAN AP and WLAN client mode with WLAN scan for finding WLAN networks

ARGUS® 2G4 Scope for finding WLAN interferers in real time

ARGUS® WLAN Analyzer: Automated and graphical evaluation of found networks, even during the connection, and much more

Measurement on G.fast (106/212) and G.fast/VDSL (35b) bonding accesses

iperf client/server mode, determines TCP throughput in down-/upload, also ARGUS® vs. ARGUS®

ARGUS® Real Speed Test with evaluation of TCP throughput acc. to RFC 6349 with up to 10 Gbit/s

Integr. cable multimeter for exact determination of U=, U~, CSym, C, Iso-R, RSym, R, I=, LCL, NEXT in autotest, opt. with RFL and automated remote kit control

TDR for determination of line length, detection and identification of short circuits, interruptions, mismatches, stubs, and more

ISDN BRI S/T and/or POTS interface for maximum compatibility

Assists in the maintenance and testing of modern broadband interfaces in the copper and fiber range Many different SFP modules for fiber (FTTx) and ETH (Active Ethernet), opt. with SFP+ Features a 1000 Base-T Ethernet interface and allows HTTP/FTP up/download tests, IP ping, traceroute; simulates at xDSL (opt.) bridge, PC and router mode

Offers numerous copper test options; e.g. with the line scope in the time/frequency range for the detection of interferers on all telecommunication lines

All-in-one tester with touch display: combines intuitive operation, familiar ARGUS® menu structure

Establ. speed tests on numerous interfaces such as GPON, XGS-PON, Ethernet, WLAN, G.fast, xDSL,

Combines the functions of various fiber measurement devices, xDSL combi testers and 10 GigE

Free cloud functions, e.g. firmware update, configuration and test result upload

Supports easy configuration on the PC with the ARGUS® Configuration Tool

ARGUS 300 with optional ...

ARGUS 300 ...

and maximum system performance

measurement technology

10 GigE and many more

Selective OPM with automated detection of XGS-PON and GPON and readout of PON ID/XGS-PON ID PON powermeter extension with through mode, measures 5 wavelengths simultaneously,

with Alien-ONT detection Guided PON installation test, ONT simulation; display of PON ID in plain text, precise, calibrated attenuation measurement and much more

ARGUS® GPON ONT: Replaces the customer ONT on-site, protocol setup (PPP) as well as speed and triple play tests, OLT port determination, separate GPON trace and PON level and attenuation measurement

OTDR: highly precise last mile troubleshooting, auto mode + graph. route analysis event by event

Fiber inspection tool for optical fiber inspection and pass/fail evaluation according to IEC 61300-3-35

Optical Fault Finder: simple optical fault location, determines the distance to various fault events

2.5/10 Gigabit Ethernet interface for even faster in-service speed testing via IPv4 and IPv6 WLAN AP and WLAN client mode with WLAN scan for finding WLAN networks

ARGUS® 2G4 Scope for finding WLAN interferers in real time

ARGUS® WLAN Analyzer: Automated and graphical evaluation of found networks, even during the connection, and much more

Measurement on ADSL, VDSL (35b), SHDSL (8-wire), G.fast (106/212) and all types of bonding accesses, incl. graphical processing of measured values, graphical long-term trace, OK/fail analysis, etc.

iperf client/server mode, determines TCP throughput in down-/upload, also ARGUS® vs. ARGUS®

ARGUS® Real Speed Test with evaluation of TCP throughput acc. to RFC 6349 with up to 10 Gbit/s Traffic generator and loop function for 1/2.5/5/10 Gigabit Ethernet interfaces

RFC2544: Tests throughput, latency and frame loss with a maximum data rate of 10 Gbit/s

ARGUS® SAM: Service Activation and Performance Test according to Y.1564, determines CIR, EIR (incl. Traffic Policing) with a maximum data rate of 10 Gbit/s

Integr. cable multimeter for exact determination of U=, U~, CSym, C, Iso-R, RSym, R, I=, LCL, NEXT in autotest, opt. with RFL and automated remote kit control

TDR for determination of line length, detection and identification of short circuits, interruptions, mismatches, stubs, and more

ISDN BRI S/T, PRI and/or POTS interface for maximum compatibility

ARGUS[®] F300

TTH(()) N Intion Sel. OPM (()) Through Mode ((())) OTDR(()) \bigcirc FIT OLS 🔘

XGS-

×PON ID

10GigE

SFP_

wlan•))

Data

peed test

iperf



ARGUS® F240 **ARGUS F240** ... Fiber tester with touch display: combines intuitive operation, familiar ARGUS® menu structure and maximum system performance Selective xPON-OPM with automated detection of XGS-PON and GPON and readout of PON ID/XGS-PON ID Many different SFP modules for fiber (FTTx) and ETH (Active Ethernet)

Establ. speed tests on numerous interfaces such as GPON, XGS-PON, Ethernet, WLAN, 10 GigE and many more

Assists in the maintenance and testing of modern broadband interfaces in the fiber range

Features a 10 GBase-T interface and allows HTTP/FTP up/ download tests, IP ping, traceroute

Free cloud functions, e. g. firmware update,

configuration and test result upload

Supports easy configuration on the PC with the ARGUS® Configuration Tool

ARGUS F240 with optional ...

PON powermeter extension with through mode, measures 5 wavelengths simultaneously, with Alien-ONT detection

Guided PON installation test, ONT simulation; display of PON ID in plain text, precise, calibrated attenuation measurement and much more

Fiber inspection tool for optical fiber inspection and pass/fail evaluation according to IEC 61300-3-35

2.5 Gigabit Ethernet interface for even faster in-service speed testing via IPv4 and IPv6

WLAN AP and WLAN client mode with WLAN scan for finding WLAN networks

ARGUS® 2G4 Scope for finding WLAN interferers in real time

ARGUS® WLAN Analyzer: Automated and graphical evaluation of found networks, even during the connection, and much more

iperf client/server mode, determines TCP throughput in down-/upload, also ARGUS® vs. ARGUS®

ARGUS® Real Speed Test with evaluation of TCP throughput acc. to RFC 6349 with up to 10 Gbit/s

xDSL + GigE COMBI TESTER¹ VDSL + ADSL COMBI TESTER²



ARGUS 166/163 ...

Sel. OPM (())

ID

rough Node ((())

FTTH

DIN tallation

FIT (C)

DLS 🔘

10GigE

SFP_

WLAN•))

Data

V_P

test

iperf

RFC 6349

 \bigcirc

N____ XGS-PON (())

> Tester with larger memory and optimized system performance

	VDSL2 Profile 35b (ITU-T G.993.2, Annex Q / Super Vectoring)					
	Highspeed downloads on xDSL and Ethernet (> 900 Mbit/s)	Se D				
	Ethernet network scan with graphical display lists all IP and MAC addresses in the network	1011 IP T Ve				
	Supports a lot of different SFP transceivers for fiber tests (FTTx)					
	Active Line Noise graph and graphical xDSL long-time trace to detect infrequent DSL errors	6. 6. 1. 2.				
	HTTP/FTP up-/download tests, IP Ping, trace route; bridge,	2				

PC and router modes Line monitoring (Line Scope) via optional Probe with sym. / asymm. operation mode

Free cloud functions, e. g. firmware update, configuration and test result unload

Supporting PC software (ARGUS® Update Tool, WINanalyse, WINplus) for updates, configuration and test results

ARGUS 166/163 with optional ...

VDSL2 profile 35b Bonding support

G.fast extension (G.9700/9701) up to 212 MHz

ADSL2/2+ modem simulation (Annex A + L + M and / or B + J)

SHDSL connection tester, 2, 4, 6 and 8 wire, SDHSL and

SHDSL.bis (ATM, EFM, TDM) ISDN BRI S/T/U, PRI/E1 interface (TE/NT/monitor) and POTS

LAN cabling tests (multi cable test) with up to 100 measurements for detecting cabling faults²

Allocate up to 100 active ARGUS® LAN Probes with programmable ID²

PoE load tests ("Power over Ethernet"), class 0 to 4 automatic²

Supports throughput according to RFC 2544 incl. GigE loop and traffic generator (1 Gbit/s) $^{\rm l}$

GPON/XGS-PON modem simulation (ONT) with throughput tests* TDR function for measuring line lengths (up to 6 km) and

identifying sources of interference

Extension of copper test functions with the ARGUS® Copper Box Parallel tests of all Triple Play services like Data, VoIP, IPTV via xDSL and GigE

LTE extension* consisting of LTE scanner and download tests

WLAN-AP and WLAN client mode with WLAN scan for finding WLAN networks

ARGUS® 2G4 Scope for finding WLAN interferers in real time

ARGUS® WLAN Analyzer: Automated and graphical evaluation of found networks, even during the connection, and much more

Fiber enhancements for fiber testing (Optical Power Meter, Optical Fault Finder, PON installation test), see ARGUS® 300

1 ARGUS 166 only 2 ARGUS 163 only

xDSLCOMBI TESTER³ VDSL + ADSL TESTER⁴



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G.fast VDSL

ADSL

SHDSL

Bonding

GigE

SFP

LAN

LTE

wlan•)

	4
Fester with larger memory and optimized system performance	i
/DSL2 Profile 35b (ITU-T G.993.2, Annex Q / Super /ectoring) ⁴	
Highspeed downloads on xDSL and Ethernet // // // // // // // // // // // // //	
Measurement of xDSL up-/downstream parameters, as well as bits/tone (graphic) and more 4	
HTTP/FTP up/download tests ³	1
P ping and traceroute tests as well as bridge, °C and router mode included	
Supports the protocols IPv4 and IPv6 as well as the dual stack mode	
Active Line Noise graph and graphical xDSL long-time trace to detect infrequent DSL errors	
ine monitoring (Line Scope) via optional Probe with sym. / asymm. operation mode	
Free cloud functions, e. g. firmware update, configuration and rest result upload	
Supporting PC software (ARGUS® Update Tool, WINanalyse, NINplus) for updates, configuration and test results	
ARGUS 156/153 with optional	
/DSL2 profile 35b Bonding support	

G.fast extension (G.9700/9701) up to 212 MHz

Ethernet network scan with graphical display lists all IP and MAC addresses in the network

ADSL2/2+ modem simulation (Annex A + L + M and / or B + J)

SHDSL connection tester, 2, 4, 6 and 8 wire, SDHSL and SHDSL.bis (ATM, EFM, TDM) *3

HTTP download/FTP up and download tests (with several 100 Mbit/s) via FTP server

Parallel tests of all Triple Play services like Data, VoIP, IPTV via xDSL and GigE

TDR function for measuring line lengths (up to 6 km) and identifying sources of interference

Expandability of line monitoring, TDR, symmetry measurement (up to 30 MHz) and more*3

Extension of copper test functions with the ARGUS® Copper

Box ISDN BRI S/T/U, PRI/E1 interface (TE/NT/monitor) and POTS³

Transferring of test results via WLAN or QR code to systems of an electronic order processing

LTE extension* consisting of LTE scanner and download tests WLAN-AP and WLAN client mode with WLAN scan for

finding WLAN networks

ARGUS® 2G4 Scope for finding WLAN interferers in real time ARGUS® WLAN Analyzer: Automated and graphical evaluation of found networks, even during the connection, and much more details

3 ARGUS 156 only 4 ARGUS 153 only

E

would be glad to provide further

We

G.fas<u>t</u> VDSL ADSL GigE LTE ed est FC 49

ARGUS OVERVIEW

		300	F300	260	F240	166 / 163	156 / 153
	ADSL2/2+	~		Ø			
	VDSL2 Profile 35b	 Image: A start of the start of		Ø		 Image: A start of the start of	<
ces	VDSL2 Profile 35b Bonding	 Image: A start of the start of		 Image: A start of the start of		\checkmark	
rfa	G.fast (up to 212 MHz)	\checkmark		\checkmark		\checkmark	\checkmark
Interfaces	G.fast (up to 212 MHz Bond.)	\checkmark		\checkmark			
	SHDSL 2/4/8 wire (STU-R/C)	 Image: A start of the start of				✓ 1	🗸 з
	xDSL	~				\checkmark	 Image: A start of the start of
	1 GigE	Ø	v	Ø			Ø
E	2.5 GigE	 Image: A start of the start of	 Image: A start of the start of	 Image: A start of the start of			
	10 GigE Link	\checkmark		\checkmark	\checkmark		
	GPON	 Image: A start of the start of		 Image: A start of the start of		 Image: A start of the start of	
	XGS-PON	 Image: A start of the start of	Ø	 Image: A start of the start of	Ø	 Image: A start of the start of	
	xPON ID	 Image: Second sec		 S 		S	
	PON Installation Test	 Image: A start of the start of		 Image: A start of the start of		 Image: A start of the start of	
	Sel. OPM / Optical Power Meter		⊘/-		⊘/-	- / 🖍	
Fiber	Sel. OPM with Through Mode	 ✓ 					
ΞĒ.	Optical Fault Finder	 Image: A start of the start of		 Image: A start of the start of			
	OTDR	 Image: A start of the start of	Ø				
	Fiber Inspection Tool						
	Optical Light Source	 Image: A start of the start of	 Image: A start of the start of	 Image: A start of the start of			
	VFL						
	WLAN Test	 ✓ 		 Image: A start of the start of			
Wireless	WLAN Test WLAN Spectrum Analysis/2G4 Scope	 ✓ ✓ 	 ✓ ✓ 	 ✓ ✓ 		 Image: A start of the start of	 Image: Second sec
e l	WLAN Management				 		
Š	-					~	 Image: Second sec
	ARGUS [®] WLAN Analyzer	~	•	×	•	-	-
ISDN/POTS	BRI U						3
PO	BRI S/T	 Image: A start of the start of		 Image: A start of the start of			3
N	PRI/E1	 Image: A start of the start of					✓ 3
<u>s</u>	POTS	\checkmark		\checkmark		\checkmark	✓ 3
	int. Cable Multimeter (DMM)	\checkmark		\checkmark			
	Copper Box					 Image: A start of the start of	
e.	Line Scope	Ø		Ø		\bigcirc	Ø
Copper	TDR	\checkmark		\checkmark		\checkmark	\checkmark
చ	RFL	\checkmark		\checkmark			
	Remote Kit Control	\checkmark		\checkmark		\checkmark	
	ARGUS [®] RF Current Clamp	\checkmark		\checkmark		\checkmark	
	IP Tests (Ping/Traceroute)			Ø			
	Down-/Upload (HTTP/FTP)	0	0	Ø	Ø	✓ ¹ / ✓ ²	
	ARGUS [®] Real Speed Formal (RFC6349)	 Image: A start of the start of		~			 Image: A start of the start of
	ARGUS [®] Real Speed Direct (iperf)	 Image: A start of the start of	 Image: A start of the start of	 Image: A start of the start of		\checkmark	
	Speedtests up to 2.5 Gbit/s	-	Ø			-	
	Speedtests up to 10 Gbit/s	 Image: A start of the start of	 Image: A start of the start of	 Image: A start of the start of			
10	Network Scan					I	
Tests	Web Browser	0	v	Ø	Ø		
Ē	VoIP + MOS	 Image: A start of the start of	 Image: A set of the set of the	 Image: A start of the start of	 Image: A start of the start of		
	IPTV	 Image: A start of the start of		 Image: A start of the start of			
	Parallel Tests / Autotests			I			
	LAN Cabling/PoE	-				✓ 2	
	Loop/Traffic-Generator	~				1	
	RFC2544	\checkmark				1	
	ARGUS [®] SAM (Y.1564)	 Image: A start of the start of					
	FW Update, Configuration Import &						
.=	Test Result Upload via Cloud/FTP	Ø	S	Ø	Ø	Ø	I
Admin			0	Ø	Ø		
A	Remote Access (VNC) PC Software	O		o	Ø	✓ 1/ ✓ 2	 Image: Second sec
	ARGUS® Mobile App						V
		¥	•	· ·	~		
		10000					22222 22222
			10-10-10-10-10-10-10-10-10-10-10-10-10-1	6 6			