

ASC ARGNET SERIES, CONTROLLER FOR ALL ARGES SUBSYSTEMS

COMPACT LASER SYSTEM CONTROLLER FOR REAL TIME PROCESSING

Novanta develops photonics solutions through our globally recognized brands— ARGES, Cambridge Technology, Laser Quantum and Synrad— specializing in cutting-edge components and sub-systems for laser-based diagnostic, analytical, micromachining and fine material processing applications. Powerful lasers, coupled with advanced beam steering and intelligent sub-systems incorporating software and controls, deliver extreme precision and performance, tailored to our customers' demanding applications.

NEXT GENERATION OF SCAN HEAD CONTROL

Engineered by ARGES, the ASC ARGnet series is our next generation system controller solution controlling scan heads, lasers, sensors, actuators and other peripherals. This new controller features powerful Quadcore 64bit-CPU with 215k logic cell FPGA, enabling high-power performance, changeable multi-functional interface boards for added flexibility, and open platform with embedded Linux OS.

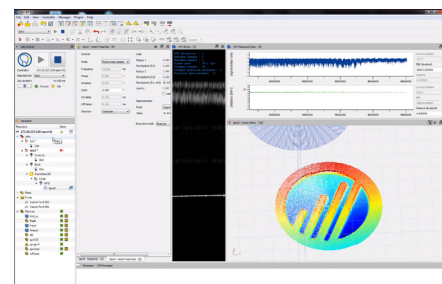
The combination of ASC system controller and its intuitive software, InScript results in a highly configurable interfaces and processing units which responds in real-time to external signals. This next generation controller solution guarantees an optimized synchronization of all devices and signals, which is important in laser systems.

The ASC is an autonomously functioning device that does not require a host to carry out its processing tasks and can be remotely diagnosed, administered, and parameterized via TCP/IP. This controller solution is compatible with all ARGES scan heads, lasers and sub-systems.



OPTIMIZED LASER PROCESSING CONTROL AT YOUR FINGERTIPS

- Timestamp based infrastructure for precise scanner and laser real-time control
- High throughput thanks to timestamp based data processing at 200K sample rate
- High accuracy enables micromachining jobs
- Easy combination/alignment of several signal streams with TSS technology
- Modular SW-architecture enables a quick extension of the scope of functionality
- Short response time of the system (<10 ms) via C API enables quick process handling



Vector Editor, 3D feature

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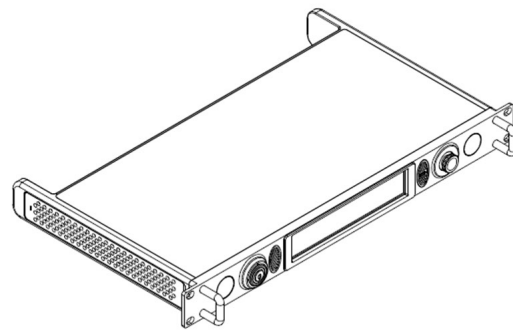
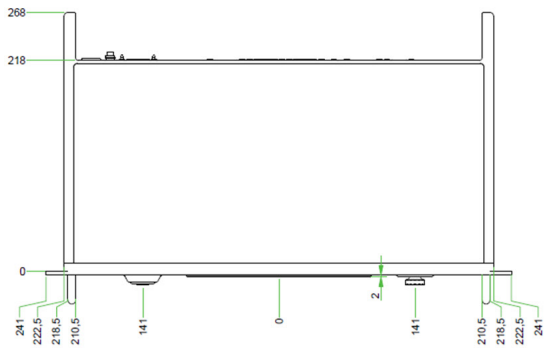
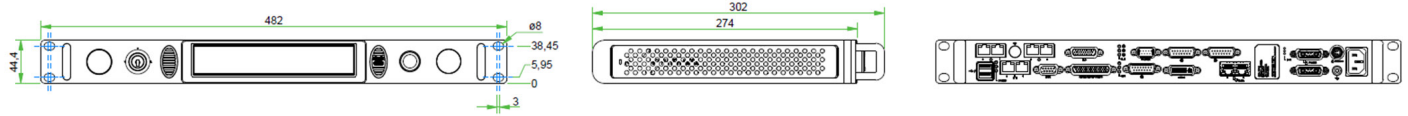
Specifications	
Supply Voltage	90-250VAC; 47-63Hz
Output Voltage, Tolerance	+47,76 ~ +48,24Vdc
Max Power Consumption	Max 600 W Peak Power (less than 5s, 50% duty cycle): 900W
Max Supply Input Current	7 A @ 600W; 10,6A @ Peak Power 900W Fast Acting Fuse @ 8A
Operating Temperature Range	0°C ~ 40°C
Storage Temperature Range	-20°C ~ 60°C
Non-Condensing Humidity	10% ~ 80%
Controller CPU	Freescale QorIQ 64-bit CPU T2081
Controller Main FPGA	Xilinx Artix-7 200T
Weight	5.0 kg
Dimensions (L x W x H)	268 mm x 482 mm x 44.4 mm
External Interfaces	
Gigabit Ethernet (2x)	100Mbit/s; 1000 Mbit/s
USB (2 back & 1 front) - (3x)	Front: Type C - USB 3.0 - 5Gbps Back: Type A - USB 3.0 – 5Gbps
RS232 (1x)	Baudrate 115200; Data bits 8; Stop bits 1; Parity None; Flow control None
ARGnet Interface (4x)	1000Mbit/s; Precision Time Protocol (PTP); Power over Ethernet (PoE++); Sync over Ethernet (SyncE)
PLC (1x)	External Supply vVoltage input: 5 Vdc to 24 Vdc; 1A max Digital Inputs: 24 Vdc Tolerant PLC in Serial Mode (on request: Parallel Mode)
PLC AUX (1x)	External Supply vVoltage input: 5 Vdc to 24 Vdc; 1A max Digital Inputs: 24 Vdc Tolerant PLC in Serial Mode (On Request: Parallel Mode)
UserIO / General Purpose E I/O (1x)	External Supply Voltage Input: 5Vdc to 24 Vdc; 1A max Digital Inputs: 24Vdc Tolerant
Power (2x)	Nominal Voltage: 48Vdc; Max. Current at Nominal Voltage 6,25A; Max. Rated Output Power: 300W Peak Output Power (less than 5s, 50% duty cycle): 450W
Position-Encoder (3x)	Differential Line Drivers and Receivers 3,3Vdc Operation Voltage Level, TTL Inputs 5Vdc Tolerant Supply for Rotary Encoder: 5Vdc; 0,5Amax
Laser (1x)	HSSI IOs: 5 Vdc UART IOs: 5 Vdc LVDS IOs: 1,2 Vdc DAC: +/-10Vdc, 10mA max. Power Output: 5 Vdc; 0,5A max
Software Integration	
Application Programming Interface	ARGES ControllerLib C-API (Win32 & Win64 DLL) ARGES InScript (Optional)
Operating Systems	Windows 7 & 10 32-bit/64-bit

ADDITIONAL FEATURES:

- For all ARGES scan heads with DG_BB (ARGNET)
- For high-precision welding and cutting applications
- Compatible with ARGES InScript® software 3.1

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CONTROLLER SYSTEM



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