

BEDROCK® Secure OSA® Remote

Product Datasheet

Universal 10 Channel, Channel Isolated
Universal 20 Channel, Channel Isolated

R10.8 / R10.32
R20.8 / R20.32

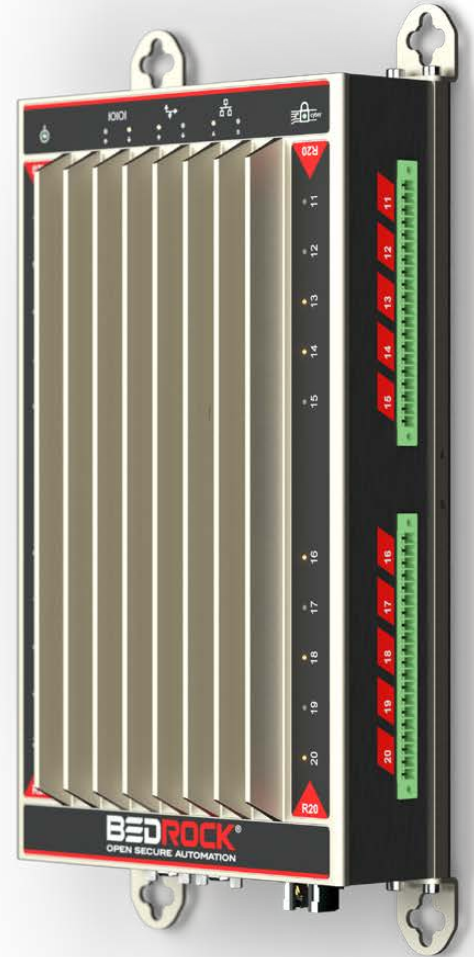
Secure OSA® Remote brings the full suite of Bedrock's Open Secure Automation OSA® to your remote applications. The ultimate IIoT Gateway, each OSA® Remote is equipped with 30 security technologies to intrinsically secure the edge to the cloud. The R10 models provide ten universal, secure remote input/output channels while the R20 models expand the input/output channel capacity with an additional 10 channels for a full 20 channels of universal, channel isolated and secure remote input/output.

FEATURES

- Secure SCADA Uplink for OPC UA, MQTT and DDS.
- Edge/Process interfaces & protocols supported: AI/AO/DI/DO/Pulse, HART 7, BSAP, RS-232/485/422, Ethernet IP, ModBus TCP, 61850, DNP3, PROFINET, DeviceNet, CAN Bus, BACnet.
- Per channel, soft-selectable analog input/output range from 4-20 mA.
- Per channel, soft-selectable analog input range from 0-10 V dc.
- Per channel, soft-selectable discrete input/output range from 0-30 V dc.
- Per channel, soft-selectable NAMUR or counter input for pulses up to 100 kHz.
- Integrated electronic fusing.
- Integrated analog and digital readback.
- Per channel, soft-selectable overcurrent limiting.
- Per channel, soft-selectable overcurrent retry limit and period.
- Per channel, soft-selectable fail-safe mode.
- Advanced signal & module diagnostics.
- Per channel, channel-to-channel and channel-to-ground galvanic isolation.
- 3 ms controller update time.
- Sequence of Events enabled with time stamp accuracy to ± 0.5 ms.
- Soft-selectable contactor debounce time.

BENEFITS

- ✓ Free IDE software tools to develop, innovate and test provided with unlimited seats and unlimited tags.
- ✓ Free embedded simulation and online training that is intuitive and simple to learn.
- ✓ Channel isolated, universal input/output for any field device.
- ✓ Operating temperature range -40 to +80 °C.
- ✓ Supplied direct termination plug headers allow field wiring to terminate on the module or use Bedrock's Universal I/O Cable for the ultimate in field termination and enclosure design.
- ✓ Controller update time that rivals or betters today's SCADA, PLC or DCS.
- ✓ Software configurable contactor debounce time eliminates false trips.
- ✓ Electronic fusing reduces or eliminates additional marshalling requirements.
- ✓ Overcurrent limiting with software configurable retries protects against field faults while a software configurable fail-safe mode maintains the field device value in the event of a communication failure.
- ✓ Security elements include: secure OS, authenticated modules, authenticated supply chain, secure remote updates, authenticated messages, anti-counterfeit protection and an all metal, tamper-proof design.
- ✓ Open engineering tools support IEC-61131.



OSA® Remote R20.32 shown.



+1 (781) 821-0280
8 am to 8 pm Eastern Time



support@bedrockautomation.com



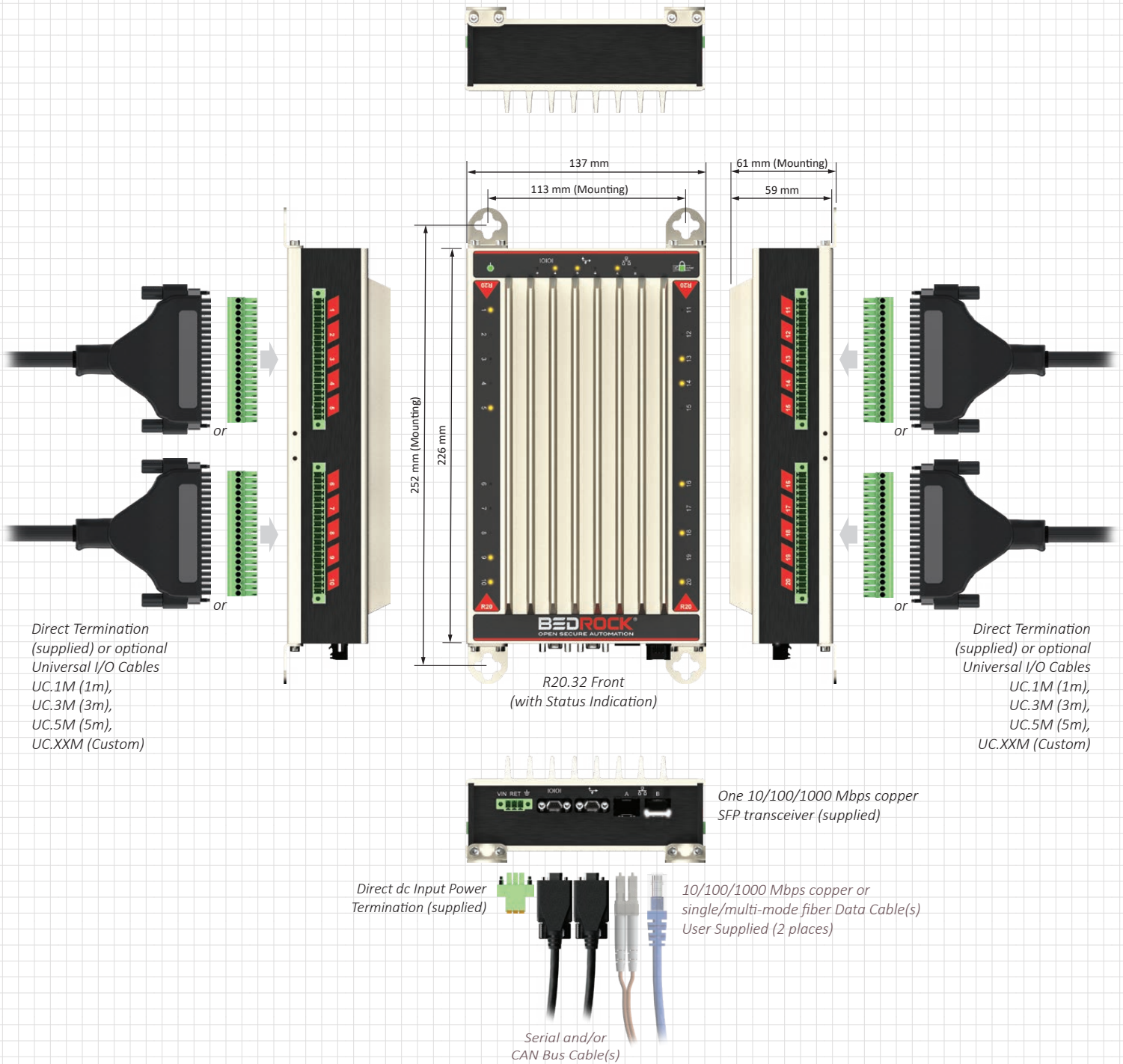
+1 (781) 821-0288

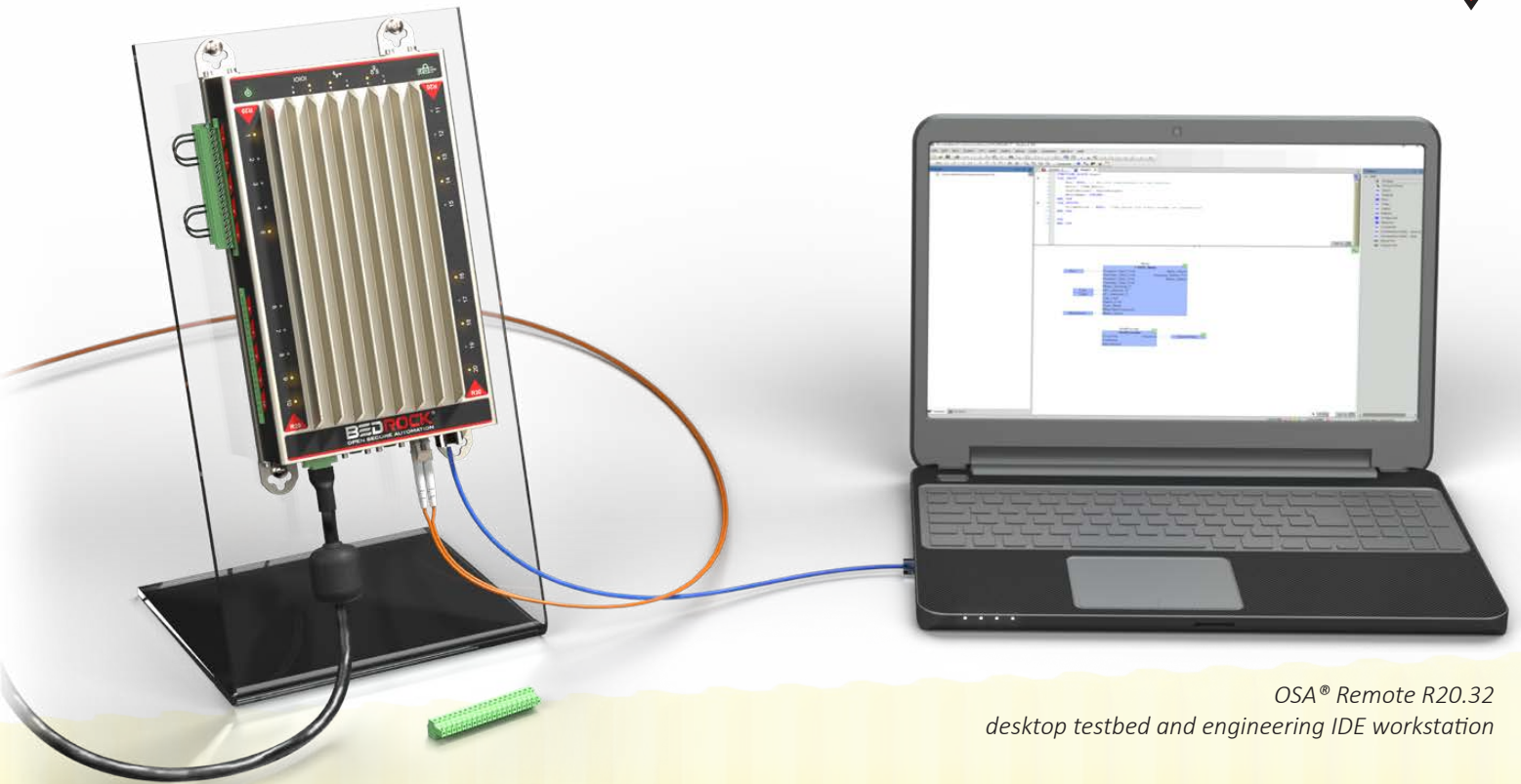


www.bedrockautomation.com

PHYSICAL DIMENSIONS AND EXTERNAL CONNECTIONS

Remote





OSA® Remote R20.32
desktop testbed and engineering IDE workstation



OSA® Remote R20.32
Universal Automation Enclosure

SPECIFICATIONS

Remote

FUNCTIONAL

Processor			Dual-Core ARM Cortex™
Memory	512 MB		RAM, DDR3 RAM at 1066 MHz
	8 or 32 GB		Non-Volatile Flash Memory (R10.8 & R20.8 = 8 GB, R10.32 & R20.32 = 32 GB)
Communication Ports			Dual SFP, Single Serial Mini-DB9 Port, Single CAN Bus Mini-DB9 Port
Input Power Range	9-30 V dc		
Number of Channels	10 or 20		Universal Input/Output, Ch. Isolated (R10.8 & R10.32 = 10 Ch., R20.8 & R20.32 = 20 Ch.)
Input Type(s)	4-20 mA		2-Wire, Internally or Externally Powered / 4-Wire, Ext. Powered Loop Transmitter
	5, 12, 24 V dc		Voltage Monitor or Contact Closure, Soft-selectable (Externally Sourced)
	24 V dc		Contact Closure (Internally Sourced Voltage)
	8 V dc		Nominal, NAMUR (Internally Sourced Voltage)
	0-10 V dc		Analog, Low Voltage
	0.01-100 kHz		Pulse (5, 12, 24 V dc Thresholds Supported)
Input Range(s)	3.25-22 mA		Analog
	0.1-12 V dc		Analog, Low Voltage, 0-10 V dc
	0-30 V dc		Discrete, 24 V dc Nominal
Excitation	21.6 V dc		@ 24 mA, Soft-selectable
Loop Compliance Voltage	18 V dc		Minimum at 22 mA
Open Digital Protocols			HART Master Device, Supporting HART Revision 7
HART Scan Time	0.5 s		Per Channel
Input Accuracy	± 0.030 %		of Full Scale (4-20 mA @ 23°C)
	± 0.030 %		of Full Scale (0-10 V dc @ 23°C)
	± 0.035 %		of Full Scale (10-100 kHz)
Input Temperature Coefficient	50 ppm/°C		
Input Resolution	20 bits		
Sampling Rate	8-120 Smpls/s		Soft-selectable
Analog Controller Update Rate			System Configured Based on Sampling Rate
Discrete Controller Update Rate	3 ms		Maximum
Input Voltage Thresholds	OFF/ON		Soft-selectable
	2/4 V dc		5 V dc
	6/8 V dc		12 V dc
	12/14 V dc		24 V dc
Voltage Input Impedance	20 kΩ		
Overcurrent Limit	1.0 A		Maximum, Soft-selectable
Debounce Filter Time	0-255 ms		Soft-selectable, 0 = No Debounce Filter
Output Type(s)	4-20 mA		with Readback
	24 V dc		Nominal, Discrete, Internal Excitation up to 25 mA
	0-30 V dc		Discrete, External Excitation up to 1 A
Analog Output Range	3.25-22 mA		
	0-25 V dc		@ 25 mA
	0-30 V dc		@ 1 A, 10 A Maximum / Module (Externally Sourced)
Output Accuracy	± 0.035 %		of Full Scale (4-20 mA @ 23°C)
	± 1.5 %		of Full Scale (0-60 V dc @ 23°C)
Output Resolution	14 bits		
Analog Output Load Resistance	750 Ω		Maximum
ON Current	1 A		Maximum
Switching voltage	30 V dc		Maximum
Blanking Time	4 ms		Time Between Overcurrent Detection and Shutdown
Overcurrent Shutoff			Latch-off or Back-off and Retry
Overcurrent Retry Limit	0-255		Soft-selectable, 0 = Latch-off
Overcurrent Retry Period	0-255 ms		Soft-selectable, low end should be set to 3
Maximum voltage on Excitation	25 V dc		
Maximum Current	25 mA		
Analog to Digital Sampling Rate	8-120 Smpls/s		User Configurable
Isolation	500/500 V ac		Channel to Channel / Channel to Ground
Time Stamp Accuracy	± 0.5 ms		
Power Consumption	20 W		Maximum
Power Dissipation	12 W		Maximum
Operating Temperature	- 40 to + 80 °C		Minimum to Maximum
Operating Relative Humidity	5 to 95 %		Minimum to Maximum (non-condensing)
Standards			IEC 60068-2-27, IEC 60068-2-6, CISPR 11, IEC 61000-4-2 to 6, MIL-STD-461G, IEC/TS 61000-5-8:2009
Class I, Division 2 Hazardous Loc.			ANSI/ISA-12.12.01-2105
Actual Dimensions	226/137/59 mm		Unit (without Mounting Brackets)
Unit Weight	1000 g		Preliminary Design Weight
Storage Temperature	- 40 to + 85 °C		Minimum to Maximum

ENVIRONMENTAL