- ❖ **2x SFP+ Slots 10 GBASE-R**
- ❖ **8x RJ45 Ports 10/100/1000 BASE-T**
- ❖ **Serial Buses 2x RS485 / RS422 / Modbus**
- ❖ **2x Digital/Alarm Inputs**
- ❖ **1x Programmable Relay Output**
- ❖ **2x Independent Supply Inputs**
- ❖ **Redundant Topology LAN-RING, RSTP**
- ❖ **Event Management with Support:**
  HTTP/ONVIF Client, E-mail, IP Watchdogs, ETH Events, TCP, Modbus, DIO, Balanced Loops...
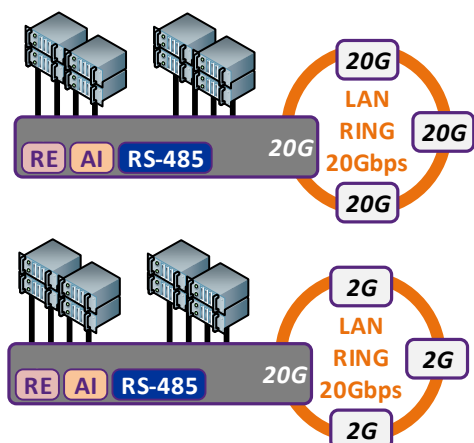- ❖ **SNMPv3 Encrypted Management**

- ❖ **VLAN, QoS, SNMP, SMTP, SNTP, IGMPv1/2, RSTP, LLDP, 802.1X**
- ❖ **Overvoltage Protections up to 30A (8/20μs)**
- ❖ **Operating Range -40°C to +70°C**
- ❖ **Operating Range of Components –40°C to +85°C**

PRODUCT NAME		CODE		NOTE	
20G-2X.8.0.F-BOX		1-981-220		10-60VDC/10-30VAC	
Holders for DIN35, Flat Surface and to 10" Cabinets are Included.					
AVAILABLE PORTS:	SFP+	GE	DI/BI	RE	RS485/422
	2	8	2	1	2/1
Na www.metel.eu naleznete dostupné SFP moduly.					

L2 switches 20G-2X.8.0.F-BOX expand the successful series of 2G switches with a backbone L2 switch with 10Gbps full duplex throughput on 2 optical ports. They support connections in ring topology, cascade ring topology, mesh and point-to-point. Industrial design and surge protection of all metallic ports, inputs and outputs guarantee reliable operation even in demanding outdoor and industrial applications.

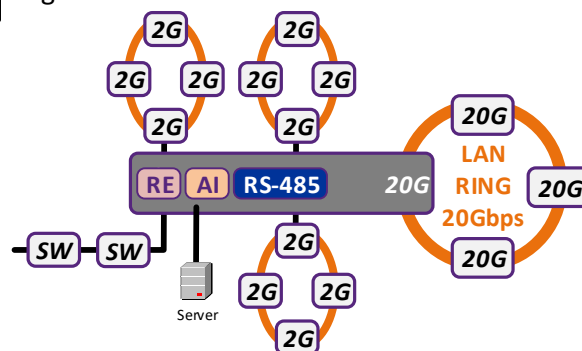## Typical Connection in RING Topology

Depending on the SFP modules used, 20G switches support both 10Gbps full duplex (LAN-RING 20G) and 1Gbps full duplex (LAN-RING 2G) optical ring connections.
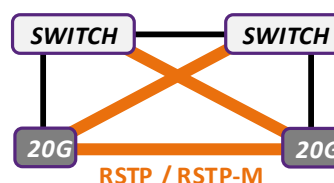
Typical Connection in Cascade

A common application is growing systems, where 20G switches interconnect individual network segments.

Typical Connection in MESH Topology

The switches support the RSTP / RSTP-M protocols.

LEGEND:

▬	10 GBASE-R	**RS-485**	RS485
▬	1000 BASE-X	**AI**	Alarm Input
▬	1000 BASE-T	**RE**	Relay Output

Technical Parameters

compatibility

	Parameter	Value		Unit	Note
Switching Capacity	Throughput	48		Gbps	
	Switching CPU	Marvell (USA)			
10 GBASE-R	Count	2			
	Supported Formats	Supports 64B/66B signal encoding			
	Connector	Slots SFP+			
1000 BASE-T	Count	8			FE
	Supported Formats	10/100/1000 BASE-T			
	Overvoltage Protection	30		A	8/20µs
	Connector	RJ45			
Management	SNMPv3	SIMULand			Windows Application
RS485/RS422[1]	Count	2/1			
	Speed	Max. 57.6		kbps	
	Overvoltage Protection	30		A	8/20µs
Digital Inputs	Count	2			
	Mode	Digital - NC / NO			
		Analog 0 - 30kΩ for Balanced Loops			
Relay Output	Type of contact	1x Change-over			
	Max. Load	62.5VA (30W) / 1A / 60V			Resistive Load
Power Supply		Main input	Back-up input		
	Input Voltage	10 - 60 / 10 - 30	10 - 60	VDC/AC	
	Power Consumption	Max. 10		W	
	Overvoltage Protection	100		A	8/20µs
Environment	Operational Range	0...+70		°C	Temperature of Environment
	Storage Range	−40...+70		°C	
	Humidity	Max. 95		%	Non-condensing
	Weight	0.8		kg	
Planned Certification		CE, TUV			

The producer retains the right to change any technical parameters without previous written or published notification.

[1] It is not possible to use both interfaces at the same time.

Overview of Supported Modes RS485

The table below lists the most commonly used modes / protocols recommended for deployment on new systems.

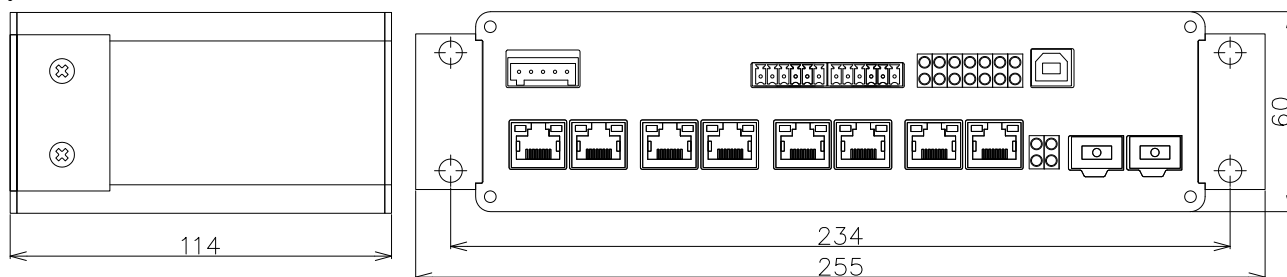|		B U S 2				
		ASSET	DOMINUS	GALAXY	MODBUS	RS485	NOTE
B U S 1	ASSET	✓	✗	✗	✓	✓	I&HAS Fides
	DOMINUS	✗	✗	✗	✓	✓	I&HAS Abbas
	GALAXY	✗	✗	✗	✓	✓	I&HAS Honeywell
	MODBUS	✓	✓	✓	✓	✓	MODBUS ASCII/RTU
	RS485	✓	✓	✓	✓	✓	Type. 4-5ms Delay Between RS Ports

When transmitting data from I&HAS systems designed in accordance with EN 50131-1 the following rules apply:

❖ All frames are identified with VLAN headers in accordance with IEEE 802.1Q.

❖ All connected systems have a defined bandwidth (protection from DDoS attacks).

❖ Alarm system data have the QoS bits set for the highest priority.

The activity on all ports in the transmission system should be monitored via SNMP protocol.
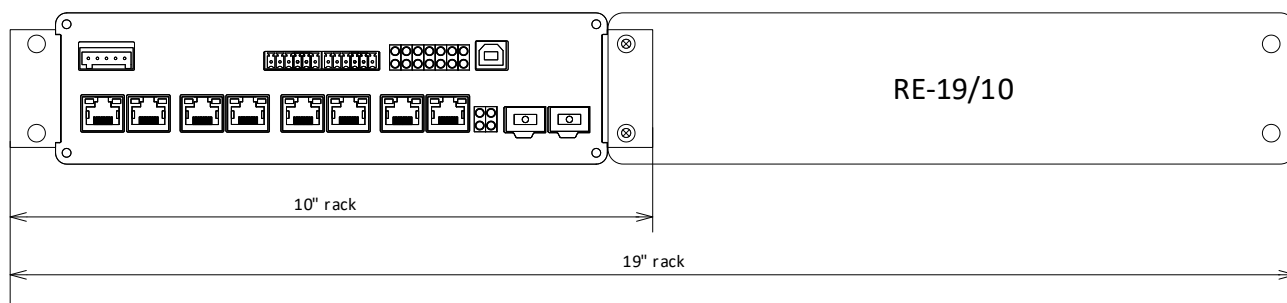
Dimensions of 20G-2X.8.0.F

universality

Mounting in the 10" and 19" rack

universality

RE-19/10

10" rack

19" rack

Mounting to DIN35

universality

REV: 202008 – 1st. Serial Version