Simgenet IP/MPLS Router Family — Comparison Table

All models run on SMGOS (Simgenet proprietary network operating system) | Cisco IOS-like CLI-based management

	SMG411 Edge Router	SMG104 Aggregation	SMG818V5 Industrial	SMG1000 Industrial
HARDWARE PLATFORM				
Operating System	SMGOS	SMGOS	SMGOS	SMGOS
Chipset / Platform	Intel	Intel C236	Intel® C741	ICX 4309Y 2P 8C/2.8G
CPU	Intel	Intel Xeon E3-1200 v5	Xeon 5418Y	Xeon ICX 4309Y 2P 8C
Memory (RAM)	16 GB	Max. 64 GB DDR4	16x DDR5 4400/4800 ECC	16x DDR5 4400/4800 ECC
Form Factor	1U Rackmount 19"	1U Rackmount 19"	2U Rackmount 19"	4U Rackmount 19"
Dimensions	N/A	430 x 550 x 89 mm	440 × 592 × 88 mm	N/A
Power Supply	220 VAC, 250W	220 VAC, 250W	2x 220 VAC, 250W	2x 220 VAC, 250W
Operating Temperature	-5°C ~ +50°C	-5°C ~ +50°C	-20°C ~ +60°C	-20°C ~ +60°C
EMC Certification	EN61000-4 Level 1	CE, RoHS, EN61000-4 L1	EN61000-4 Level 3	EN61000-4 Level 3
EXPANSION & PORTS				
PCIe Slot	PCIe-based	4x PCIe Gen3 x8	8x PCIe Gen5 x8	Model A: 1x / Model B: 2x PCIe Gen4
Max. Uplink Speed	1G / 10G	1G / 10G / 40G / 100G	1G / 10G / 40G / 100G	100G / 200G
Max. Uplink Capacity	PCIe Gen3 bandwidth	PCIe Gen3 bandwidth	PCIe Gen5 bandwidth	Model A: 2x100G Model B: 4x100G/200G
1G SFP Card	1/10G	4-port / 8-port SFP	8x 8-port SFP	7x 8-port SFP
1G RJ45 Card	6	4-port / 8-port (Std & Bypass)	8x 8-port RJ45	7x 8-port RJ45
10G SFP+ Card	4	4x 2x SFP+	8x 2x SFP+	7x 2x SFP+
40G QSFP+ Card	—	4x 2x QSFP+	8x 2x QSFP+	7x 2x QSFP+
100G QSFP+ Card	—	4x 2x QSFP+	8x 2x QSFP+	2x 2x QSFP+
ROUTING & MPLS				
Static / PBR / Redistribution	✓	✓	✓	✓
IPv4 / IPv6 Dual-Stack	✓	✓	✓	✓
RIPv2	✓	✓	✓	✓
OSPFv2 / OSPFv3	✓	✓	✓	✓
IS-IS	✓	✓	✓	✓
BGP (iBGP / eBGP / RR)	✓	✓	✓	✓

	SMG411 Edge Router	SMG104 Aggregation	SMG818V5 Industrial	SMG1000 Industrial
BGP Add-Path	✓	✓	✓	✓
MPLS / LDP	✓	✓	✓	✓
MPLS L3 VPN (RFC 4364)	✓	✓	✓	✓
MPLS L2 VPN / EoMPLS	✓	✓	✓	✓
Segment Routing (SR-MPLS)	✓	✓	✓	✓
MPLS-TE / RSVP-TE	✓	✓	✓	✓
VRF	✓	✓	✓	✓
VXLAN	✓	✓	✓	✓
Fast Convergence / ECMP	✓	✓	✓	✓
BFD	✓	✓	✓	✓
SERVICES & SECURITY				
QoS / Traffic Shaping	✓	✓	✓	✓
DHCP Server / Relay	✓	✓	✓	✓
NAT (SNAT/DNAT/PAT/VRF-aware)	✓	✓	✓	✓
IPsec VPN (Site-to-Site)	✓	✓	✓	✓
OpenVPN	✓	✓	✓	✓
PPPoE	✓	✓	✓	✓
IEEE 1588 PTP v2	✓	✓	✓	✓
NTP / SNTP	✓	✓	✓	✓
SNMP v2/v3	✓	✓	✓	✓
RADIUS (AAA)	✓	✓	✓	✓
Syslog	✓	✓	✓	✓

Which Model Should You Choose?

All models run the same SMGOS software and support the same protocol set. Model selection should be based on environmental resilience requirements, port/uplink capacity, and physical space — not software capabilities.

Criterion 1: Environmental Conditions

	SMG411 / SMG104	SMG818V5 / SMG1000
Environment	Controlled room, data center, climate-controlled cabinet	Substation, field cabinet, outdoor site, railway station
Temperature	-5°C ~ +50°C	-20°C ~ +60°C
EMC Level	EN 61000-4 Level 1	EN 61000-4 Level 3
Conclusion	Sufficient for office / DC environments	Required for harsh field conditions

Criterion 2: Port Density & Uplink Capacity

	SMG411	SMG104	SMG818V5	SMG1000
PCIe Slot	Limited	4x Gen3	8x (Gen5)	5x Gen4 or 2x Gen5
Max. Speed	10G	100G	100G	200G
Suitable Scenario	Few ports, low bandwidth	Medium-high ports, multiple uplinks	High port density, multiple cards	High port density, multiple cards

Criterion 3: Physical Space & Form Factor

	SMG411	SMG104	SMG818V5	SMG1000
Form Factor	1U Rackmount	1U Rackmount	2U Rackmount	4U Rackmount
Note	Narrow cabinet, limited space	Standard rack	More card capacity	More card capacity

Notes:

• All models use the same SMGOS software — protocol and service capabilities are identical across all platforms.

• Any model can be deployed in any sector (energy, railway, telecom, DC). Selection depends on port requirements, environmental conditions, and physical space — not on the sector.

• SMG818V5 and SMG1000: EN 61000-4 Level 3 (heavy industrial EMC), -20°C ~ +60°C, dual PSU — recommended for all field deployments outside controlled environments (energy, railway, industrial facilities, etc.).

• N/A: Information not yet published in the datasheet.