



SCALANCE MUM856-1 (A1) 5G router, IP65, for wireless IP communication from Ethernet-based applications via public 3/4/5G mobile radio networks and private 5G networks, VPN, firewall, NAT, IPv6, connection to SINEMA RC via CLP, 4 N-Connect connections, 1x micro SIM slot, eSIM, 1x10/100/1000 Mbps M12 socket, redundant DC 24 V, M12 L-encoded, PoE, -30... +70 °C, CLP slot, 1x DI and 1x DO, A-coded, observe national approvals: [siemens.com/mobile-approvals](https://www.siemens.com/mobile-approvals) CERT ID: MS5G16R-65-M1-M12-E4-1

Technical Product Detail Page

<https://i.siemens.com/1P6GK5856-2EA10-3AA1>

transfer rate

transfer rate / for Industrial Ethernet	10, 100, 1000 Mbit/s
transfer rate	
<ul style="list-style-type: none"> with UMTS transmission / with downlink / maximum 	42 Mbit/s
<ul style="list-style-type: none"> with UMTS transmission / with uplink / maximum 	5.76 Mbit/s
<ul style="list-style-type: none"> for LTE transmission / with downlink / maximum 	1000 Mbit/s
<ul style="list-style-type: none"> for LTE transmission / with uplink / maximum 	200 Mbit/s
<ul style="list-style-type: none"> for 5G transmission / with downlink / maximum 	1000 Mbit/s
<ul style="list-style-type: none"> for 5G transmission / with uplink / maximum 	500 Mbit/s

interfaces

number of electrical/optical connections / for network components or terminal equipment / maximum	1
number of electrical/optical connections / for gigabit Ethernet / maximum	1
number of electrical connections	
<ul style="list-style-type: none"> for network components or terminal equipment 	1
number of electrical connections	
<ul style="list-style-type: none"> for external antenna(s) 	4
<ul style="list-style-type: none"> for power supply 	1
<ul style="list-style-type: none"> for redundant voltage supply 	1
type of electrical connection	
<ul style="list-style-type: none"> for network components or terminal equipment 	M12 (8-pin, X-coded), PoE
<ul style="list-style-type: none"> for external antenna(s) 	N-Connect (socket)
<ul style="list-style-type: none"> for redundant voltage supply 	M12 (4-pin, L-coded)

memory

number of slots / for Micro-SIM card	1
product component / eSIM integrated	Yes
design of the removable storage / CLP	Yes

signal inputs/outputs

number of digital inputs	1
number of digital outputs	1
type of electrical connection / at the digital inputs/outputs	M12 (4-pin, A-coded)
input voltage / at digital input / at DC	-30 ... +30 V
output voltage / at digital output / at DC / maximum	24 V; 0,5 A
operational current / of the signaling contacts / at DC / at 30 V / maximum	0.008 A

WAN connection

type of wireless network / is supported	5G public networks, 5G private networks, LTE, UMTS
type of mobile wireless service / is supported	HSDPA, HSUPA, HSPA+

frequency band / is supported	
<ul style="list-style-type: none"> • 5G Standalone (SA) 	n1, n2, n3, n5, n7, n8, n20, n25, n28, n30, n38, n40, n41, n48, n66, n71, n75(DL), n77, n78, n79
<ul style="list-style-type: none"> • 5G Non-Standalone (NSA) 	n1, n2, n3, n5, n7, n8, n20, n25, n28, n30, n38, n40, n41, n66, n71, n77, n78, n79
<ul style="list-style-type: none"> • LTE 	B1, B2, B3, B4, B5, B7, B8, B12, B13, B14, B17, B18, B19, B20, B25, B26, B28, B29(DL), B30, B32(DL), B34, B38, B39, B40, B41, B42, B43, B46(DL), B48, B66, B71
<ul style="list-style-type: none"> • UMTS 	B1, B2, B4, B5, B6, B8, B19
supply voltage, current consumption, power loss	
supply voltage / from Power-over-Ethernet according to IEEE802.3at for type 1 and IEEE802.3af	48 V
consumed current	
<ul style="list-style-type: none"> • at DC / at 24 V 	0.55 A
<ul style="list-style-type: none"> • at DC / at 24 V / sleep mode / maximum 	0.013 A
<ul style="list-style-type: none"> • with Power-over-Ethernet according to IEEE802.3at for type 1 and IEEE802.3af / typical 	0.27 A
power loss [W]	
<ul style="list-style-type: none"> • at DC / at 24 V / typical 	13.2 W
<ul style="list-style-type: none"> • with Power-over-Ethernet according to IEEE802.3at for type 1 and IEEE802.3af / typical 	12.96 W
supply voltage / 1 / rated value	24 V
<ul style="list-style-type: none"> • type of voltage 	redundant 24 V DC power supply, M12, L-coded
<ul style="list-style-type: none"> • type of voltage / 1 / of the supply voltage 	DC
supply voltage / 2 / rated value	24 V
<ul style="list-style-type: none"> • type of voltage / 2 / of the supply voltage 	DC
supply voltage / 3 / rated value	48 V
<ul style="list-style-type: none"> • type of voltage / 3 / of the supply voltage 	DC, PoE
ambient conditions	
ambient temperature	
<ul style="list-style-type: none"> • during operation 	-30 ... +70 °C
<ul style="list-style-type: none"> • during storage 	-40 ... +85 °C
relative humidity / at 25 °C / during operation / maximum	95 %
protection class IP	IP65
design, dimensions and weights	
depth	45 mm
height	179 mm
width	166 mm
net weight	1300 g
fastening method	Wall mounting, mounting on a DIN rail with a separate mounting adapter
<ul style="list-style-type: none"> • 35 mm DIN-rail mounting 	Yes
<ul style="list-style-type: none"> • wall mounting 	Yes
product features, product functions, product components / general	
product function	
<ul style="list-style-type: none"> • DynDNS client 	Yes
<ul style="list-style-type: none"> • no-ip.com client 	Yes
product functions / management, configuration, engineering	
product function	
<ul style="list-style-type: none"> • CLI 	Yes
<ul style="list-style-type: none"> • web-based management 	Yes
<ul style="list-style-type: none"> • MIB support 	Yes
<ul style="list-style-type: none"> • TRAPs via email 	Yes
protocol / is supported	
<ul style="list-style-type: none"> • Telnet 	Yes
<ul style="list-style-type: none"> • HTTP 	Yes
<ul style="list-style-type: none"> • HTTPS 	Yes
type of configuration	Web-based management
product function / is supported / identification link	Yes; acc. to IEC 61406-1:2022
product functions / diagnostics	
protocol / is supported	
<ul style="list-style-type: none"> • SNMP v1 	Yes

<ul style="list-style-type: none"> • SNMP v2 	Yes
<ul style="list-style-type: none"> • SNMP v2c 	Yes
<ul style="list-style-type: none"> • SNMP v3 	Yes
product function	
<ul style="list-style-type: none"> • statistics Packet Size 	No
<ul style="list-style-type: none"> • statistics packet type 	No
<ul style="list-style-type: none"> • error statistics 	No
<ul style="list-style-type: none"> • SysLog 	Yes
<ul style="list-style-type: none"> • packet filter log 	Yes
product functions / DHCP	
product function	
<ul style="list-style-type: none"> • DHCP client 	Yes
<ul style="list-style-type: none"> • DHCP server - internal network 	Yes
product functions / routing	
router function	
<ul style="list-style-type: none"> • NAT (IP masquerading) 	Yes
<ul style="list-style-type: none"> • port forwarding 	Yes
<ul style="list-style-type: none"> • NAT traversal 	Yes
<ul style="list-style-type: none"> • 1:1 NAT 	Yes
<ul style="list-style-type: none"> • DNS cache 	Yes
product functions / security	
suitability for operation / Virtual Private Network	Yes
firewall version	Statefull Inspection
product function	
<ul style="list-style-type: none"> • password protection 	Yes
<ul style="list-style-type: none"> • packet filter 	Yes
<ul style="list-style-type: none"> • broadcast/multicast/unicast limiter 	No
product function	
<ul style="list-style-type: none"> • broadcast blocking 	No
<ul style="list-style-type: none"> • with VPN connection 	IPsec, OpenVPN (as Client)
number of possible connections / with VPN connection	20
type of authentication / with Virtual Private Network / PSK	Yes
protocol / is supported	
<ul style="list-style-type: none"> • IPsec tunnel and transport mode 	Yes
key length	
<ul style="list-style-type: none"> • 1 / with IPsec AES / with Virtual Private Network 	128 bit
<ul style="list-style-type: none"> • 2 / with IPsec AES / with Virtual Private Network 	192 bit
<ul style="list-style-type: none"> • 3 / with IPsec AES / with Virtual Private Network 	256 bit
<ul style="list-style-type: none"> • with IPsec 3DES / with Virtual Private Network 	168 bit
type of Internet key exchange / with Virtual Private Network	
<ul style="list-style-type: none"> • main mode 	Yes
<ul style="list-style-type: none"> • quick mode 	Yes
type of packet authentication / with Virtual Private Network	MD5, SHA-1, SHA-256, SHA-384, SHA-512
IETF profile / with Virtual Private Network / X.509v3 certificate	Yes
product functions / time	
protocol / is supported	
<ul style="list-style-type: none"> • NTP 	Yes
<ul style="list-style-type: none"> • SNTP 	Yes
standards, specifications, approvals	
standard	
<ul style="list-style-type: none"> • for EMC 	ETSI EN 301 489-1, ETSI EN 301 489-19, ETSI EN 301 489-52, EN 55011, NAMUR NE21
<ul style="list-style-type: none"> • for emitted interference 	CISPR 32, ETSI EN 55032 Class A / Class B, EN IEC 61000-6-3, EN IEC 61000-6-4
<ul style="list-style-type: none"> • for interference immunity 	CISPR 35, EN 55035, EN IEC 61000-6-1, EN IEC 61000-6-2
certificate of suitability	
<ul style="list-style-type: none"> • EC Declaration of Conformity 	Yes
<ul style="list-style-type: none"> • CE marking 	Yes
<ul style="list-style-type: none"> • Power-over-Ethernet according IEEE802.3at for type 1 	Yes

and IEEE802.3af

- railway application in accordance with EN 50121-3-2
- railway application in accordance with EN 50121-4
- railway application in accordance with EN 50155

Yes

Yes

Yes; no coated printed-circuit boards, EMC: trackside unit/vehicle unit, climate: use in the vehicle within equipment boxes/cabinets, mechanical system: class B: in equipment housing

- fire protection in accordance with EN 45545-2

Yes

standards, specifications, approvals / Environmental Product Declaration

Environmental Product Declaration

Yes

global warming potential [CO2 eq]

- total
- during manufacturing
- during operation
- after end of life

394.88999 kg

33.7 kg

361 kg

0.19 kg

further information / internet links

internet link

- to website: Selection guide for cables and connectors
- to web page: selection aid TIA Selection Tool
- to website: Mobile radio national approval
- to website: Industrial communication
- to web page: SiePortal
- to website: Image database
- to website: CAx-Download-Manager
- to website: Industry Online Support

<https://support.industry.siemens.com/cs/ww/en/view/109766358>

<https://www.siemens.com/tstcloud>

<https://www.siemens.com/mobile-approvals>

<https://www.siemens.com/simatic-net>

<https://sieportal.siemens.com/>

<https://www.automation.siemens.com/bilddb>

<https://www.siemens.com/cax>

<https://support.industry.siemens.com>

security information

security information

Siemens provides products and solutions with industrial cybersecurity functions that support the secure operation of plants, systems, machines and networks. In order to protect plants, systems, machines and networks against cyber threats, it is necessary to implement - and continuously maintain - a holistic, state-of-the-art industrial cybersecurity concept. Siemens' products and solutions constitute one element of such a concept. Customers are responsible for preventing unauthorized access to their plants, systems, machines and networks. Such systems, machines and components should only be connected to an enterprise network or the internet if and to the extent such a connection is necessary and only when appropriate security measures (e.g. firewalls and/or network segmentation) are in place. For additional information on industrial cybersecurity measures that may be implemented, please visit www.siemens.com/cybersecurity-industry. Siemens' products and solutions undergo continuous development to make them more secure. Siemens strongly recommends that product updates are applied as soon as they are available and that the latest product versions are used. Use of product versions that are no longer supported, and failure to apply the latest updates may increase customer's exposure to cyber threats. To stay informed about product updates, subscribe to the Siemens Industrial Cybersecurity RSS Feed under <https://www.siemens.com/cert>. (V4.7)

Approvals / Certificates

General Product Approval



EG-Konf.



UL



RCM

[Type Examination Certificate](#)

[China RoHS](#)

General Product Approval

For use in hazardous locations

Radio Equipment Type Approval Certificate

Railway



EG-Konf.



ATEX

[FM](#)

[Miscellaneous](#)

[Miscellaneous](#)

[Confirmation](#)

Environment



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