SIEMENS

Data sheet 6GK5856-2EA10-3AA1



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 CERT ID: MS5G16R-65-M1-M12-E4-1

product brand name	SCALANCE
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	
● with UMTS transmission / with downlink / maximum	42 Mbit/s
● with UMTS transmission / with uplink / maximum	5.76 Mbit/s
● for LTE transmission / with downlink / maximum	1000 Mbit/s
● for LTE transmission / with uplink / maximum	200 Mbit/s
● for 5G transmission / with downlink / maximum	1000 Mbit/s
● 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	
● for network components or terminal equipment	1
number of electrical connections	
● for external antenna(s)	4
● for power supply	1
● for redundant voltage supply	1
type of electrical connection	
● for network components or terminal equipment	M12 (8-pin, X-coded), PoE
● for external antenna(s)	N-Connect (socket)
● 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

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type of mobile wireless service / is supported	HSDPA, HSUPA, HSPA+
frequency band / is supported	
● 5G Standalone (SA)	n1, n2, n3, n5, n7, n8, n20, n25, n28, n30, n38, n40, n41, n48, n66, n71, n75(DL), n77, n78, n79
● 5G Non-Standalone (NSA)	n1, n2, n3, n5, n7, n8, n20, n25, n28, n30, n38, n40, n41, n66, n71, n77, n78, n79
● 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
● 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	
● at DC / at 24 V	0.55 A
● at DC / at 24 V / sleep mode / maximum	0.013 A
● with Power-over-Ethernet according to IEEE802.3at for type 1 and IEEE802.3af / typical	0.27 A
power loss [W]	
● at DC / at 24 V / typical	13.2 W
● 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
● type of voltage	redundant 24 V DC power supply, M12, L-coded
● type of voltage / 1 / of the supply voltage	DC
supply voltage / 2 / rated value	24 V
● type of voltage / 2 / of the supply voltage	DC
supply voltage / 3 / rated value	48 V
● type of voltage / 3 / of the supply voltage	DC, PoE
ambient conditions	
ambient temperature	
● during operation	-30 ... +70 °C
● 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
● 35 mm DIN-rail mounting	Yes
● wall mounting	Yes
product features, product functions, product components / general	
product function	
● DynDNS client	Yes
● no-ip.com client	Yes
product functions / management, configuration, engineering	
product function	
● CLI	Yes
● web-based management	Yes
● MIB support	Yes
● TRAPs via email	Yes
protocol / is supported	
● Telnet	Yes
● HTTP	Yes
● 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	

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● SNMP v1	Yes
● SNMP v2	Yes
● SNMP v2c	Yes
● SNMP v3	Yes
product function	
● statistics Packet Size	No
● statistics packet type	No
● error statistics	No
● SysLog	Yes
● packet filter log	Yes
product functions / DHCP	
product function	
● DHCP client	Yes
● DHCP server - internal network	Yes
product functions / routing	
router function	
● NAT (IP masquerading)	Yes
● port forwarding	Yes
● NAT traversal	Yes
● 1:1 NAT	Yes
● DNS cache	Yes
product functions / security	
suitability for operation / Virtual Private Network	Yes
firewall version	Statefull Inspection
product function	
● password protection	Yes
● packet filter	Yes
● broadcast/multicast/unicast limiter	No
product function	
● broadcast blocking	No
● 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	
● IPsec tunnel and transport mode	Yes
key length	
● 1 / with IPsec AES / with Virtual Private Network	128 bit
● 2 / with IPsec AES / with Virtual Private Network	192 bit
● 3 / with IPsec AES / with Virtual Private Network	256 bit
● with IPsec 3DES / with Virtual Private Network	168 bit
type of internet key exchange / with Virtual Private Network	
● main mode	Yes
● 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	
● NTP	Yes
● SNTP	Yes
standards, specifications, approvals	
standard	
● for EMC	ETSI EN 301 489-1, ETSI EN 301 489-19, ETSI EN 301 489-52, EN 55011, NAMUR NE21
● for emitted interference	CISPR 32, ETSI EN 55032 Class A / Class B, EN IEC 61000-6-3, EN IEC 61000-6-4
● for interference immunity	CISPR 35, EN 55035, EN IEC 61000-6-1, EN IEC 61000-6-2
certificate of suitability	
● EC Declaration of Conformity	Yes
● CE marking	Yes

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● Power-over-Ethernet according IEEE802.3at for type 1 and IEEE802.3af	Yes
● railway application in accordance with EN 50121-3-2	Yes
● railway application in accordance with EN 50121-4	Yes
● railway application in accordance with EN 50155	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	394.89 kg
● during manufacturing	33.7 kg
● during operation	361 kg
● after end of life	0.19 kg
further information / internet links	
internet link	
● to website: Selection guide for cables and connectors	https://support.industry.siemens.com/cs/ww/en/view/109766358
● to web page: selection aid TIA Selection Tool	https://www.siemens.com/tstcloud
● to website: Mobile radio national approval	https://www.siemens.com/mobile-approvals
● to website: Industrial communication	https://www.siemens.com/simatic-net
● to web page: SiePortal	https://sieportal.siemens.com/
● to website: Image database	https://www.automation.siemens.com/bilddb
● to website: CAx-Download-Manager	https://www.siemens.com/cax
● to website: Industry Online Support	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

CE EG-Konf.	UKCA	UL UL	RCM	Type Examination Certificate	China RoHS

General Product Approval	For use in hazardous locations		Radio Equipment Type Approval Certificate		Railway
CE EG-Konf.	Ex ATEX	FM	Miscellaneous	Miscellaneous	Confirmation

Environment

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