

Průmyslové mobilní routery

M!DGE

Mobilní routery M!DGE jsou primárně navrženy pro SCADA a telemetrické aplikace v kritické infrastruktuře, energetické a vodohospodářské, ropné a plynárenské a dalších. Jsou také vhodné pro mnoho dalších aplikací, kde je vyžadována vysoká spolehlivost, jako jsou POS, ATM a bezpečnost.



Market leader

- Sériové SCADA protokoly
- SFP rozhraní
- Možné rozšíření – mPCIe
- Hybridní sítě

Výkon

- 5G, 4G, 3G, 2G
- 2× SIM
- Statické a dynamické směrování
- QoS

Zabezpečení

- IPsec, OpenVPN
- RADIUS, SNMPv3
- Firewall, VLAN
- Digitálně podepsaný FW

Spolehlivost

- Odolná průmyslová konstrukce
- Schváleno pro energetické rozvodny
- -40 až +70 °C
- MTBF > 100 let



Technické parametry

	MIDGE3	MIDGE2
Frequency bands	One world wide model	3 models: EU, Asia, Americas
CPU	800 MHz Dual Core	600 MHz Single Core
Ethernet	4 × 1 Gb/s	4 × 100 Mb/s
SFP	Yes	No
Inputs / Outputs	2 × DI, 2 × DO, 1 × DiffDI	1 × DI, 1 × DO
Responsive web / Wifi management	Yes / Yes	No / No

Cellular interface		MIDGE3		
Frequency bands W	4G LTE (also 5G NSA) - Band 1 (2100 MHz), Band 2 (1900 MHz), Band 3 (1800 MHz), Band 4 (2100 MHz), Band 5 (850 MHz), Band 7 (2600 MHz), Band 8 (900 MHz), Band 12 (700 MHz), Band 13 (700 MHz), Band 18 (850 MHz), Band 19 (850 MHz), Band 20 (800 MHz), Band 26 (850 MHz), Band 28 (700 MHz), Band 38 (2600 MHz), Band 40 (2300 MHz), Band 41 (2500 MHz), Band 66 (2100 MHz)			
	3G UMTS/HSDPA/HSUPA - Band 1 (2100 MHz), Band 2 (1900 MHz), Band 3 (1800 MHz), Band 4 (2100 MHz), Band 5 (850 MHz), Band 6 (850 MHz), Band 8 (900 MHz), Band 19 (850 MHz)			
	2G GSM/GPRS/EDGE - GSM 850 MHz, E-GSM 900 MHz, DCS 1800 MHz, PCS 1900 MHz			
Cellular interface		MIDGE2		
Frequency bands E	4G LTE (also 5G NSA) - Band 20 (800 MHz), Band 5 (850 MHz), Band 8 (900 MHz), Band 3 (1800 MHz), Band 1 (2100 MHz), Band 7 (2600 MHz)			
	3G UMTS/HSDPA/HSUPA - Band 5 (850 MHz), Band 8 (900 MHz), Band 2 (1900 MHz), Band 1 (2100 MHz)			
	2G GSM/GPRS/EDGE - GSM 850 MHz, E-GSM 900 MHz, DCS 1800 MHz, PCS 1900 MHz			
Frequency bands P	4G LTE (also 5G NSA) - Band 28 (750 MHz), Band 5 (850 MHz), Band 8 (900 MHz), Band 3 (1800 MHz), Band 1 (2100 MHz), Band 7 (2600 MHz)			
	3G UMTS/HSDPA/HSUPA - Band 5 (850 MHz), Band 8 (900 MHz), Band 2 (1900 MHz), Band 1 (2100 MHz)			
	2G GSM/GPRS/EDGE - GSM 850 MHz, E-GSM 900 MHz, DCS 1800 MHz, PCS 1900 MHz			
Frequency bands A	4G LTE (also 5G NSA) - Band 17 (700 MHz), Band 5 (850 MHz), Band 4 (1700 MHz), Band 2 (1900 MHz), Band 7 (2600 MHz)			
	3G UMTS/HSDPA/HSUPA - Band 5 (850 MHz), Band 8 (900 MHz), Band 4 (AWS, i.e. 1700 MHz), Band 2 (1900 MHz), Band 1 (2100 MHz)			
	2G GSM/GPRS/EDGE - GSM 850 MHz, E-GSM 900 MHz, DCS 1800 MHz, PCS 1900 MHz			
Frequency bands U	3G UMTS/HSDPA/HSUPA - Band 5 (850 MHz), Band 8 (900 MHz), Band 2 (1900 MHz), Band 1 (2+B1:B21			
	2G GSM/GPRS/EDGE - GSM 850 MHz, E-GSM 900 MHz, DCS 1800 MHz, PCS 1900 MHz			
		MIDGE3	MIDGE2	
Data rates	Up to 150 Mb/s downlink; 50 Mb/s uplink			
SIM slot	2× Micro SIM			
Electrical				
Primary power	10 – 50 VDC		12 – 24 VDC, +/- 20%	
Power consumption	Average 7W			
Interfaces				
Ethernet	4× Ethernet 10/100/1000 Base-T, Auto MDX bridged or routed	4× RJ45	4× Ethernet 10/100 Base-T, Auto MDX bridged or routed	4× RJ45
SFP	1× 10/100/1000 Base or T/1000Base-SX or 1000Base-LX	1× SFP	No	
Serial	1× RS232/RS485 SW configurable 600 b/s – 1 Mb/s	Terminals (5 pins)	1× RS232 300 b/s – 115 kb/s	Terminals (3 pins)
USB	1× USB 3.0 / Host A		1× USB 2.0 / Host A	
Inputs/Outputs	1× HW alarm input, 1× HW alarm output, 1× Sleep input 2× DI, 2× DO, 1× DiffDI (when mPCle-COMS is not used)	Power connector RJ45	1× DI, 1× DO Terminals	
Antenna	2× SMA female – receiver diversity			
Optional Expansions				
mPCle slot	Cellular module or GPS or 2× RS232		Cellular module or GPS	
Proprietary extension slot	No		COMIO: RS232/RS485 + 1× DI, 1× DO	
Environmental				
IP Code (Ingress Protection)	IP40			
MTBF (Mean Time Between Failure)	> 900 000 hours (> 100 years)		> 220.000 hours (> 25 years)	
Operating temperature	–40 to +70 °C (–40 to +158 °F)			
Operating humidity	5 to 95% non-condensing			
Mechanical				
Casing	Metal			
Dimensions	132 H × 43 W × 110 D mm (5.20 × 1.69 × 4.33 in)		125 H × 45 W × 110 D mm (4.9 × 1.8 × 4.3 in)	
Weight	0.50 kg (1.1 lbs)		0.45 kg (1.0 lbs)	
Mounting	DIN rail, optionally: Flat-bracket or L-bracket		DIN rail, optionally: Flat-bracket	
Security				
Management	HTTPS (Web)		HTTPS (Web), SSH (CLI)	
Role-based access control (RBAC)	4 levels (Guest, Tech, SecTech, Admin)		2 levels (User, Admin)	
IPsec	Yes		Yes	
Firewall	Layer 2 – MAC, Layer 3 – IP, Layer 4 – TCP/UDP, SMS filter			
AAA protocol	RADIUS			
FW	Digitally signed			
HW tamper	Case opening evidence			
SW				
Fallback management	Yes			
Connection supervision	Yes			
Automatic connect recovery	Yes			
SMS management	Yes			
Routing	Static / Dynamic			
BGP/OSPF/BABEL	Yes/Yes/Yes		Yes/Yes/No	
QoS	Yes			
NAPT	Yes			
User protocols on Ethernet	Yes			
Serial SCADA protocols	DNP3, DF1, IEC101, Modbus RTU, PR2000, RDS, Siemens 3964(R), COMLI, SAIA S-bus, Mars-A, UNI, Async Link			
Serial to IP convertors	DNP3 / DNP3 TCP, Modbus RTU / Modbus TCP, Terminal servers			
VPN	IPsec, GRE		OpenVPN, IPsec, PPTP, GRE	
VRRP	No		Yes	
NTP	Client, Server			
SNMP	v1, v2c, v3			
Software Development Kit	No		Full featured	
Linux container	No		LXC	
Approvals	CE, FCC, ... Ask for others			

All information provided is preliminary and may change after the product is launched.

