Industrial VDSL LTE Cellular Router

Merlin 4700 Series

- **Versatile VDSL LTE cellular router for industrial applications**
  - Zero-touch large scale deployment
  - Multi-service support: LTE, GbE Ethernet, VDSL, Digital I/Os, RS-232/485
  - Industrial protocol gateway and conversion
  - Support for WeConnect

- **Best-in-class Cybersecurity**
  - Secure Boot ensures software is authentic and unmodified
  - Trusted Platform Module keeps cryptographic keys secure
  - Cybersecurity suite: 802.1X, IPSec encryption, stateful firewall

CE UKCA **EN 61000-6-2** Industrial Immunity **EN 61000-6-4** Industrial Emission **MCT-Pass** RED Radio equipment directive

The Merlin series of versatile cellular routers provide high speed data network connectivity for demanding industrial and smart grid applications. Coupled with the Zero Touch deployment software Activator, it provides cost-effective, reliable, and consistent onboarding of routers in large-scale projects.

This compact, rugged unit is suited to tight spaces. Its high MTBF and wide temperature range support maximum service life.

To achieve best-in-class cybersecurity, the Merlin series is equipped with a TPM (Trusted Platform Module) chip that keeps cryptographic keys secure. Secure Boot ensures that the unit boots using only software that is signed and trusted by manufacturer. A set of cybersecurity tools is available as standard including VPN and stateful Firewall support for data security and user authentication.

The built-in industrial protocol gateway enables several devices using different protocols to be accessed via a common protocol interface. The unit supports up to 6 digital inputs and 2 outputs for local control or monitoring. Support for more digital inputs and outputs is possible using external modules.

Specifications - Merlin 4700 Series

Dimensional drawing

Dimensions in millimetres (mm)
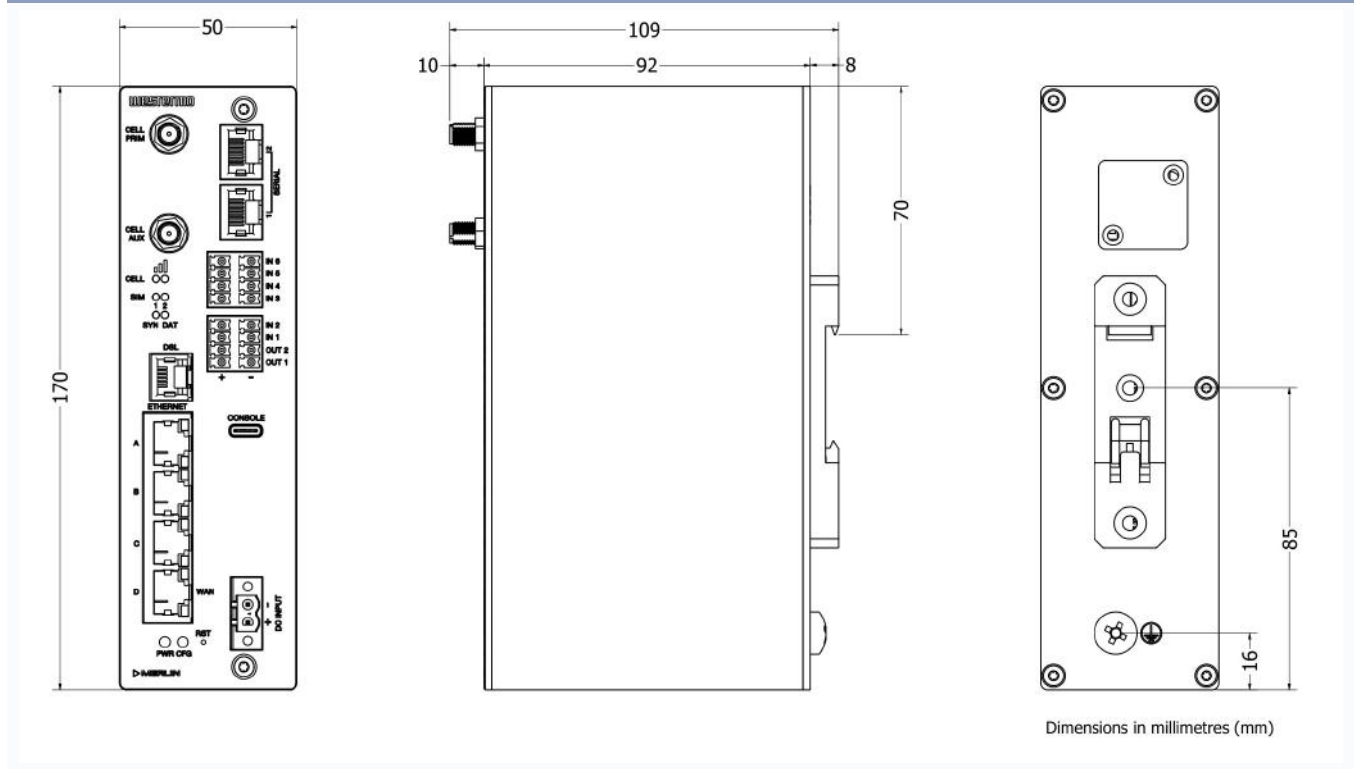
Housing

Dimensions (W x H x D)	50 x 170 x 102 mm
Housing	Full metal
Weight	760 g

Power parameters

Operating voltage	9.6 to 60 VDC
Power consumption	7 W
Hold up time	100 msec
Isolation	4.0 kVrms galvanic isolation on power port

Environmental

Temperature, operating	-20 to +65°C
Temperature, storage and transport	-30 to +70°C
Ingress protection	• IP30 as standard • IP31 when fitted with accessory part 432-00078
Humidity, operating	5-95% relative humidity

Approvals

EMC	• EN/IEC 61000-6-2, Immunity industrial environments • EN/IEC 61000-6-4, Emission industrial environments
Safety	• EN 62368-1, Safety Communication Technology
VDSL	• BT Openreach MCT

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Interface	
Ethernet	Ethernet 4 x 10/100/1000 Mbit/s, Ethernet TX, RJ45
DSL	VDSL2 / ADSL2+ Annex A, Annex B, RJ11
Mobile	LTE Cat 4
SIM cards	2 x Mini-SIM (2FF) card slots to rear, covered by metal plate
Antenna connectors	2 x SMA compatible connectors
Console	USB type-C. Router acts as device
Serial	Up to 2 serial ports, each software configurable for RS232/RS485
Digital inputs	Up to 6 digital inputs for detecting remote contact open/close
Digital outputs	Up to 2 relay contact outputs. 220 VDC, 2 Amp rating

MTBF hours	
Telcordia	1.500.000 hours

Software Features	
Management	Web interface (HTTPS), SMS management support, CLI via console, SSHv2, TFTP, SNMPv1/v2c/3, Secure Copy (SCP), Flexible alarm and event system, Port monitoring
Monitoring	Built-in diagnostics and packet tracing, event logging, SNMP Traps, Syslog
IP Routing	IPv4 and IPv6, DHCP, DynDNS, NAT, NAT Traversal, NTP Client, VLAN support, Packet filtering, Port forwarding, BFD, BGPv4, OSPF, RIP (v1 and v2), IPSec/L2TP/GRE, DMVPN, SNMP v1/v2/v3, TLS 1.2, 802.1x authentication, IEC104, QoS, VRRP, VRF
Firewall	Stateful inspection firewall
IPSec VPN	IKE Version 2, X.509 certificates, ECC, SHA2_512 support, AES_CBC (256), PFS, SCEP, DH_8192
SCADA Protocol Conversion	Control of I/O from SCADA master, IEC 60870-5-104, IEC 60870-5-101, IEC 61850, Modbus RTU, Modbus TCP, Modbus RTU to TCP conversion, DNP3, Serial to Ethernet, MQTT
RTU Functionality	Monitoring and Control of I/O from SCADA master, Protocol conversion, Basic PLC functions

Mobile Frequency Bands					
Region	2G Bands	3G Bands	LTE Bands	LTE Category	GNSS
Global	-	B1, B2, B4, B5,B6, B8, B19	B1, B2, B3, B4, B5, B7, B8, B12, B13, B18, B19, B20, B25, B26, B28, B38, B39, B40, B41	4	No

Warranty	
Validity	5 years

Art.no.	Product	Ethernet	Serial	VDSL2/ ADSL2+	USB Console	Digital Inputs	Digital Outputs	Region
3460-47099	Merlin-4708-V-T4G-S2-DI6-DO2-LV-QFR	4	2	1	Yes	6	2	Global

Accessories	
3125-0150	PS-60, power supply. DIN-mounted. Input voltage: 100 to 240 VAC, 50 to 60 Hz or 110 to 250 VDC
432-00078	End Cap for Merlin 4700 Series and Merlin 4600 Series routers
1211-2210	Westermo auxiliary serial adapter cable RJ-45/D-sub, 50cm length
Note: antennas not included	

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