

# A Name for Industrial IoT Solutions

PROSCEND is committed to enhancing machine-to-machine connectivity and enabling mission-critical communications for Industrial IoT and Smart Cities. Founded in 1999, we offer a comprehensive portfolio of wired and wireless network solutions for versatile applications and harsh environments in the global marketplace. An intelligent cloud-based solution with a wide range of industrial-grade LTE cellular routers and an integrated service management system (ISMS) is designed for utilizing remote management and optimizing condition monitoring. We actively strive for delivering reliable products, excellent solutions, and trusted supports to our worldwide partners.

## An Intelligent Cloud-based Solution Enables Secure IIoT Connectivity

Industrial 4G<sup>LTE</sup> / WiFi Cellular Routers



+886-3-5639000









sales@proscend.com

+886-3-5633830

www.proscend.com

2F, No. 36, Industry E. Rd. IV, Hsinchu Science Park, Hsinchu 30077, Taiwan, R.O.C.



	Compact		Hardened				Rugged (Outdoor IP67)	Extreme (Outdoor IP68)						
Model Name	M330	M330-W	M301	M301-G / M301-TG	M301-GW	M301-TPG	M360-P / M360-PW	M301-TXG						
Industrial 4G LTE Cellular Router														
Cellular Technology														
LTE Interface (4G, 3G, 2G)	<ul style="list-style-type: none"> <li>4G : FDD/TDD LTE, LTE Cat4</li> <li>3G : WCDMA</li> <li>2G : GSM/EDGE</li> </ul>	<ul style="list-style-type: none"> <li>4G : FDD/TDD LTE, LTE Cat4</li> <li>3G : WCDMA</li> <li>2G : GSM/EDGE</li> </ul>	<ul style="list-style-type: none"> <li>4G : FDD/TDD LTE, LTE Cat4</li> <li>3G : WCDMA</li> <li>2G : GSM/EDGE</li> </ul>	<ul style="list-style-type: none"> <li>4G : FDD/TDD LTE, LTE Cat4</li> <li>3G : WCDMA</li> <li>2G : GSM/EDGE</li> </ul>	<ul style="list-style-type: none"> <li>4G : FDD/TDD LTE, LTE Cat4</li> <li>3G : WCDMA</li> <li>2G : GSM/EDGE</li> </ul>	<ul style="list-style-type: none"> <li>4G : FDD/TDD LTE, LTE Cat4</li> <li>3G : WCDMA</li> <li>2G : GSM/EDGE</li> </ul>	<ul style="list-style-type: none"> <li>4G : FDD/TDD LTE, LTE Cat4</li> <li>3G : WCDMA</li> <li>2G : GSM/EDGE</li> </ul>	<ul style="list-style-type: none"> <li>4G : FDD/TDD LTE, LTE Cat4</li> <li>3G : WCDMA</li> <li>2G : GSM/EDGE</li> </ul>						
Antenna Connector	3 x SMA (MAIN + AUX + GPS)	3 x SMA (MAIN + AUX + GPS)	2 x SMA (MAIN + AUX)	3 x SMA (MAIN + AUX + GPS)	3 x SMA (MAIN + AUX + GPS)	3 x SMA (MAIN + AUX + GPS)	2 x Embedded high gain antenna	3 x SMA (MAIN + AUX + GPS)						
Communication Interface														
Ethernet	1 x 10/100 Mbps LAN 1 x 10/100 Mbps WAN	1 x 10/100 Mbps LAN 1 x 10/100 Mbps WAN	3 x 10/100 Mbps LANs 1 x 10/100 Mbps WAN	3 x 10/100 Mbps LANs 1 x 10/100 Mbps WAN	3 x 10/100 Mbps LANs 1 x 10/100 Mbps WAN	3 x 10/100 Mbps LANs 1 x 10/100 Mbps WAN	1 x 10/100/1000 Mbps LAN with PoE	1 x 10/100 Mbps LAN 1 x 10/100 Mbps WAN						
PoE	N/A	N/A	N/A	N/A	N/A	1 x IEEE 802.3at/af PoE P.D.	1 x Passive PoE	N/A						
SIM Card	1 (Micro SIM)	1 (Micro SIM)	2	2	2	2	1 (Micro SIM)	2						
Serial	1 x RS232 (TXD/RXD/GND)	1 x RS232 (TXD/RXD/GND)	1 x RS485 (D+/D-) 1 x RS232 (TXD/RXD/GND)	1 x RS485 (D+/D-) 1 x RS232 (TXD/RXD/GND)	1 x RS485 (D+/D-) 1 x RS232 (TXD/RXD/GND)	1 x RS485 (D+/D-) 1 x RS232 (TXD/RXD/GND)	N/A	1 x RS485 (D+/D-) 1 x RS232 (TXD/RXD/GND)						
Console Port	RS232	RS232	RS232	RS232	RS232	RS232	N/A	RS232						
I/O	1 x DI, 1 x DO (Non-Isolated)	1 x DI, 1 x DO (Non-Isolated)	2 x DI, 1 x DO (Alarm +/-)	2 x DI, 1 x DO (Alarm +/-)	2 x DI, 1 x DO (Alarm +/-)	2 x DI, 1 x DO (Alarm +/-)	N/A	2 x DI, 1 x DO (Alarm +/-)						
GPS	1	1	N/A	1	1	1	N/A	1						
WiFi Technology														
WiFi Interface	N/A	<ul style="list-style-type: none"> <li>Standards: IEEE 802.11 b/g/n</li> <li>2.4 GHz WiFi band</li> <li>Wireless Operation Rate: 2T2R 300 Mbps</li> <li>Wireless Security: WPA2-PSK(AES)</li> <li>Antenna Connector: 2 x RP-SMA</li> </ul>	N/A	N/A	<ul style="list-style-type: none"> <li>Standards: IEEE 802.11 b/g/n</li> <li>2.4 GHz WiFi band</li> <li>Wireless Operation Rate: 1T1R 150 Mbps</li> <li>Wireless Security: WPA-PSK(AES), WPA2-PSK(AES)</li> <li>Antenna Connector: 1 x RP-SMA</li> </ul>	N/A	<ul style="list-style-type: none"> <li>Standards: IEEE 802.11 b/g/n</li> <li>2.4 GHz WiFi band</li> <li>Wireless Operation Rate: 2T2R 300 Mbps</li> <li>Wireless Security: WPA-PSK(AES), WPA2-PSK(AES)</li> </ul>	N/A						
Temperature & Power														
Operating Temperature	-30 to +70 °C	-30 to +70 °C	-20 to +70 °C	<ul style="list-style-type: none"> <li>M301-G: -20 to +70 °C</li> <li>M301-TG: -40 to +75 °C</li> </ul>	-20 to +70 °C	-40 to +75 °C	-20 to +60 °C	-40 to +75 °C						
Input Voltage	8 ~ 48 VDC	8 ~ 48 VDC	10~32 VDC	10~32 VDC	10~32 VDC	10~32 VDC	+15V / 1A DC	10~32 VDC						
Power Consumption	< 7W	< 7W	< 7W	< 7W	< 7W	< 7W	< 12W	< 7W						
Mechanical Construction														
Dimensions (W x H x D)	91 x 28 x 74 mm	91 x 28 x 74 mm	60 x 110 x 106 mm	60 x 110 x 106 mm	60 x 110 x 106 mm	60 x 110 x 106 mm	170 x 225 x 89 mm	259 x 250 x 75 mm						
Weight	250 g (0.5512 lb)	250 g (0.5512 lb)	452 g (0.9965 lb)	452 g (0.9965 lb)	452 g (0.9965 lb)	452 g (0.9965 lb)	433 g (0.9546 lb)	2250 g (4.9604 lb)						
Installation	DIN Rail (Default) Wall Mount (Optional)	DIN Rail (Default) Wall Mount (Optional)	DIN Rail (Default) Wall Mount (Optional)	DIN Rail (Default) Wall Mount (Optional)	DIN Rail (Default) Wall Mount (Optional)	DIN Rail (Default) Wall Mount (Optional)	Pole Mount/Wall Mount (Optional)	Pole Mount/Wall Mount (Optional)						
Enclosure	Metal Case	Metal Case	IP40 Aluminum Case	IP40 Aluminum Case	IP40 Aluminum Case	IP40 Aluminum Case	IP67 Protection	IP68 Protection						
Software Specifications	<b>Network Protocols:</b> IPv4, IPv6, IPv4/IPv6 dual stack, DHCP server ★ and client, ★ PPPoE, ★ Static IP, SNTP, ★ GPS sync time, DNS Proxy, ▲ Modbus, ★ VRRP, ★ OSPF, ★ Message Queue Telemetry Transport (MQTT Broker), BGP, ★ Flow (Modbus master ↔ MQTT client)		<b>Routing/Firewall:</b> NAT, Virtual Server, DMZ, MAC Filter, URL Filter, IP Filter, VLAN, Static Routing and RIP-1/2, IPS, Policy Route <b>Dual APN: (for M330 series/M360-P series)</b> • Bridge Only, Router Only • Bridge+Router, Dual Router		<b>VPN Security:</b> • OpenVPN • IPSec (3DES, AES128, AES196, AES256, MD5, SHA-1, SHA256) • GRE • PPTP • L2TP		<b>Wireless Connectivity:</b> • Failover/ Roaming over/ Back up (for Dual SIM version) • Two SIM data usage control (for Dual SIM version) • Seamless multi WAN connections switch (for multi WAN version) • WAN WiFi Client (for M330-W)		<b>Alarm:</b> (for DI/DO version), SMS, VPN/WAN Disconnect, SNMP Trap, E-mail, TR069 <b>Others:</b> DDNS, QoS, ▲ Virtual COM, ★ UPnP, SMS Action, ★ GPS Track Drawing, ★ GPS TCP Push		<b>Management Software</b> • Web GUI for remote and local management, CLI • Dual Image firmware upgrade by Web GUI • Syslog monitor • SNMP, TR069 • FOTA (Firmware over the Air) • Remote management via SSH v2, HTTPS		• Local management via Telnet, SSH v2, HTTP/HTTPS • Network Management System: ISMS (Integrated Service Management System)	
LTE Bands/Frequencies (MHz)	<b>(1) EU Model: (Region: Europe, Africa, Middle East, Korea, Thailand, India)</b> • FDD LTE: B1(2100), B3(1800), B5(850), B7(2600), B8(900), B20(800) • TDD LTE: B38(2600), B40(2300), B41(2500) • WCDMA: B1(2100), B5(850), B8(900) • GSM/EDGE: B3(1800), B8(900) <b>(2) US Model: (Region: North America)</b> • FDD LTE: B2(1900), B4(1700), B12(700) • WCDMA: B1(2100), B5(850), B8(900)			<b>(3) AU Model: (Region: Australia, New Zealand, South Africa, Taiwan)</b> • FDD LTE: B1(2100), B2(1900), B3(1800), B4(1700), B5(850), B7(2600), B8(900), B28(700) • TDD LTE: B40(2300) • WCDMA: B1(2100), B2(1900), B5(850), B8(900) • GSM/EDGE: B2(1900), B3(1800), B5(850), B8(900) <b>(4) JP Model: (Region: Japan)</b> • FDD LTE: B1(2100), B3(1800), B8(900), B18(850), B19(850), B26(850) • TDD LTE: B41(2500) • WCDMA: B1(2100), B6(850), B8(900), B19(850)			★ Not to support for M360-P series. ▲ Not to support for M330 series and M360-P series. ※ All specifications are subject to change without prior notice.							
							