

## Features

- **Industrial Flameproof Transceiver**
  - Aus IECEx TSA07.0016X
  - MSHA Approval Pending
  - Integral 2.4GHz/5.0GHz 802.11 a/b/g Transceiver
  - Ethernet Interface With PoE 802.11af
  - High Speed Data Rate up to 108Mbps
  - High Output Power up to 28 dBm
  - Minimum 200m line-of-sight range
- **Embedded Industrial Microcontroller**
  - 400Mips ARM Processor
  - Separate embedded MMU
- **IEEE wireless standard compliance**
  - IEEE802.11a/b/g and WECA
  - Worldwide Licence Free Bands
  - IEEE802.11i Security with WPA, WPA2 and WEP encryption
  - IEEE802.11d Country Regulatory Support
  - IEEE802.11e Quality of service enhancements
  - IEEE802.11h Spectrum and transmit power management
  - IEEE802.11j Security and public safety band support
- **Operates Minus 10°C to +60°C**
  - All industrial components
- **Heavy Duty Enclosure**
  - Fully Self Contained IP65 Rating
  - Stainless Steel Engraved Facia
  - Integral Teflon Radome & Antenna
  - Rugged Construction

## Description

The L0MT-IEEE Series Flameproof High speed transceiver is an AS4240 compliant device designed for the most rigorous of environments. Fully waterproof and impact resistant, the L0MT Series of high speed transceivers can be used for a variety of industrial remote control/data communication applications where a safety critical interface is required. L0MT-IEEE is fully interoperable with IEEE802.11 certified equipment.



## Obelix

Flameproof  
High Speed IEEE802.11  
Transceiver

Type L0MT



## Pempek Systems

Australia HQ  
Unit 3 / 13 Hoyle Ave  
Castle Hill NSW 2154  
Phone +(612) 9634 2540  
Fax +(612) 9894 0379

USA  
640 Bizzell Drive  
Lexington KY 40510  
Phone +(859) 252 4439  
Fax +(859) 252 4641

Web [www.pempek.com.au](http://www.pempek.com.au)



## Typical Applications

- Continuous Bolter/Miners
- Continuous Haulage
- Mobile Bolters
- Mobile Roof Supports
- Remote Control Scoops
- Remote Control Loaders
- Remote Control Feeder/Breakers
- Any intrinsically safe industrial remote control application

## Features

### Virtual LAN

- Access Point, Client Bridge, or Wireless Distribution System (WDS) configuration
- Open client mode
- Output power control
- Secure client mode with WEP, WPA, WPA2 PSK and enterprise (dynamic key) with 802.1x supplicant
- Half and quarter rate channel support

### Wireless Security

- WPA/WPA2 personal and enterprise (with dynamic key from remote RADIUS server) TKIP, AES (CCMP)
- Secure WDS mode, WDS inter access point traffic is secured by WPA/WPA2 in personal or enterprise modes
- Static and dynamic WEP
- 802.1x with EAP-MD5, EAP-TLS, EAP-PEAP, EAP-TTLS, EAP-SIM, EAP-LEAP
- Layer 2 intra access point client isolation
- SSID broadcasting suppression
- Static wireless Access Control List, MAC address filtering

### Networking

- LAN/WAN programmable network interface
- VLAN tagging, up to 4096 VLAN tags, VLAN pass-through
- Bridging, spanning tree protocol (STP)
- IP routing DHCP server, client, relay
- DNS relay/proxy
- NTP and internal clock support
- Per VLAN, Virtual AP (MBSSID), IP tunnel or physical interface networking settings
- 802.1x authenticator
- 802.1x supplicant
- MAC filtering per interface
- IP filtering per interface
- Stateful inspection firewall
- Digital certificates for device identification
- Diffserv with 802.1p mapping for WMM queues



## Public Access

- WEB login redirection with HTTP proxy support and multiple/selective authentication methods PAP/CHAP/MSCHAP/MSCHAPv2)
- Static and dynamic white and black lists
- RADIUS client has support for multiple authentication and accounting RADIUS servers
- RADIUS accounting client supports fail over and backup modes
- Client IP connection logging to remote SYSLOG server

## Management

- WEB management via HTTPS
- Command line management via SSH and serial console
- Configuration file upload via HTTPS and FTP
- RCMS configuration, firmware management and status reporting agent with NAT/Firewall traversal functionality
- Subnet or VLAN for management traffic
- Management access control list
- Administrator authentication via RADIUS or TACACS
- SNMP V1/2 /3
- SNMP Traps
- Supported MIB's: 802.11, 802.1x, MIBII, RADIUS authentication, RADIUS accounting
- SYSLOG support including remote servers and debug levels

## Ordering Information

Part Number	Description
L0MT0401	High Speed Transceiver 2.4GHz / 56Mbps 28dBm output
L0MT0402	High Speed Transceiver 2.4GHz / 108Mbps 25dBm output
L0MT0403	High Speed Transceiver 5.0GHz / 56Mbps 22dBm output

## Wiring Specification

Connector 19mm Ex id Gland		
PIN	Description	Signal
1	Ethernet TX+	Communications
2	Ethernet TX-	Communications
3	Ethernet RX+	Communications
4	N/A	N/A
5	N/A	N/A
6	Ethernet RX-	Communications
7	N/A	N/A
8	N/A	N/A



## Electrical Characteristics

Supply	
Voltage	12-20VDC or 48VDC (PoE)
Wattage <sup>MIN</sup>	3W
Wattage <sup>MAX</sup>	5W

Radio Module	
Frequency	2.4GHz / 5.8GHz
Power	Programmable up to 28dBm (802.11g), 22dBm (802.11a)
Channels	14 (5MHz Spacing)
Modulation	OFDM (802.11a/g) DSSS (802.11b)
Range <sup>MIN</sup>	200 metres "Line of Sight"
Range <sup>MAX</sup>	500 metres "Line of Sight"
Bandwidth	Up to 108Mbps (802.11g), 54Mbps (802.11a), 11Mbps (802.11b)
Sensitivity 802.11a	-90dBm @ 6Mbps, -72dBm @ 54Mbps
Sensitivity 802.11b	-95dBm @ 1Mbps, -90dBm @ 11Mbps
Sensitivity 802.11g	-91dBm @ 6Mbps, -72dBm @ 54Mbps
Antenna	Internal Passive
Classification	Transceiver

Communications	
Media	Ethernet
Port	1x 10/100 RJ-45 LAN/WAN
Throughput	Up to 200Mbps

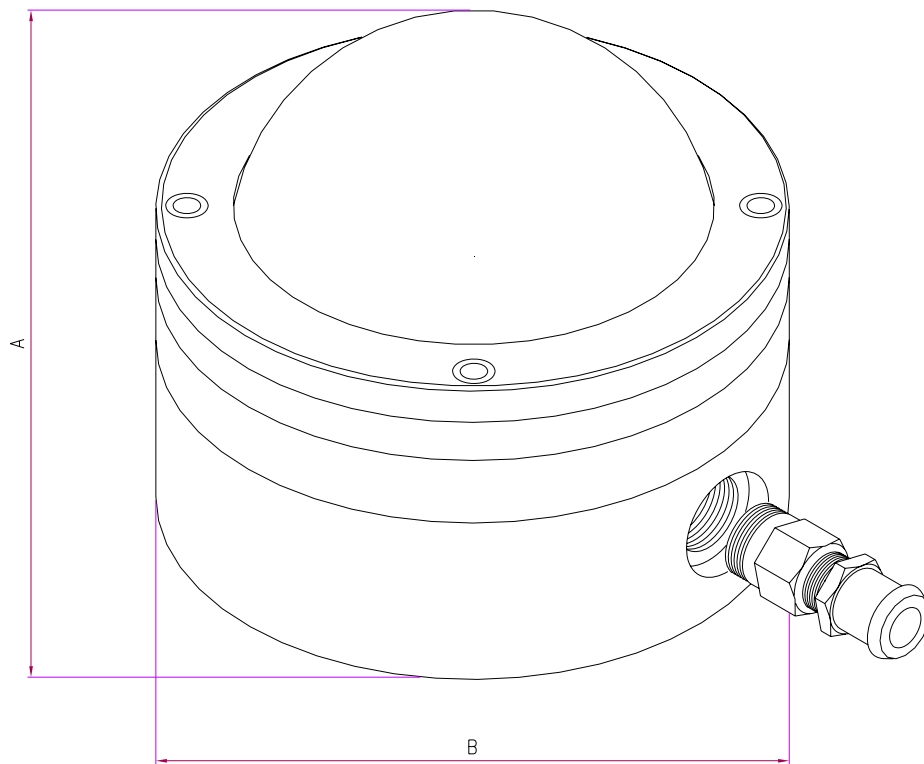
Environmental	
Operating Temperature	Minus 10°C to +60°C
IP Rating	IP65
Humidity	T.B.A.
MTBF	10,000 hours*

Certification	
World	IECEX TSA 07.0016X Ex d 1/IIB T6
USA	Pending

\* Figure cited on usage rate equalling 16 hours per day, 6 days per week, 52 weeks per year where failures are due to manufacturing.



## Mechanical Characteristics



Dimension	Measurement	Description
A	190	Height
B	185	Diameter

### Notes

- All dimensions are in millimetres.

### Material

- Enclosure is free machining brass.
- Enclosure retainer is stainless steel.
- Radome is Teflon.

### Fasteners

- M6 x 50mm x 4

### Mass

- 7.5kg (16.5lb)