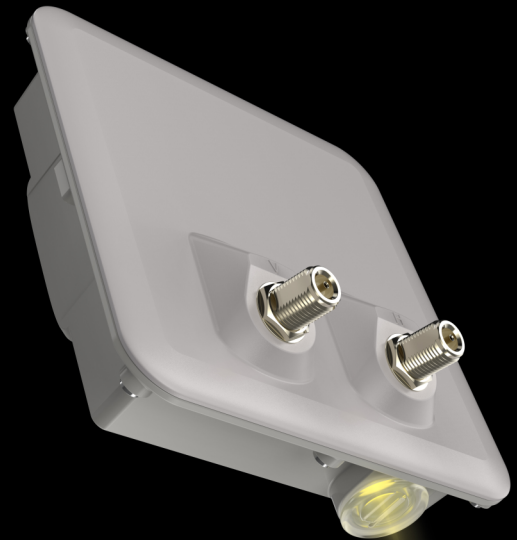


# ASTRADRIVE

## E6-STE

PRODUCT DATASHEET

**The DRIVE E6-STE subscriber terminal delivers carrier-grade wireless connectivity with throughput up to 670 Mbps at distances over 10 km.**



E6-STE supports hardware and software modifications, new algorithms with DRIVE network technology for aggregation and quick switching of the moving objects passing with seamless roaming at speeds up to 400 km/h. Purpose-built for mission-critical applications in rail, mining and port operations, this rugged terminal ensures continuous communication while withstanding extreme conditions, heavy vibration and temperatures from -55°C to +60°C.

**Net throughput**

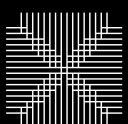
Up to 670 Mbps in 80 MHz

**Transmit power**

Up to 25 dBm

**Recommended distances**

10+ km



**Astrawireless**

# TECHNICAL SPECIFICATION

|                                  |  |
|----------------------------------|--|
| Net throughput                   | up to 670 Mbps in 80 Mhz<br>up to 370 Mbps in 40 Mhz<br>up to 160 Mbps in 20 Mhz |
| Packet performance               | 180 000 pps  |
| Transmit power                   | up to 25 dBm   |
| Receiver sensitivity             | down to -91 dBm  |
| Antenna gain                     | 2xN-type connectors  |
| Frequency range                  | 4900-6425 Mhz  |
| Channel width                    | 20, 40, 80 MHz   |
| Center frequency adjustment step | 1 MHz  |
| Power consumption                | up to 15 W   |
| Recommended distances            | 10+ km   |



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## TECHNICAL SPECIFICATION

|                           |  |
|---------------------------|--|
| Duplex scheme             | TDD  |
| Radio technology          | MIMO 2x2 (OFDM 64/128)   |
| Modulation coding schemes | from BPSK 1/2 to QAM256 5/6  |
| Wired Interfaces          | 1x GigabitEthernet RJ-45   |
| Power options             | via Eth0:<br>- 90-240 VAC ~ @ 50/60 Hz<br>+-43.56 VDC<br>- Passive PoE or 802.3at  |
| GPS module                | not available  |
| Outdoor Unit (ODU)        | 180x190x86 mm, 1.2 kg  |
| Packing List              | Outdoor unit E6-STE DRIVE:         1<br>Power Supply IDU-CPE-G(24W):      1<br>Power Cord:                               1<br>Cable Gland for RJ-45:                1<br>Standard RJ-45 connector:            1<br>Shielded RJ-45 connector:            1<br>RJ-45 Plug Cap:                         1<br>MONT-KIT-85 Mounting kit:            1<br>Quick Start Guide:                     1 |



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# RADIO FEATURES



## Adaptive TDMA air protocol

- Dynamic and fixed air frame duration
- Subscriber activity aware scheduling
- Permanent channel testing



- Voice/RTP Aware Superpacketting



- Channel Time Adjustment
- Spectrum Analyzer mode
- Channel testing tools



## Air frame Configurable

- From 1 to 10 ms
- Uplink / Downlink ratio Configurable from 50:50 to 92:8, in any direction



- DFS / Radar detection / Instant DFS



- Automatic Bitrate Control
- Automatic Transmit Power Control
- Automatic Distance Measurement

# NETWORKING FEATURES



## Switching

- Full-fledged 2nd layer switch
- VLAN 802.1Q, 802.1ad
- IGMP Snooping
- MAC/IP filtering, L2/L3 Firewall
- STP, RSTP support



## Routing

- ARP protocol support
- NAT (multipool, H.323-aware)
- DHCP client/server/relay
- ODR routing protocol
- RIPv2 / OSPFv2 /static routing
- Ethernet-over-IP and IP-over-IP tunnels



## Quality of Service

- IEEE 802.1p, IP TOS/DiffServ support
- 17 priority queues
- Full voice support
- Auto priority of multicast
- Traffic limiting (absolute, relative)



## Own network infrastructure

- Proprietary MINT network protocol
- Pseudo-radio interface



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# MANAGEMENT AND SECURITY



## Management features

- Various Management Protocols: HTTP, HTTPS, SSH, Telnet, SNMP v1/2c/3 (MIB-II and proprietary MIBs)
- Graphical User Interface
- Antenna alignment tool
- Automatic software update
- Online monitoring with proprietary EMS NEXT



## Safety & Security

- Storm/flood protection
- Password protection
- Secure CLI access via SSH protocol
- AES-128/256 (pending)



## LED Indication

- Power status, wired link status, signal level

# STANDARD COMPLIANCE



## Radio

- ETSI EN 301 893 v.2.1.1
- ETSI EN 302 502 v.2.1.1
- FCC part 15.407



## Safety

- EN 62368-1:2014+A11:2017
- UL 62368-1:2014
- EN 62311:2008



## RoHS3

- EN IEC 63000:2018



## EMC

- ETSI EN 301 489-1 v.2.1.1
- ETSI EN 301 489-17 v.3.1.1
- FCC Part 15 Class B



## Lightning protection

- IEC 61000-4-2:  
+/-4kV (contact discharge),  
+/-8kV (air discharge)
- IEC 61000-4-4:  
+/-0.5kV IEC 61000-4-5:  
+/-1kV (line-to-ground),  
+/-0.5kV (line-to-line)

# OPERATION OPTIONS



## Outdoor Unit conditions

- -40..+60°C, can be extended to -55..+60°C (models with "t" index)
- 100% humidity, condensing
- Dust and water protection: IP66, IP67
- Wind load: 160 km/h operational; 200 km/h survival



## Indoor Unit conditions

- 0..+40°C
  - 95% humidity, non-condensing
- 
- Cooling: fanless design corrugated aluminium