



Elte-MT

RDL-3000 Series Solutions
More flexible than fiber

AT A GLANCE

Ruggedized industrial application-defined radio

Design-optimized for machine-to-machine (M2M) communications

Die-cast aluminum and stainless steel construction

-40 °C to +60°C (-65°C to +75°C peak) range using dynamic and radiant thermal dissipation (no moving parts)

High throughput / low latency / extended range / non line-of-sight

Dynamic uplink/downlink rates (up to 80% uplink)

Feature-rich Quality of Service profiles

Military-grade security

Strong interference mitigation

Low power consumption suitable for solar power applications

Highest MTBF in the industry

POWERFUL. VERSATILE. RELIABLE.

Datasheet

Rugged High-Speed Radio Terminal

Purpose built for the tough industrial marketplace, the Elte-MT (pronounced élite-MT) radio terminal easily solves your challenges to provide reliable robust high speed data connectivity to equipment and personnel in isolated and hard to access locations and harsh environments.

Elte-MT is your smart alternative when considering fiber, but need to deploy rapidly or in areas where no fiber exists. With superior physical security, simple setup and connection, rock-solid reliability, and scalable performance options, the Elte provides flexibility not available with fiber.

Patent-pending technology in the Elte-MT terminal scales to meet all performance specifications for any combination of in-field instrumentation, automation and process control, SCADA devices, video surveillance, Wi-Fi, telephony and backhaul.

Once installed, the Elte-MT provides full over-the-air (OTA) management, software upgrades and functional upgrades using license key options that removes the need to physically access the terminal.

Powerful Features & Benefits

The industrial-hardened Elte-MT design features a robust premium die-cast aluminum and Kevlar® casing that withstands the harshest environments and highest temperatures while providing continuous reliable service to mission critical systems. The stainless steel protected Ethernet (POE) port interfaces easily to standard components including Wi-Fi and serial devices.

Powerful hardware accelerators ensure all data is processed instantly and queued for immediate transmission at speeds of up to 120 Mbps OTA with wire-line latency. Deploy up to 120 km (75 mi) with a single link over the rugged terrain of deserts, water and mountains.

Patented advanced proprietary interference mitigation monitors the signal-to-noise ratio (SNR) and channel hops to maintain optimum performance in noisy and non line-of-sight conditions.

The Quality of Service (QoS) profiles actively manage traffic priority and flow to dependably deliver simultaneous streams of data, voice and video traffic. The dynamic scheduler adjusts instantly from heavy downlink use (i.e. GIS maps) to uplink-weighted applications (i.e. HD video). All OTA data can be secured with military grade encryption and authentication.

Product Complements

The Elte-MT is fully OTA compatible with Elte-GT and RDL-3000 base stations and can be deployed in mixed use scenarios with AN-80i and RDL-3000 series subscribers.

Redline's ClearView NMS network management application provides full element and provisioning management and software upgrades.

The Elte product family is supplemented by full line of hardened industrial peripherals.

SERVICES & SUPPORT

Redline Professional Services are designed especially to assist customers to identify and address the complex tasks of designing, deploying and operating wireless networking projects. Available services include cell planning, managing deployment activities, maintenance, and training.

Redline is widely recognized as having one of best support programs in the wireless industry — delivering responsive customer and solution support everywhere Redline's products are deployed.

SOFTWARE KEY OPTIONS

- MetroLINK
- SmartLINK
- SecureLINK
- VideoLINK

ABOUT REDLINE COMMUNICATIONS

Redline Communications (www.rdlcom.com) is a leading provider of specialized broadband wireless systems used to cost-effectively deploy distributed applications and services. Redline systems are used by local and state governments to quickly and easily deploy or extend their public safety networks; by oil and gas companies to connect their digital oil fields; by service providers and enterprises to bring dedicated Internet access to business users; and by the military to rapidly deploy secure networks. For more than 10 years, Redline has been delivering powerful, versatile and reliable wireless solutions through certified partners in the Americas, the Middle East, and Africa.

TECHNICAL SPECIFICATIONS

System Capability	LOS, optical-LOS, and non-LOS
Wireless Transmission	OFDM (orthogonal frequency-division multiplexing) MIMO 2x2
RF Band	4.940-5.925 GHz TDD ¹ 3.300-3.800 GHz TDD ¹
Channel Size	3.5, 7, 14 MHz ^{1,2} / 5, 10, 20 MHz ¹ (software selectable)
Data Rate	Up to 120 Mbps UBR ² Up to 100 Mbps Ethernet rate ²
Latency	<1 ms typical
Processing Speed	220,000 Packets Per Second (PPS)
Maximum Tx Power	+25 dBm / 0.3W (region specific)
PoE Cable	Up to 91 m (300 ft)
Maximum Range	120+ km (75+ mi)
Antenna	Integrated MIMO antenna or RF connectors for external antenna system
Network Attributes	Transparent bridge, automatic link distance ranging, DHCP pass-through, 802.1Q VLAN
Modulation MAC	BPSK to 256 ² QAM TDMA, Dynamic ARQ (per-link), Dynamic adaptive modulation (per-link), Dynamic and fixed TDD (per link)
QoS	802.1p/Q, CIR, PIR support Multiple service flows per radio terminal Dynamic Spectrum Access & Management
Over the Air Encryption	AES-128 and AES-256
Network Connection	10/100/1000 ² Ethernet (RJ-45) Stainless steel connector
Node Authentication	X.509 certificates
Management	ClearView NMS, HTTP (Web) interface, SNMP v2 / v3, Telnet, HTTPS (SSL), SSH
Operating Temperature	Standard: -40 °C to +65 °C [-40 °F to +150 °F] Peak: -65 °C to +75 °C [-85 °F to +165 °F]
Humidity	100% humidity, condensing
Enclosure	IP67 rated die cast A360 aluminum / Kevlar® with polycarbonate radome
Power	Standard IEEE 802.3at
Compliance²	Safety: IEC, EN, and UL/CSA 60950 EMC: EN 301 489-1, EN 301 489-17 ATEX: Zone 1 & 2 ² CSA: Class 1 Div 2 ² 5.8 GHz: IC RSS-210, FCC Part 15, ETSI EN 302 502 5.4 GHz: IC RSS-210, FCC Part 15, ETSI EN 301 893 4.9 GHz: IC RSS-111, FCC Part 90 3.3-3.8: GHz ETSI EN 302 326-2 ² 3.65 GHz: IC RSS-192/197, FCC Part 15/90 ²
Dimensions/ Weight	20 cm x 20 cm x 6.35 cm (8 in x 8 in x 2.5 in) 2 Kg (4.5 lbs)

¹ Availability restricted by regional regulations ² Pending

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