

# TELiG E1500

The **TELiG E1500** by Council Rock is a powerful computing platform supporting the latest wireless communication standards.

This award winning platform allows full integration of all middle mile industrial applications onto a single device in a secure, reliable manner.

Anterix® **ACTIVE**

**TELiG E1500** utilizes an ARM Cortex A9 processor, and leverages LTE as its primary wireless communication technology. Optional features include GPS enabled asset tracking and timing, and WiFi. The integration of these technologies onto a powerful, modular computing platform ensures investments are future-proof.

The TELiG E1500 is an optimal UE solution for industrial grade smart private networks designed for Smart Grids, Smart Cities, Digital Oil Fields, and Smart Campuses. The TELiG's feature rich software platform, powerful processing capabilities and ample memory combine to provide the tools needed for developers to create next generation networks with distributed intelligence.

## FEATURES

- CR** LTE support for all 3GPP bands
- CR** Dual serial RS232 and RS485
- CR** Modbus and DNP3 onboard, with other industrial protocols available
- CR** Easily embedded into distribution automation control cabinets
- CR** Edge computing and 3rd party app support
- CR** Modular design allows multiple configuration options and technology evolution
- CR** Uses "Zero Touch" self-provisioning for easy installation
- CR** GPS and gyroscope for asset tracking and damage alarms (optional)
- CR** Configurable ethernet ports 10/100/1000 LAN/WAN
- CR** IEEE1613, and C1/D2 certifications
- CR** Certified: OnGo, FirstNet® and IP54 certifications, AT&T, Verizon, UScellular™ and 900 MHz (Anterix Spectrum)



- Modular design allows for multiple configuration options, network diversity, and technology evolution
- Deploy on the Public Carrier of your choice today. Seamlessly migrate to private network tomorrow
- Rules based dynamic multi traffic routing across (up to 4) different networks based on performance requirements
- Multi LTE radios (up to 3) always on always connected capability in support of ultra high reliability applications



## TELiGE1500

### COMPUTING SPECIFICATIONS

- Freescale™ ARM® Cortex™ -A9 Single, Dual or Quad core SoC Processor
- Up to 4GBytes DDR3 SDRAM Memory
- Up to 32GBytes eMMC Memory
- Serial Configuration EEPROM
- Open Source Linux OS: Open WRT customized for DA and support for Python
- Mini PCIe and m.2 expansion card slots
- Programmable GPIOs

### COMMUNICATIONS FEATURES

- LTE in all 3GPP Bands (FDD & TDD), up to Cat 12 DL, Cat 13 UL
- Optional GPS and Gyroscope
- Optional WiFi
- Fully programmable I/O capabilities
- SNMP or COAP management system
- Supports configurations with NB1/cat M1 for narrow band channels

### NETWORKING FEATURES

- MPLS Label Switch Router
- Bridging and routing
- Fully managed switch support (802.1q)
- Quality of Service (802.1p)
- Optional Console Port or 802.3 at PoE PSE
- MODBUS/TCP/UDP/Serial
- DNP3 TCP/UDP/Serial
- DHCP IPv6 and IPv4
- 2 Serial Ports: RS-232/RS-422/RS-485
- Up to 5 Ports 10 /100/1000 Ethernet
- IP Router /Firewall/VPN Capabilities BGP, MPLS, RIPv2, EIGRP, LDP, ISIS, OSPF, DMVPN, RPL, GRE, etc.

### MECHANICAL SPECIFICATIONS

- Dimensions: 4.6"Wx1.9"Hx4.5"D;
- Weight: > 1 lb

### PROTOCOL SPECIFICATIONS

- DNP3 Serial and IP
- MODBUS Serial and IP
- IPV4 and IPV6
- IEC 60870-5-101/104 protocol translation
- IPV4 in IPV6 transitioning protocols MAP-T, MAP-E, SIIT, DS-Lite
- SNMP v1, 2c and v3
- CoAP

### ELECTRICAL SPECIFICATIONS

- 9-60VDC
- Alarm Contacts
- Power consumption (typical) 2 - 4 watts
- Power Consumption (sleep mode) 400mWatts
- Power Consumption (peak) 12 watts

### ENVIRONMENTAL SPECIFICATIONS

- Temperature range: -40° to 70°C with type test up to 85°C (185°F) for 16 hours
- Humidity: 5% to 95% non-condensing
- Ambient Temperature of -30C to +62C

### REGULATORY COMPLIANCE

- IEEE1613, UL Safety, PTCRB, OnGo, FirstNet® and and IP54 certifications, AT&T, Verizon, UScellular™ and 900 MHz (Anterix Spectrum)
- FCC part 15 and IC
- Class 1 Div 2 Groups A, B, C, and D T4 locations

### WIRED&WIRELESS INTERFACES

- UART & USB interfaces for other modules
- Up to 5 SIM card slots with network failover
- Optional Fiber Backhaul

### SECURITY FEATURES

- External Tamper Switch with message alerts
- Crypto-authentication
- IEEE 802.1x-based authentication

- Certificate-based identity [Radius and AAA support]
- Encryption : 3DES, AES 128/192/256, SHA 256/384/512 HMAC
- Network Layer Encryption (IPsec)
- Stateful Layer 3 Firewall with MAC Filtering, NAT, Source NAT, Static NAT, Port Forwarding
- FIPS 197 compliant encryption
- Embedded location and orientation sensors
- NIST certified hardware-based cryptographic calculation algorithms and secure key/secret

### EDGE INTELLIGENCE FRAMEWORK

- 3rd Party Applications
- OSGi
- Node JS/JavaScript
- Docker Containers
- LXC Containers
- Snaps

### DEVICE MANAGEMENT

- Remote and Local Management and Monitoring
- SNMPv3 and CoAP - based device management
- "Element Management System"
- Locally connected web-browser based GUI
- Over-the-Air update capability
- Battery Management / Monitoring / Predictive maintenance

### OPTIONAL OUTDOOR ENCLOSURE

- UL 508, Type 4X Enclosure
- Meets IP 66 / 67; IK08 Impact Rating
- Rated Insulation: AC 690 V / DC 1000 V
- Waterproof Gasket
- UL 94, 746C Flame Rating
- Optional UPS with Lithium battery (1200Wh)
- Lithium Battery NMC outdoor rated with pole mount bracket

#### Notes:

1. This datasheet as of October 2021 is subject to change
2. Band availability model dependent
3. Please consult Council Rock Sales for price & availability



#### ◀ Watch Video Tour of the TELiGE1500

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