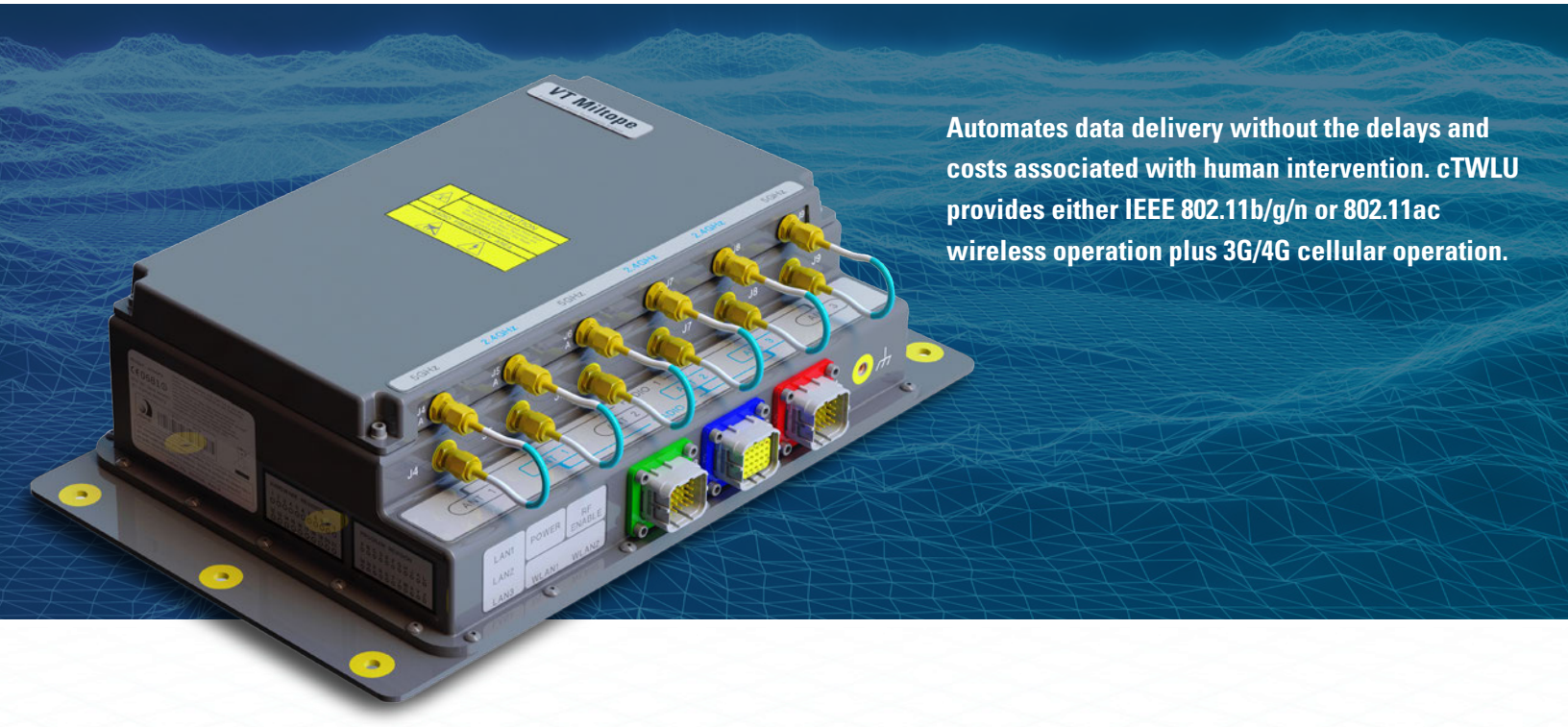
cTWLU CELLULAR TERMINAL WIRELESS LAN UNIT



Automates data delivery without the delays and costs associated with human intervention. cTWLU provides either IEEE 802.11b/g/n or 802.11ac wireless operation plus 3G/4G cellular operation.

Wireless gateway from an aircraft LAN to a ground based LAN

Configurable profiles that include; SSIDs, QOS, security, and filtering for customized network and user group setups.

Python scripting is available for adding customer capabilities.

Data transfer applications include: FOQA, EFB, navigation information, flight charts, weight and balance, weather maps, fault logs, cabin maintenance, Inflight Entertainment (IFE) multimedia.

cTWLU Features and Functions:

- ARINC 763 compliant design
- Based on nMAP2 hardware
- IEEE 802.11a/g/n/ac
- Compact, waterproof design
- Secure interactive WEB based interface to software management tool
- Proven reliability, No maintenance required
- Software upgradeable to support evolving security, connectivity, and authentication protocols
- cTWLU antenna (ordered separately)
- Open standards based solution for hardware and software

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SPECIFICATIONS

WIRELESS CELLULAR:
GSM EDGE: 850/900/1800/1900 MHz
GPRS: Max data transfer rate: 85 kbps up/down
DC-HSPA+/HSPA+/: 850/900/1900/ AWS/2100 MHz with Rx Diversity
HSPA/ UMTS: Max data transfer rate: 5.7 Mbps up / 42 Mbps down
WCDMA PS: Max transfer rate: 384 kbps up/downl
LTE: Carrier specific. 700/1700/1900/2100 MHz/ for North America.
800/900/1800/2100/2600 MHz for EMEA
Max data transfer rate: 50 Mbps up / 100 Mbps down)
SIM: supports two removable subscriber identity modules (accessible via door)

WIRELESS WIFI™:
IEEE 802.11 b/g/n (2.4 GHz) or IEEE 802.11a/n/ac (5.6 GHz)
Max data transfer rate: 1.3 Gbps di-directional (2 antennas)

WIRED INTERFACES:
ETHERNET: Two IEEE 802.3ab 1000 BaseT (auto-sensing)
DISCRETES: Two Input (weight on wheels interface)

POWER:
Primary 97-134 Vac, 360-900 Hz and 18-36 Vdc
Power Consumption: 12 Watts nominal (17 Watts max)

SECURITY/VPN:
VPN: IPSec with IKEv1, IKEv2, NAT Traversal; SSL, SSLv2, SSLv3 Open VPN client and server, PPTP, L2TP; 5 VPN Tunnels
ENCRYPTION: DES, 3DES and AES up to 256-bit
AUTHENTICATION: RADIUS, TACACS+, SCEP (simple certificate enrollment protocol) for X.509 certificates
MAC Address Filtering; VLAN support; Ethernet Port Isolation Stateful inspection firewall with scripting, Address + port translation

ROUTER/FIREWALL:
NAT, NAPT with IP port forwarding, IP pass through, Ethernet bridging, Multicast Routing Routing Protocols: PPP, PPPoE, GRE, RIP (v1, v2), OSPF, SRI, BGP, iGMP routing (multicast)
IP Failover: VRRP, VRRP+TM; RSTP (Rapid Spanning Tree Protocol)
DHCP, Dynamic DNS client compatible with BIND9/No-IP/ DynDNS

MANAGMENT:
HTTP, HTTPS, FTP, SFTP, SSL
SMTP, SNMP (v1/v2c/v3), SSH
CLI, Telnet, and SOAP (optional) for web management, SMS management, protocol analyzer

PHYSICAL:
Compact, waterproof design, ARINC 836 & 628 design approach
Weight: 3.5 lbs. (1.6 kg) estimate
Backwards compatible TWLU(ARINC 763) mounting
EN 4165 connectors
Dimensions: Enclosure 2.40" (161 mm) H x 8.89" (226mm) L x 6.39" (162mm) W
Mounting plate 11.50" (292mm) L x 6.97" (177mm) W

ENVIRONMENTALS

THERMAL:
DO160G, Section 4, Category A2

VIBRATION:
DO160G, Section 8, Category R, curve C/C1

POWER INPUT:
DO160G, Section 16, Category A (WF) for AC, Category A for DC

RADIATED RF EMISSIONS:
DO160G, Section 21, Category M plus HF notch

BLADE ANTENNA TECHNICAL SUMMARY

FREQUENCY:
0.70-2.65 GHz, 4.8-5.875 GHz

POLARIZATION:
Vertical

IMPEDANCE:
40 Ohms

VSWR:
≤ 2.5:1 for all frequencies except
≤ 1.5:1 for 1.03-1.09 GHz

WEIGHT:
0.7 oz. (20 gm)

MATERIAL:
Aluminum housing

DIMENSIONS:
2.00"(51mm) W x 5.12"(130mm) L x 2.86" (73mm) H