DAWN: Deploy Anywhere Wireless Node

Telos provides the solution for go-anywhere Internet access in deployed or remote locations.

- Self-powered, self-contained wireless access point
- Wireless LAN access up to 450 Mbps per radio
- Air monitoring and intrusion detection and prevention
- Power for a full workday of remote service

A significant challenge for military and first responder networking requirements is the ability to extend wireless coverage to deployed or remote locations. Specifically, service men and women often work on flightlines, in storage depots, and other isolated areas where wireless service is hard to provide using conventional technologies.

**DAWN (Deploy Anywhere Wireless Node)** from Telos Corporation fills this gap in wireless networking capabilities. DAWN is a self-contained, self-powered multi-band (802.11a/b/g and 802.11n MIMO) wireless access point that offers go-anywhere network access.

The heart of the DAWN unit is the Aruba Networks AP-114, a high-performance, multi-function access point that provides wireless LAN access at data rates of up to 450 Mbps per radio, air monitoring, and wireless intrusion detection and prevention over the 2.4 GHz and 5 GHz RF spectrums.

DAWN integrates a battery-powered AP-114 and a dual-band 2.4 / 5 GHz Multiple In Multiple Out (MIMO) antenna into a ruggedized case. The antenna simplifies deployments by using only one antenna for both RF bands. The unit also provides a 10/100/1000 Ethernet interface.

802.11n makes wireless networking as fast and reliable as a wired LAN, a key consideration for connecting service personnel with resources served from a wired network. 802.11n increases performance through techniques such as channel bonding, block acknowledgement, and MIMO.

For flightline maintenance, DAWN uses mesh technology to enable technicians to carry their wireless AP directly onto the aircraft to access online repair manuals and other network-based resources over tablet computers and other wireless devices. The battery will supply power to the AP for a full shift of service.
Access Point

Operating Modes
- 802.11a/b/g/n Mobility Controller Managed WLAN AP
- 802.11a/b/g/n air monitor
- Secure enterprise mesh
- Remote AP
- Configurable to support 802.11n HT 20/40 channels or mixed-mode deployment IEEE 802.11a/b/g/n

Radios
- Dual Radio - software configurable to support 2.4-2.5 GHz and 5 GHz
- Automatic transmit power and channel management control with auto coverage hole correction via Adaptive Radio Management (ARM)

Advanced Features
- Integrated Trusted Platform Module (TPM) for secure storage of credentials and keys
- SecureJack capable for secure tunneling of wired Ethernet traffic

802.11a Radio Specifications
- Operating Frequency: 5.150 – 5.850 GHz*
- Available Channels: Mobility Controller-managed, dependent upon configured regulatory domain
- Modulation: Orthogonal Frequency Division Multiplexing (OFDM)
- Transmit Power: 16 dBm at 54 Mbps*
- Configurable in increments of 0.5 dBm
- Association Rates (Mbps): 54, 48, 36, 24, 18, 12, 9, 6 with automatic fallback

802.11b Radio Specifications
- Operating Frequency: 2.4–2.4835 GHz*
- Available Channels: Mobility Controller-managed, dependent upon configured regulatory domain
- Modulation: Direct-Sequence Spread-Spectrum (DSSS)
- Transmit Power: 23 dBm*
- Configurable in increments of 0.5 dB
- Association Rates (Mbps): 11, 5.5, 2, 1 with automatic fallback

802.11g Radio Specifications
- Operating Frequency: 2.4–2.4835 GHz*
- Available Channels: Mobility Controller-managed
- Modulation: Orthogonal Frequency Division Multiplexing (OFDM)
- Transmit Power: 18 dBm at 54 Mbps*
- Configurable in increments of 0.5 dB
- Association Rates (Mbps): 54, 48, 36, 24, 18, 12, 9, 6 with automatic fallback

802.11n Radio Specifications
- Operating Frequency: 2.4–2.4835 GHz and 5.150 GHz - 5.850 GHz*
- Available Channels: Mobility Controller-managed, dependent upon configured regulatory domain
- Modulation: OFDM using BPSK, QPSK, 16-QAM, 64-QAM
- Transmit Power: 16 dBm 2.4 GHz at MCS7/15/23*
  14 dBm 5 GHz at MCS7/15/23*
- Association Rates: MCS0 to MCS23 (6.5 Mbps – 450 Mbps)
- Radio: Multiple-In, Multiple-Out (MIMO)
- High-Throughput (HT) Support: HT 20/40
- Packet Aggregation: A-MPDU, A-MSDU

System

Interfaces
- Network: One 10/100/1000BASE-T Ethernet (RJ45), Auto-sensing link speed and MDI/MDX
- Power: One DC power connection
- Other: One RJ-45 console interface (internal)

Physical
- Dimensions: 14” x 11.6” x 6”
- Weight: 11.5 lbs with external power supply
  10.1 lbs without external power supply

Environmental
- Operating:
  Temp: 0° to 50° C (32° to 122° F)
  Humidity: 5 to 95% non-condensing
- Storage:
  Temp: -20° to 60° C (-4° to 140° F)

Antenna
- Frequency Range: 2.4 – 2.5 / 5.150 – 5.850 GHz
- Gain: 4 / 6 dBi
- Vertical Beamwidth: 360°
- Horizontal Beamwidth: 60/70°
- Nominal Impedance: 50 Ohms
- Polarization: Vertical

Battery System
- Rated over 150 Watt Hour at 14.4V
- Provides over 8 hours of operation

* All channel/power settings are controlled by the Mobility Controller and are based on regulatory domain. Actual RF output for the AP-114 is slightly reduced due to additional internal RF circuitry.