

TWS-100 AXES

Fast Ethernet Wireless Broadband Solution

Terra Wireless Systems' TWS-100 AXES wireless broadband solution offers Ethernet transmission at an extremely competitive price. TWS-100 AXES is the newest addition to TWS-100 portfolio of high capacity, cost-effective wireless broadband solutions that deliver carrier-class TDM and Ethernet services in the sub-6 GHz bands.

The TWS-100 AXES solution meets the needs of operators who want to deploy high-quality Ethernet services with maximum speed, yet with minimum costs and hassles. Operators can install in hours, expand their connectivity footprint and realize almost immediate return on investment. In addition, TWS-100 AXES is designed to support user capacity management, enabling optimized bandwidth allocation and flexible service pricing. Reliable and robust, TWS-100 AXES provides unparalleled performance for broadband access applications, WiFi backhauling and remote site connectivity.

Collocation Installation

TWS-100 AXES comes with a unique Hub Site Synchronization feature that enables installation of multiple systems at the same site. This feature synchronizes the transmission of collocated TWS-100 AXES radios which dramatically reduces mutual interference commonly experienced with collocated TDD radios. This capability makes the TWS-100 AXES ideal for deployment in multi point-to-point topologies.

Typical Applications

Broadband Access

TWS-100 AXES enables service providers to provide superior quality full duplex Ethernet services to customers quickly and cost-effectively.

Metro WiFi Backhauling

TWS-100 AXES is the ideal solution for backhauling WiFi traffic, providing backhaul to WiFi access points and metro WiFi networks in crowded environments.

Remote Site Connectivity

TWS-100 AXES meets the needs of private networks such as enterprises, campuses, municipalities and government institutions that want to establish high-speed Ethernet connectivity between offices rapidly and affordably.

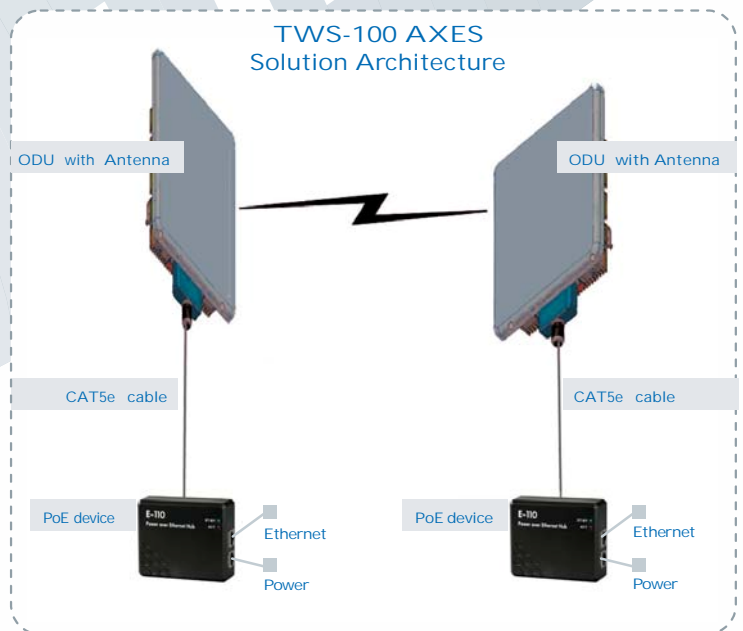
Video Surveillance

TWS-100 AXES is ideal for transmitting high-quality ethernet video traffic, enabling deployment of multiple cameras in areas that are either too remote or too costly to reach with cable or fiber-based solutions.



TWS-100 AXES ARCHITECTURE

TWS-100 AXES solution consists of an Outdoor Unit device (ODU) with an Integrated or External antenna and a Power over Ethernet (PoE) device on each side of the link. The PoE device supplies power over the same CAT5e twisted-pair cable that carries the Ethernet traffic to the ODU.



Configuration

Architecture	Outdoor Unit with PoE device
IDU to ODU Interface	Outdoor CAT5e cable; Maximum length: 100

Radio

Frequency Bands	2.300 – 2.4835 GHz 2.400 - 2.4835 GHz 5.725 – 5.850 GHz
Throughput	2 Mbps full duplex
Channel Bandwidth	5 MHz
Duplex Technique	TDD
Modulation	OFDM – BPSK/QPSK/16QAM/64QAM
Max Range	20 Km
Max Tx Power	18 dBm
Error Correction	FEC k=1/2, 2/3, 3/4

LAN Interface

Type	10/100BaseT Interface with Auto-negotiation (IE
Number of Ethernet Ports	1
Framing/Coding	IEEE 802.3/U
Line Impedance	100 Ω
VLAN Support	Transparent
Connector	RJ-45
Maximum Frame Size	1800 Bytes

Management

Protocol	SNMP based
Network Management	SNMPc based
Upgrade Capabilities	Local and remote 'over the air' software upgrades

Mechanics

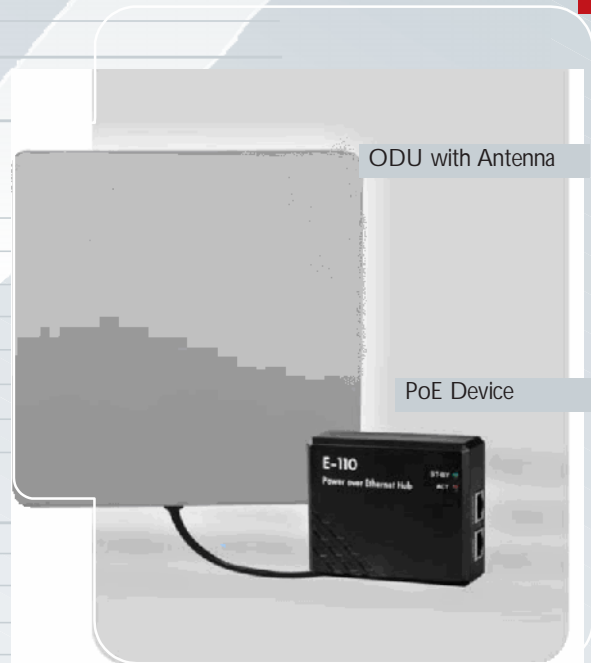
ODU (with 1 ft flat integrated antenna)	30.5 cm (H) x 30.5 cm (W) x 5.8 cm (D) Weight: 1.5kg / 3.3lbs
ODU (with no integrated antenna)	24.5 cm (H) x 13.5 cm (W) x 4.0 cm (D) Weight: 1.0kg / 2.2lbs
PoE Device	3.2 cm (H) x 9 cm (W) x 7.5 cm (D) Weight: 0.16kg / 0.35lbs

Power and Mounting

Power Feeding	110/220VAC, 50/60Hz
Power Consumption	<10W (ODU + PoE device)
Mounting	Pole and Wall

Environmental

Outdoor Unit Enclosure	All weather cases
ODU Operating Temperatures	-35°C - 60°C
PoE Device Operating Temperatures	0°C - 40°C
Humidity (Outdoor Unit)	Up to 100% non-condensing



Antennas

	2.400-2.4835 GHz	5.725-5.850 GHz
1ft Integrated Antenna		
Gain		22 dBi
Beam Width		9°
Polarization		Linear
2ft External Antenna		
Gain	24 dBi	28 dBi
Beam Width	8°	4.5°
Polarization	Linear	Linear

Regulation

	2.400-2.4835 GHz	5.725-5.850 GHz
Radio		
FCC: 47CFR	Part 15, Subpart C	Part 15, Subparts C&B
IC		RSS-210
Safety		
TUV	60950, According to UL 60950	
CAN-USA	C22.2 No.60950	
EMC		
FCC	CFR Part15, Subpart B	
CAN-ETSI	EN 301 489-1	
Environmental		
ETSI	IEC 60721-3-4 Class 4M5	
	IP67	

TWS-100 AXES Ordering Information

Terra Wireless Systems' TWS-100 AXES is available in several configurations to meet different frequency, power, antenna and collocation requirements. For collocated units, the Hub Site Synchronization feature is identified by the CL abbreviation. Please refer to TERRA WIRELESS SYSTEMS's Price List to see the full range of TWS-100 products and accessories.

TERRA WIRELESS SYSTEMS