



TRACER[®] 4205

Compact License-free ISM Band DS3 Radio

Product Summary

- Key applications:
 - Cellular backhaul
 - Service provider network extension
 - Corporate networks and campus connectivity
 - Redundant link
 - Disaster recovery
- Increased link distance when compared to U-NII band radios
- Broadband wireless connectivity up to 45 Mbps
- Rapid return on investment
- Economical and reliable alternative to wireline
- Small footprint – 1U, 19-inch rack space
- No license required per FCC rules part 15.247
- 5.725 to 5.850 GHz ISM band operation
- Remote loopback and configuration
- Point-to-point, up to 25 miles
- Industry-leading five-year North American warranty

ADTRAN's TRACER 4205 is a license-free digital microwave radio that provides economical, wireless, full-duplex DS3 connectivity for service providers and corporate networks.

TRACER 4205 operates in the industrial, scientific, and medical (ISM) band at 5.8 GHz. The TRACER 4205 DS3 wireless solution offers 45 Mbps of broad-band connectivity in many locations at a significantly lower cost than competing products. The monthly cost savings generate a rapid return on investment while lowering overall communications costs. Additionally, in applications where quick installation and time-to-market are essential, or existing high bandwidth infrastructure is inadequate or nonexistent, the TRACER 4205 will provide rapid deployment and reliable carrier-grade connectivity.

The TRACER 4205 DS3 radio is ideally suited for many applications such as backhauling cellular traffic, extending a service provider's network and presence, interconnecting corporate networks within a campus community, and providing a redundant link or rapid deployment for disaster recovery.

Because TRACER operates in the license-free ISM band, delays and expenses associated with frequency coordination and licensing are eliminated, allowing rapid delivery of high-bandwidth connectivity to those areas of the network that require it. Locations previously unreachable by existing copper or fiber networks can now be seamlessly integrated into both public and private networks.

TRACER 4205's outstanding performance enables excellent link distances with high confidence and less expensive infrastructure than other license-free DS3 transport alternatives. TRACER 4205 is the first DS3 radio to operate in the ISM band. ISM band operation does not limit the Effective Isotropic Radiated Power (EIRP) of a transmitter in the manner of Unlicensed Network Information Infrastructure (U-NII) bands. Relief of this limit effectively changes the practical path length from 15 miles to 25 miles. Full-duplex data transmission is provided and 99.999% carrier-class reliability can be achieved with proper link engineering design.

TRACER 4000 series radios occupy only 1 RU of rack space. They are excellent wireless connectivity solutions for applications where cabinet or rack space is limited.

The TRACER series is intended for use in point-to-point situations, and features VT100 management of both ends of the link without impacting DS3 throughput. Management functions include control, status, and alarm capabilities.

By using the latest technology and incorporating ISO 9001 manufacturing processes, ADTRAN has designed the TRACER series to provide the highest levels of reliability and durability. As a result, TRACER series products are supported by an industry-leading five-year North American warranty and an award-winning technical support team.



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Product Specifications

Transmitter

- **Output power:** +5 to +20 dBm (3 to 100 milliwatts)
- **Frequency band:** 5.725 to 5.850 GHz ISM band
- **Channel bandwidth:** 50 MHz

Receiver

- **Receive level threshold (10⁻⁶ BER):** -78 dBm
- **Maximum receive level:** -30 dBm
- **Nominal receive level:** -50 dBm
- **Frequency range:** 5.725 to 5.850 GHz ISM band
- **Channel bandwidth:** 50 MHz

Frequency plan

- **Plan A center frequencies:** TX 5.747 GHz, RX 5.827 GHz
- **Plan B center frequencies:** TX 5.827 GHz, RX 5.747 GHz

RF Interface

- **Antenna connector:** female type-N
- **Impedance:** 50 ohms

Digital Interface

- **Capacity:** full DS3
- **Data rate:** 44.736 Mbps
- **Interface type:** DS3
- **Connectors:** Female BNC, 75 ohms
- **Line code:** B3ZS
- **Line buildout:** 0 to 225 feet (DSX-3), 225 to 450 feet
- **DS3 monitoring:** M13 or C-bit parity
- **Alarms:** AIS, LOS, LOF, RAI, Idle signal
- **Loopbacks:** Line and link

User Interface

- **Front panel:** Status LEDs
- **Diagnostics:** Line loopback button, self-test LED
- **Test points:** RSSI, transmit power
- **Alarm contacts:** RF carrier loss, normally open and closed

Terminal Interface

- **Function:** Menu-driven user interface, monitor and control of local and remote end of link, password protection, event history
- **Emulation:** VT100
- **Data rate:** 9600 bps
- **Physical interface:** Female DB25
- **Electrical interface:** RS-232

Mechanical and Environmental

- **Operating temperature:** -25°C to 65°C
- **Width:** 17.12" (for 19" EIA rackmounting – hardware accommodates both 19 and 23-inch bays)
- **Height:** 1.72" (1U)
- **Depth:** 9.34"
- **Humidity:** 95%, non-condensing
- **Weight:** 7 lbs.

Power

- **Input voltage:** 21-60 VDC, either polarity referenced to ground
- **Power consumption:** 21 Watts, maximum
- **DC connector:** 2-pin plug in

Ordering Information

Equipment	Part #
TRACER 4205, Freq A	12804205L1A
TRACER 4205, Freq B	12804205L1B
AC Power Supply	1280650L1



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