

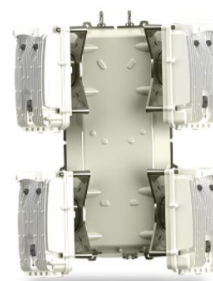
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## STR 4500 & CTR 8740 Installation, Operation and Maintenance TRN-STR4500-IOM-A/B/C/D

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### Course Specifics

Duration:	3 days
Class capacity:	10 students
Materials provided:	Instruction and user Manuals (USB) Student Handbook (e-Book) Datasheets (USB)



### Course Description

The STR 4500 All Outdoor Trunking Radio system that uses the WTM 4500T/WTM4500XT with OBU/WBX is a powerhouse radio system when used in conjunction with the CTR 8740, the Ultra-Compact Transport Router and Microwave IDU for edge, pre-aggregation, aggregation, and nodal transport applications.

This combination delivers a unique combination of high-capacity all-packet transport, Carrier Ethernet, IP/MPLS and PWE services and comprehensive mission critical microwave features.

**The STR 4500 & CTR 8740 Installation, Operation and Maintenance** course teaches students key functions of the WTM 4000 & CTR 8740 platform. The course includes an overview of the chassis, initial setup and management access, installation and deployment options, basic configuration, system commissioning, diagnostics, maintenance, and troubleshooting.

Extensive hands-on labs (nearly 50% of the course duration) and case studies offer students with scenarios they will face in real deployments in their networks. Courses are conducted by **AVIAT expert trainers** in a mentoring environment backed by their deep technology expertise and experience in implementation of microwave wireless and IP networks.

The in-person training is conducted at the Aviat Training locations or can be arranged at customer sites.

### Target Audience

This course is intended for installation and service personnel responsible for installation, configuration, and maintenance procedures for the STR 4500 & CTR 8740 product.

### Prerequisites

1. Participants must complete applicable E-Learning courses.
2. Participants should have a basic understanding of Microwave and IP Fundamentals and have basic computer skills.

3. Each student must bring an IBM compatible laptop PC or an equivalent and have administrator rights on the PC.

The PC must have minimum parameters of:

- Pentium 4 or later w/ 1GB of RAM and 250 MB of free hard drive space
- Microsoft Windows XP, Vista, Windows 7, or Windows 8
- USB Port
- Network card (LAN Port)
- DB9 serial port connection or adapter

### Objectives

Upon successfully completing this course, participants will be able to:

- Basic installation and configuration of the STR 4500 and CTR 8740 radio equipment
- Provisioning of features such as Management, RF Links, Ethernet VLANs, QoS, and Link Aggregation
- Basic diagnostics, troubleshooting and preventive maintenance for the CTR 8740 and STR 4500 radio system

## Course Outline

### Day 1

#### **WTM4000 System Overview**

- WTM 4000 product overview
- Product variants (including WTM4500T and WTM4500XT)
- Implementation options
- System & RF

#### **Product installation**

- Unpacking
- Antenna installation
- WTM4500T/OBU installation
- DC power (external or PoE)

#### **Basic Access & Management**

- Connecting to the WTM4500T
- Management option (GUI / CLI)
- Management access configuration
- SNMP and Wi-Fi configuration
- Admin management

#### **Radio Link Configuration**

- Provisioning the RF link
- WTM 4500T/OBU Configuration Options
- WTM 4500XT/WBX XPIC Configuration

#### **Performance Statistics and Monitoring**

- RF Link Performance Statistics and Monitoring using CLI and GUI
- RFC2544 Ethernet tests and interpretation

#### **Switching and routing**

- VLAN management
- Basic routing function
- L2 control protocol tunnel

### Day 2

#### **WTM4K QOS**

- Classification
- Scheduling
- Policing
- Flow classification

#### **Troubleshooting and Maintenance**

- Troubleshooting and Maintenance Techniques and Options
- Troubleshooting Configuration and Link Problems

#### **CTR8740 System Overview**

- CTR8740 Base Hardware Highlights
- Product Architecture
- Deployment options

## **Installation**

- Unpacking
- CTR 8740 front panel
- Grounding and power supply
- SD Card

## **Basic Access & Management**

- Local maintenance ports
- Management options
- Management access configuration
- Admin management

## **VLAN Configuration**

- VLAN concepts and configuration on the CTR 8740
- Q-in-Q concept and configuration on the CTR 8740

## **LACP Configuration**

- Link aggregation concepts
- LACP configuration via CLI and GUI

## **Day 3**

### **L1LA Configuration**

- L1LA concept on the CTR 8740
- L1LA Configuration with WTM 4000

### **Synchronization Configuration**

- Network synchronization
- SYNCE configuration

### **QOS Configuration**

- QOS concepts
- Non-hierarchical QOS
  - Classification
  - Metering (Policing)
  - Scheduling and Shaping
- Hierarchical QOS
  - Classifier configuration
  - Policy configuration
- QOS configuration via CLI and GUI

## Required Equipment for Training Sessions at Customer Sites

RADIO	<p>One equipment rack with 48VDC power supply</p> <p>At least 1 Traffic free hop – 2 radios talking to each other. (Path has been simulated with at least 60dB of attenuation, for troubleshooting training variable attenuators are preferred however not mandatory)</p> <p>Chassis configurations should include as a minimum:</p> <ul style="list-style-type: none"> <li>•ODRs should be a matching pair that is same sub band and TR spacing with one being Tx High and the other Tx Lo.</li> </ul>
OTHER EQUIPMENT	<p>Ethernet tester</p> <p>Digital Multimeter.</p>
CLASSROOM SET UP	<p>Sufficient in size to handle all participants, instructor, desks, chairs, classroom equipment. The room must have enough 110 AC (220) AC power and air conditioning to operate equipment, all student's client's PC's and the server or radio as required.</p> <p><b>Classroom Equipment</b></p> <p>Marker board, SVGA or Overhead projector and screen.</p> <p><b>Desk and Chairs</b></p> <p>Desks or workstations with enough room for each student to write have open books, client PC and / or, keyboard and monitor.</p> <p><b>Internet Access</b></p> <p>Internet access through the server or through client PC.</p>

## Pricing & Scheduling

Please contact your Aviat local sales team for a quote or email [aviatcareeducate@aviatnet.com](mailto:aviatcareeducate@aviatnet.com) and request pricing.

TRN-STR4500-IOM-A	STR4500: Installation, Operation and Maintenance - ILT, 3 DAYS, Aviat Training Center - Open Enrollment -per Student
TRN-STR4500-IOM-B	STR4500: Installation, Operation and Maintenance - ILT, 3 DAYS, Aviat Training Center- 10 Students Max
TRN-STR4500-IOM-C	STR4500: Installation, Operation and Maintenance - ILT, 3 DAYS, Customer Location- 10 Students Max
TRN-STR4500-VIL-IOM-A	STR4500: Installation, Operation and Maintenance - VILT, 3 DAYS, Aviat Training Center - Open Enrollment -per Student
TRN-STR4500-VIL-IOM-B	STR4500: Installation, Operation and Maintenance - VILT, 3 DAYS, Aviat Training Center- 10 Students Max