
STR 4500 & CTR 8740/80 Installation, Operation and Maintenance

Course Specifics

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



Course Description

The STR 4500 All Outdoor Trunking Radio system that uses the WTM4500XT with WBX Outdoor Branching Unit is a powerhouse radio system when used in conjunction with the CTR8740 or CTR8780, 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 8740/80 Installation, Operation and Maintenance course teaches students key functions of the WTM 4000 & CTR 8740/80 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 8740/80 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.

Objectives

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

- Basic installation and configuration of the STR 4500 and CTR 8740/80 radio equipment
- Provisioning of features such as Management, RF Links, Ethernet VLANs, and Link Aggregation
- Basic diagnostics, troubleshooting and preventive maintenance for the CTR 8740/80 and STR4500 system

Course Outline

STR4500 System Overview

- WTM 4500XT product overview
- WBX OBU Overview
- Link Aggregation Overview

Product installation

- Unpacking
- WTM4500XT/OBU installation
- DC power (External or PoE)
- RSSI and XPD Voltages
- Antenna Alignment

Basic Access & Management

- Connecting to the WTM4500XT
- Management options (GUI / CLI)
- Management access configuration
- Configuration Management
- User Management
- Software Management
- License Management

Radio Link Configuration

- RF link Provisioning
- WTM 4500XT/OBU Configuration Options
- WTM 4500XT/WBX XPIC Configuration
- WTM4500XT/WBX Space Diversity Configuration

Performance Statistics and Monitoring

- Real Time RF Link Performance Monitoring
- Historical RF Link Performance Monitoring
- WTM4500XT Spectrum Analyzer
- Paperless Chart Recorder (PCR)

Switching and routing

- Interface Configuration
- VLAN management
- Static Routes
- QoS

Troubleshooting and Maintenance

- Troubleshooting and Maintenance Techniques and Options
- Troubleshooting Configuration and Link Problems
- WTM4500XT Alarms
- Replacing a WTM4500XT

CTR8740/80 System Overview

- CTR8740 Base Hardware Highlights
- CTR8780 Base Hardware Highlights
- Product Architecture
- Deployment options

Installation

- Unpacking
- CTR 8740 front panel
- CTR8780 front panel
- Grounding and power supply

Basic Access & Management

- Local maintenance ports
- Management options
- Management access configuration
- Configuration Management
- User Management
- Software Management
- License Management

Switching and Routing

- Interface Configuration
- VLAN concepts and configuration

CTR to WTM layer 1 Link Aggregation (L1LA)

- L1LA concepts
- WTM to WTM L1LA
- WTM4500XT configuration for CTR to WTM L1LA
- CTR8740 and 8780 L1LA configuration Wizard
- Customer Traffic Configuration

Troubleshooting and Maintenance

- Troubleshooting and Maintenance Techniques and Options
- Troubleshooting L1LA
- CTR8740 and 8780 Alarms
- Replacing a CTR 8740 or 8780

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">•ODRs should be a matching pair that is same sub band and TR spacing with one being Tx High and the other Tx Lo.
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>Classroom Equipment</p> <p>Marker board, SVGA or Overhead projector and screen.</p> <p>Desk and Chairs</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>Internet Access</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 and request pricing.