JMA

Technical Education Catalog

2023

Private Training

Individual customers can arrange for private courses to be conducted on-site, at hosted locations, or virtually.

Webinars & Online Learning

Instructor-led virtual learning and on-demand opportunities are regularly scheduled and can be taken at the student's convenience.

On-Site In-Person Training

Instructor-led classroom courses are regularly scheduled and conducted globally in various regions along with customer-hosted locations

Webinars

Audience	Basic	Advanced	PRO
Installer	• TEKO DAS Platform • RET Antenna Training • FUZE Basic Training • TEKO DAS Installation	• Advanced Connector	• XRAN IOTA Installation • XRAN Product Overview • CellHub CBRS Overview
Operations	• TEKO DAS Platform • TEKO DAS Installation • RET Antenna Training	• TEKO DAS O&M • XRAN Platform Overview	• Exploring XRAN: TEKO • Exploring XRAN: CellHub • Exploring XRAN: IOTA
RF engineer	• TEKO DAS Platform • TEKO DAS Installation • TEKO DAS O&M	• XRAN Platform Overview • Exploring XRAN: TEKO • Exploring XRAN: CellHub • Exploring XRAN: IOTA	• Uplink Performance • CellHub CBRS & CBSD
Design engineer	• TEKO DAS Platform • TEKO DAS Installation • XRAN Platform Overview	• TEKO Components in iBwave • IOTA design in iBwave	• Exploring XRAN: TEKO • Exploring XRAN: CellHub • Exploring XRAN: IOTA

eLearning/On-demand

Audience	Basic	Advanced	PRO
Installer	• FUZE DE Install & Maint • TEKO DAS Installation	• XRAN IOTA Installation	
Operations	• Exploring XRAN: TEKO • Exploring XRAN: CellHub • Exploring XRAN: IOTA	• TEKO DAS OA&M • XRAN OA&M	• XRAN PM&O
RF engineer	• Exploring XRAN: TEKO • Exploring XRAN: CellHub • Exploring XRAN: IOTA • CellHub CBRS & CBSD	• TEKO DAS Commissioning • XRAN BBU Activation • XRAN CellHub Activation	• TEKO DAS OA&M • XRAN OA&M • XRAN PM&O
Design engineer	• TEKO DAS Platform • XRAN Platform Overview	• Exploring XRAN: TEKO • Exploring XRAN: CellHub • Exploring XRAN: IOTA • CellHub CBRS & CBSD	• DAS Performance Matters

JMA Wireless Technical Education Series offers instruction for people designing, installing, commissioning, and maintaining the JMA Wireless products and platforms. Courses cover XRAN, Cell Hub, TEKO DAS, and IOTA, Transmission Line Systems, FUZE™ Digital Electricity, Power Boost, and Antenna Systems. Learning opportunities include live, online instruction, on-demand eLearning, and instructor-led classroom courses.

Classroom and Virtual Training			
Audience	**Basic**	**Advanced**	**PRO**
Installer	• Basic Connector • RET Antenna Training • FUZE Digital Electricity Installation • Power Boost Installation	• Advanced Connector Prerequisite course: *Basic Connector* • TEKO DAS Advanced Installation	• TEKO DAS OA&M
Operations	• Basic Connector • RET Antenna Training • TEKO DAS O&M	• Advanced Connector Prerequisite course: *Basic Connector* • XRAN OA&M • TEKO DAS OA&M	• TEKO DAS Commissioning • XRAN BBU Activation and RF Commissioning • CellHub & CBRS Operation and Activation
RF engineer	• TEKO DAS Commissioning • XRAN BBU Activation and RF Commissioning • CellHub & CBRS Operation and Activation	• XRAN Performance Monitor & Optimization • XRAN OA&M • TEKO DAS OA&M	• XRAN Performance Monitor & Optimization
Design engineer		• TEKO DAS in iBwave Prerequisite: *Requires a current iBwave level one (or higher) certification*	

TEKO DAS Platform Overview

Webinar

Overview

This 1.5-hour interactive webinar provides those working with Distributed Antenna Systems with an overview on the JMA Wireless TEKO DAS product line components, main features, and key benefits. The webinar is a basic walk-through of the Radio Frequency (RF) end-to-end chain and TEKO DAS functions.

Target Audience

JMA Wireless partners, system integrators, DAS designers, technical staff, sales and marketing

Prerequisite

Basic knowledge of Radio Frequency (RF) and Distributed Antenna Systems (DAS)

TEKO DAS Basic Installation

Webinar

Overview

This 2-hour interactive webinar provides students with the information necessary to install the TEKO DAS Master Unit and Remote units. Topics covered include installation best practices, accessing the operation and maintenance terminal (OMT) and performing green light testing.

Target Audience

JMA Partners, System Integrators, Technicians, Operations personnel and Installers.

Prerequisite

Basic knowledge of AC and DC electrical circuits, grounding, antenna and electronic equipment installation.

TEKO DAS Certified Commissioning Review

Webinar

Overview

This 1.5-hour interactive webinar provides information helpful to RF engineers who are tasked with commissioning the TEKO DAS platform. A review of the commissioning steps, tools, and required test equipment will be presented, along with a question-and-answer period.

Target Audience

JMA Wireless partners, System Integrators, RF Engineers who are currently certified in TEKO DAS Installation and Commissioning.

Prerequisite

Completion of DAS Commissioning Certification course with current certification

TEKO DAS Operation and Maintenance

Webinar

Overview

This 2-hour interactive webinar covers the TEKO DAS Operation and Maintenance Terminal, basic troubleshooting and operational best practices to provide students with information necessary to maintain and troubleshoot the JMA TEKO DAS platform.

Target Audience

JMA Partners, System Integrators, Network Operations personnel and technical staff.

Prerequisite

TEKO DAS Product overview course, working knowledge of RF, 4G/5G applications, Distributed Antenna Systems, RF and Fiber test equipment, and electronic equipment installation.

TEKO DAS TDD, 5G, and Mid-band

Webinar

Overview

This 1.5-hour interactive webinar provides those working with Distributed Antenna Systems with an overview on the JMA Wireless TEKO DAS product in used in TDD, 5G, and Mid-band applications. Topics include System level architecture, components, installation, design considerations, and commissioning process.

Target Audience

JMA Wireless partners, system integrators, DAS designers, RF Engineers, and technical staff.

Prerequisite

TEKO DAS Product Overview course

TEKO DAS Advanced Installation

Instructor-led, in person one day course

Overview

This 8-hour, hands-on technical certification course provides students with the experience required to effectively install, and green light the JMA Wireless TEKO DAS platform.

Target Audience

JMA Partners, System Integrators, Technicians, Field Operations personnel, and experienced DAS Installers.

Prerequisite

TEKO DAS Basic Installation course, Basic knowledge of AC and DC electrical circuits, grounding, hand tools, antenna, and electronic equipment installation. Familiarity with RF cable installation, fiber cleaning and handling, torque wrenches and hand tools. Laptop computer, tablet, or smart phone for green light testing.

TEKO DAS Operation, Administration and Maintenance

Instructor-led, in person one day course

Overview

This 8-hour, hands-on technical course covers the TEKO DAS Operation and Maintenance Terminal, basic troubleshooting and operational best practices to provide students with the experience necessary to maintain and troubleshoot the JMA Wireless TEKO DAS platform.

Target Audience

JMA Partner System Integrators, RF Engineers, Technicians and Field Operations Engineers.

Prerequisite

TEKO DAS Product overview course, Laptop, working knowledge of RF, 4G/5G applications, Distributed Antenna Systems, RF and Fiber test equipment, and electronic equipment installation.

TEKO DAS Installation & Commissioning Certification

Instructor-led, in person two-day course

Overview

This 16-hour (2-day), hands-on technical certification course provides students with the experience required to install, commission, Troubleshoot, and maintain the JMA Wireless TEKO DAS platform.

Target Audience

JMA Wireless customers and partner system integrators, RF engineers, technicians, RF operations personnel and experienced DAS installers.

Prerequisite

Laptop computer, full licensed version of Microsoft Excel. Working knowledge of RF and current air-link modulation schemes (4G/5G). Familiarity and use of RF field test and measurement equipment.

TEKO DAS Commissioning Certification

Instructor-led, Virtual

Overview

12-hour, Instructor led; interactive virtual learning course provides those familiar with the installation and operation of a TEKO DAS platform the opportunity to become certified in the TEKO DAS commissioning process. Students will interact with the instructor and other students through a series of live video sessions. Students will perform virtual and live, hands-on lab exercises along with remotely commissioning a given TEKO DAS. The course is broken up over multiple days to maximize the student's schedule.

Target Audience

JMA customer, partner and system Integrator RF Engineers, Field Technicians, and RF Performance Engineers.

Prerequisite

Laptop computer, full licensed version of Microsoft Excel. Working knowledge of RF and current air-link modulation schemes (4G/5G). Familiarity and use of RF field test and measurement equipment. Web camera and microphone.

JMA

XRAN

XRAN Platform Overview

Webinar and On-demand learning

Overview

This 1.5-hour interactive course provides an overview on the JMA XRAN platform components, main features, architecture, specifications, and application advantages.

Target Audience

JMA customers, partners, sales, radio planners, system integrators and network operations staff.

Prerequisite

None

Exploring XRAN: TEKO DAS

Webinar and On-demand learning

Overview

This 1.5-hour interactive course provides a closer look into the XRAN platform BBU and TEKO DAS CPRI POI component features, architecture, DAS network applications, design considerations, implementation and configuration tools.

Target Audience

JMA customers, partners, sales, system integrators, radio planners, and network operations staff.

Prerequisite

XRAN Product Overview course, working knowledge of Distributed Antenna Systems.

XRAN BBU Activation and RF Commissioning

Instructor Led, Virtual

Overview

This 12-hour hands-on technical course will enable experienced RF Systems Engineers to effectively install XRAN server config files, verify server operation, conduct XRAN BBU Activation and RF Commissioning.

Target Audience

Wireless Service Provider Systems and RF Engineering staff with experience commissioning radio access equipment and Distributed Antenna Systems.

Prerequisite

Working knowledge of RF, LTE 4G/5G, Network Radio applications, radio access equipment operation, integration, Distributed Antenna Systems, and commissioning techniques and tools.

XRAN Operation, Administration and Maintenance (OA&M)

Instructor Led, Virtual

Overview

Virtual, 10-hour, hands-on, instructor led technical course will enable experienced RF Engineers and Field Operations Staff to effectively operate, maintain and troubleshoot the JMA Wireless XRAN platforms. The 10-hours of instruction are broken out over a multi-day format for effective in-class time and student lab assignments.

Target Audience

Wireless Service Providers, Private LTE, and 3PO's Network and Field Operations staff who have experience maintaining radio access network equipment and Distributed Antenna Systems.

Prerequisite

Working knowledge of RF, Network Radio applications, radio access equipment operation, integration, and commissioning techniques and tools.

XRAN Performance Monitoring and Optimization

Instructor Led, Virtual

Overview

This 12-hour, hands-on technical course will enable experienced RF Engineers to effectively monitor and optimize the performance of the XRAN and CellHub platform.

Target Audience

Wireless Service Provider RF Engineering staff with experience in radio access network optimization and performance monitoring.

Prerequisite

Working knowledge of RF, LTE 4G/5G, radio access networks, equipment operation, performance monitoring and optimization.

JMA

XRAN

CellHub

Exploring XRAN: CellHub

Webinar and On-demand learning

Overview

This 1.5-hour interactive course provides an overview on the JMA XRAN CellHub product line components, main features, architecture, installation requirements, and software tools for system configuration. The course explores bandwidth, fiber and RF sector design planning and considerations.

Target Audience

JMA customers, partners, sales, radio planners, system integrators and network operations staff.

Prerequisite

XRAN Product Overview course, Basic knowledge of Radio Frequency (RF) planning, and Distributed Antenna Systems (DAS)

CellHub CBRS & CBSD Overview

Instructor Led, Virtual

Overview

This 1.5-hour interactive webinar provides a closer look into the XRAN CellHub CBRS architecture, CBRS parameters, CBSD Registration and Grant process considerations.

Target Audience

JMA customers, Certified Professional Installers (CPI), partners, sales, system integrators, radio planers, and network operations staff.

Prerequisite

Exploring XRAN: CellHub course

XRAN CellHub Activation & Operation

Instructor Led, Virtual

Overview

This 12-hour virtual, hands-on, instructor-led course enables experienced Radio Access Network and Network Systems Engineers to effectively install, activate and test the CellHub platform. CPI's will also learn how to activate and register the CellHub Radio's (CBSD's). The 12-hour course is broken up over multiple days to maximize the student's schedule.

Target Audience

JMA Customers and Partners System Network Engineers, Radio Access Network Engineers and CBRS Certified Professional Installers (CPI's).

Prerequisite

XRAN Product Overview, Exploring XRAN: CellHub, CellHub and CBRS Courses. working knowledge of 4G and 5G NR architecture, Core Network, Radio Frequency (RF) planning, and 5G applications. Qualified CBRS Certified Professional Installer (CPI) for those working with CBRS.

JMA

XRAN

IOTA

Exploring XRAN: IOTA

Webinar and On-demand learning

Overview
This 1.5-hour interactive course provides an overview on the JMA XRAN IOTA product components, main features, architecture, installation requirements, and software tools for system configuration and monitoring.

Target Audience
JMA customers, partners, sales, system integrators, radio planners, and network operations staff.

Prerequisite
XRAN Product Overview course, Basic knowledge of Radio Frequency (RF) planning, 5G NR applications.

XRAN IOTA Overview and Installation

Instructor Led, Virtual

Overview
This 4-hour technical hands-on course provides students an overview on the JMA XRAN IOTA System with the information necessary to effectively install IOTA radios.

Target Audience
JMA Partners, System Integrators, and Network Operations staff.

Prerequisite
XRAN Product Overview course, Basic knowledge of Radio Frequency (RF) planning, and 5G NR applications.