Statement of Work (SOW)

VIAVI CX200 SiteXpert Communication Service Monitor

1.0 Scope

The Department of the Air Force, AFLCMC/C3BYC requires the procurement of four (4) VIAVI CX200 SiteXpert Communication Service Monitors, complete with associated options, standard accessories, and rugged transit cases. This acquisition will enable maintenance personnel and technicians at receiving sites to conduct advanced frequency, power, and modulation analysis for both analog and digital Land Mobile Radio (LMR) systems and Tactical Data Link (TDL) radio systems in the field.

A primary capability of this diagnostic test asset is to verify, measure, and analyze RF signal characteristics of secure tactical communications systems, specifically including digital LMR and TDL radio equipment. This ensures critical communication assets remain mission-ready and fully interoperable on the modern battlefield.

2.0 Applicable Documents and Product Highlights

The contractor shall ensure that all provided systems meet the commercial-off-the-shelf (COTS) performance, calibration, and industry standards detailed below. The VIAVI CX200 SiteXpert is an advanced communications service monitor that incorporates industry-standard test capabilities into a field-portable package.

The Contractor shall ensure that all provided software, hardware, and configurations comply with the following standards and directives:

Document / Standard	Description
TIA-102 Series (APCO P25)	Land Mobile Radio (LMR) standards for digital public safety radio communications, including Phase 1 Conventional and Phase 2 TDMA operations.
ETSI TS 102 361	Digital Mobile Radio (DMR) standards for commercial and professional LMR networks.
ETSI EN 300 392	Terrestrial Trunked Radio (TETRA) specifications for high-security voice and data networks.

ISO 9001:2015	Calibration compliance and quality management assurance for test and measurement equipment (relevant to CX200-C9001 Calibration Certificates).
NIST Traceability	Measurement standards and calibration protocols traceable to the National Institute of Standards and Technology (NIST).
AFI 33-200	Information Assurance compliance guidelines for secure file transfer and local interface network security.

CX200 Product Highlights:

1. Portable, durable, and ruggedized design built to withstand harsh environments (30 G Shock rating).
2. Multi-tab user interface with QuickSwitch™ feature for rapid switching between Duplex, Transmit, and Receiver tests.
3. Automated radio testing and alignment optimizing performance with minimal user input.
4. Comprehensive modulation analysis tools, including distribution plots, eye diagrams, and constellation plots.
5. Smart Access Anywhere application for remote control and file transfer.
6. Native support for modern LMR technologies including Analog, P25 (Phase 1 & 2), DMR, NXDN, and TETRA.

This procurement includes the following quantities, configurations, and part numbers:

- **4 EA: CX200-FAMILY** (CX200 Configurator)
- **4 EA: CX200** (Communications Service Monitor Base Unit)
- **4 EA: CX200-SPSB** (External Power Sensor Support)
- **4 EA: CX200-F3GHZ** (3GHz Frequency Range Extension)
- **4 EA: 92793** (5017D Bird Wideband Power Sensor)
- **4 EA: CX200-ACH** (Carrying Case, Hard Transit)
- **4 EA: CX200-ABATC** (External Battery Charger)
- **4 EA: CX200-ABAT** (Internal Battery, 98-Watt-Hour, Lithium-Ion)
- **Standard Accessory Kit (Included with each Base Unit):**
    - AC/DC Power Adapter
    - AC Power Cord – US
    - AC Power Cord – China
    - AC Power Cord – Europe

- AC Power Cord – UK
- Internal Battery, 98 Watt-Hour, Lithium-Ion (Qty 1)
- Front Cover
- Shoulder Strap
- Side Strap (Qty 2)
- Stylus
- Adapter, N(m) to BNC(f) (Qty 3)
- StrataSync (Cloud-based asset management)
- Smart Access Anywhere application license

3.0 Contractor Requirements & Tasks

The Contractor shall perform the following tasks and provide the specified deliverables to meet the AFLCMC/C3BYC mission objectives:

Task / Requirement	Description
Hardware Delivery	Deliver four (4) complete VIAVI CX200 systems, including all baseline hardware, standard accessory kits, and requested optional modules.
Transit Protection	Deliver four (4) heavy-duty CX200-ACH Hard Transit Cases to protect the diagnostic equipment during shipments, field transit, and deployment.
Delivery Logistics	Delivery shall be FCA Origin Factory, one (1) set shipped to each location listed below. The delivery schedule will be confirmed upon receipt of the order. 1. BAE Systems 22810 Three Notch Rd Lexington Park, MD 20653 2. 520th Software Engineering Squadron (SWES) Michael Hales 6137 Wardleigh Rd, Bldg 1515 Hill AFB, UT 84056-5843 3. Filius Corporation 6 Founders Blvd, Suite A El Paso, TX 79906 4. Fort Dodge CRC Testing 1649 Nelson Ave Ft. Dodge, IA 50501

Configuration	Ensure all units are configured with the required 3GHz Frequency Range Extensions, External Power Sensor capabilities, and standard calibration certs. The Contractor shall provide and affix MIL-STD-130 compliant Item Unique Identification (IUID) tags to all baseline VIAVI CX200 Communication Service Monitor units prior to delivery.
Technical Training	Provide a structured, comprehensive technical training program (detailed in Section 3.1) to ensure receiving sites are fully qualified to operate the system.
Helpdesk Support	Provide an engineering customer support helpdesk for remote hardware and software troubleshooting and setup.
Support & Documentation	Provide access to remote command interface documentation, user manuals, and the StrataSync cloud-based software application for test-data management.

3.1 Technical Training Program Requirements

To ensure that all sites receiving a CX200 unit possess sufficient operational capability and troubleshooting independence, the Contractor shall provide a Technical Training Program meeting the following requirements:

- **Training Delivery:** The Contractor shall provide on-site training (or remote as coordinated) for up to five (5) technicians per site location for each of the four (4) delivery sites.
- **Course Content:** Training must cover the following core areas:

    1. *System Setup and Navigation:* Understanding physical ports, power systems, and UI navigation (including the multi-tab interface and QuickSwitch™ utility).
    2. *LMR Testing Procedures:* Setup and execution of tests for Analog, P25, DMR, NXDN, and TETRA systems.
    3. *Auto-Test and Alignment:* Running automated tests, interpreting results, and troubleshooting failing radio alignments.
    4. *Sensor Integration:* Calibration and operation of the Bird 5017D Wideband Power Sensor utilizing the external power sensor support interface.
    5. *Data Management:* Utilizing the StrataSync asset management and Smart Access Anywhere applications to extract, save, and analyze test reports.
    6. *Tactical Data Link RF Analysis:* Practical configuration of the test set to capture, monitor, and analyze RF transmissions.

- **Training Materials:** The Contractor shall provide digital copies of all training slides, quick-reference sheets, and practical lab manuals to training participants for ongoing site reference.

4.0 System Technical Specifications

The CX200 Communication Service Monitors delivered must meet the following minimum technical and operational specifications out-of-the-box:

Category	Specification Requirement
Design & Chassis	Dimensions: 11.2 in x 6.8 in x 4.2 in; Weight: ~8.6 lbs (Base Unit). Must be ruggedized up to a 30 G Shock rating.
Display	8-inch (23 cm) diagonal color touchscreen display.
Power	Internal 98 Watt-Hour, Lithium-Ion battery supporting up to 3 hours of continuous operation; AC/DC Power Adapter.
Frequency Range	Extended range from 1 MHz to 3 GHz (via CX200-F3GHZ option).
Test Range	-135 dBm to 0 dBm.
Hardware Interfaces	10 MHz In/Out Ref, Ethernet, multiple USB ports, RF Duplex, Micro HDMI Out, AF Inputs/Outputs.
Technology Support	Analog, P25 (Phase 1 & 2), DMR, NXDN, TETRA.
Sensors & Accessories	Must include integration with external Bird 5017D Wideband RF Power Sensor and the external sensor support module.
Transit Protection	Heavy-duty, CX200-ACH carrying case with custom-molded foam inserts sized to fit the base unit, power cords, adapters, and power sensor.

5.0 Maintenance & Support Terms

The Contractor shall provide the standard warranty and maintenance terms:

Support Phase	Details
Base Warranty	VIAVI Standard Terms & Conditions and standard hardware/software warranty, to include 24/7 helpdesk support for at least one (1) year upon government inspection and acceptance of equipment.
Calibration Services	Delivery of ISO 9001 compliant Calibration Certificate with Test Data (equivalent to CX200-C9001) with each delivered unit.
Software Management	Continuous access to StrataSync for remote asset configuration, software updates, and secure cloud storage for field test reports.