



**Kestrel TSCM™
Professional Software
Kestrel Support Profile (KSP)**

Introducing the Shearwater TSCM Ltd., **Merlin MK3** Ultra Fast Scanning Spectrum Analyzer. The next generation **Merlin MK3** retains the familiar legacy Merlin software, and now includes full Kestrel TSCM™ Professional Software integration. The **Merlin MK3** captures the ambient RF spectrum at 160 Million Samples per second, and covers a wide 50 kHz to 30 GHz frequency range. The **Merlin MK3** utilizes Ethernet control for remote operation capability. Our Kestrel Support Profile (KSP) integration provides a forward-thinking and innovative approach, taking full advantage of significant, technological advances in Software Defined Radio (SDR) principles. Our award winning Kestrel TSCM™ Professional Software is a full featured professional level, RF collection and analysis resource that is packed with operator centric, and work-flow based functionality, designed and developed in Canada by the Technical Research and Standards Group (TRSG) of Professional Development TSCM Group Inc. Our Software Development Group (SDG) continues to develop and refine innovative deployment methods, features and advanced functionality. ⚡



Preliminary Product Information

Introducing the
**Merlin MK3 Ultra
Fast Spectrum
Analyzer with
Kestrel TSCM™
Professional
Software
integration**



Key Features

20150415v1.04

Merlin MK3

The Merlin MK3 legacy software interface supports multi-platform capability and can utilize an iPad, MAC, and PC based computing platform. ⚡

Wireless capability is provided for rapid deployment. ⚡

Multi-trace compare is supported for up to ten scans at one time. ⚡

Analog and Digital video demodulation is available. ⚡

External antennas can be utilized and a hand-held directional is included for basic directional-finding. ⚡

Mains and cable monitoring with a switchable interface is supported for power line and other cable testing. ⚡

The Merlin MK3 is supplied in a rugged military standard transport case. ⚡

The unit supports dual battery "hot swap" for mains and battery operation. ⚡

"Innovation is Simply the Beginning..."

Specification Overview (Preliminary) *

Frequency Range: **50 kHz - 30 GHz**
Data Collection: **160 (million Samples / Second)**
Real-Time Bandwidth: **40 MHz (16 Bit)**
Streaming Digitized IF or IQ
FFT Speed: **400,000 / Second @ 625 kHz RBW**
FPGA Processor Rate: **Up to 640 MB / Second**
Sweep Speed (10 kHz RBW): **40 GHz / Second**
Resolution Bandwidth (RBW): **5 kHz to 5 MHz**
Video Demodulation: **Analog / Digital**
Software: **Merlin Legacy and fully Integrated Kestrel TSCM™ Professional Software Support Profile (KSP)**
Power: **Mains / Battery (Hot Swap)**
Dimensions: **350 x 280 x 95 mm**
Weight: **9.0 Kg**
Multiple Receiver Support: **Kestrel TSCM Professional Software**

** Merlin MK3™ is the trademark of Shearwater TSCM Ltd., and product specifications are subject to change without notice. Visit www.shearwatertscm.com for current specifications, information and product availability.*

Professional Development TSCM Group Inc.

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Kestrel TSCM™

Signal Intelligence Support System (SISS)™

The Kestrel TSCM™ Professional Software fully supports, local and remote, Multiple Receiver Operation (MRO). Our pre-configured, Rapid Deployment Kit (RDK), includes a powerful laptop computer, and is available in single, dual or multiple receiver, ready to field deploy systems. The Kestrel TSCM™ Professional Software, is industry leading Canadian Software Defined Radio (SDR) technology that is operator centric and work-flow oriented. The ability to hand-off both the spectrum and demodulation functions across any number of receivers and analyzers is fully supported. Kestrel Support Profiles (KSP) are available for the Shearwater, (Merlin MK3), Signal Hound (SA44B, SA124B, BB60A, BB60C), Rohde & Schwarz, (EM100, PR100), Anritsu (MS2722C, MS2723C, MS2724C, MS2725C, MS2726C), and our the ThinkRF (WSA5000-408, WSA5000-418, WSA5000-427), Tektronix RSA306-USB, CRFS RFeye. ✈



Configuration

Kestrel TSCM™ Professional Software

Our software is a TSCM specific, operator centric, low cost, full featured, Canadian designed and developed application, with full support for select, industry leading search receivers and spectrum analyzers. ✈

The Kestrel TSCM™ Professional Software fully supports, single, dual and multiple receiver, spectrum and demodulation hand-off across any number and type of supported search receivers and spectrum analyzers. ✈

Multiple spectrum bands and custom frequency allocations are fully supported across multiple search receivers and spectrum analyzers. ✈

Our Dynamic Alert Annunciator (DAA) fully supports multiple alert zone, band allocation or signal level detection and alert triggered recording control. ✈

We strongly recommend Dell Alienware M14 / M17 mid-level high performance machines for use with the Kestrel TSCM™ Professional Software.

"Innovation is Simply the Beginning..."

Standard Features

- Multiple Receiver Operation (MRO) ✈
- Differential Signal Analysis (DSA) ✈
- Global Positioning System (GPS). ✈
- Minimum Detection Amplitude (MDA). ✈
- Harmonic Signature Threshold (HST). ✈
- Dynamic Alert Annunciator (DAA). ✈
- Differential Signal Analysis (DSA). ✈
- Live View Analysis (LDA). ✈
- Audio Demodulation and Analysis (ADA) ✈
- Audio Demodulation Visualizer (ADV). ✈
- Kestrel Wave Recorder (KWR). ✈
- Session Report Generator (SRG). ✈
- Remote Network Operation (RNO). ✈
- Spectrum Profile Files (SPF). ✈
- Channel Profile Masks (CPM). ✈
- Advanced Signal Intelligence Database (ASID). ✈

Please contact our office for product information, technical specifications, and sales support. Specifications are subject to change without notice.

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