Specification:

Weight	1.6Kg（With Battery）
Dimension	254 x 79 x 280 mm（L x W x H）
Excitation source	Up to 50KV/200μA, tube pressure and tube flow can be adjusted freely, Target Ag (standard), Au(optional), W(optional), Rh(optional).
Detector	BOOST Si-PIN detector for XRF8GoldMate ate.
Range of detection	All elements between Mg and U.
Display system	Industrial resistive touch screen with screen size of 4.3".
	Professional operating system and software.
	Multiple languages including English and Chinese.
	And it automatically adjusts display brightness according to the environment brightness.
Data processing	32GB memory.
	USB, Bluetooth, wifi can connect the device to the Internet, repair and setup can be done remotely. Data can be exported as EXCEL or PDF. Users can customize the reports by adding their company logos, addresses, test results, spectrum and others (such as product description, origin and batch number).
Heat dissipation	Equipped with a dedicated T-shaped radiator to dissipate the heat；no need to wait for cooling of detector.
Safety	Built-in double beam technology can automatically sense whether there is a sample at the measurement window. This is also a safety and protection feature.
	Waterproof, dust-proof and shockproof suitcase.
	Safety Band.
Power supply system	Intelligent battery with MSBUS bus, real-time monitoring battery, spare battery can directly check the remaining capacity of the battery, the battery complies with air dangerous goods transport regulations. A single battery can work for about 8 hours..

Handheld Mineral analyzer

XRFM629/XRFM634

INNOVA handheld XRFM6 analyzer is suitable for field multi-element analysis of ores. It can be used for quick and comprehensive ore study during field analysis. It has low sample requirements, but provides accurate test results. It is capable of accurately analyzing high concentration samples, thus avoiding verification tests in the laboratory. In light and compact volume, the analyzer gives a full play in simpler andeasier prospecting, exploration, and multi-element detection and analysis of various geological samples.

Features:

1. **X-ray tube light source, multi-beam filtration technology:** HP's Personal Digital Assistant (HP Palmtop) for the excellent detection range, speed and accuracy as well as upgrade potential.
2. **Advanced and versatile X-ray data modes:** Using the Compton normalization method, "internal standards" can be used for quantitative analysis without special correction.
3. **Basic parameter analysis:** The semi-quantitative analysis mode is suitable for testing samples composed of various elements and with uneven structural density.
4. **Experimental correction method:** Use the "calibration curve" for correction to generate a new calibration curve.
5. **Use the high-level spectrum recognition software:** The spectrum can be displayed on the screen.
6. **Conduct spectrum comparison and analysis based on internal standards.**

Main applications:

XRFM6 handheld ore analyzer can be used for field analysis of a variety of ores.

lt is widely applied in detection andanalysis of ores, as well as slag refining analysis and archaeological research: lt is applicable to all naturalores from phosphorus to uranium, slag, rock, mud and slurry, including gold ore（Au）, silver ore(Ag), copper ore(Cu), ironore(Fe), tin ore(Sn), zinc ore(Zn), nickel ore(Ni), molybdenum ore(Mo), iridium ore(Ir), arsenic ore(As), lead ore(Pb), titanium ore(Ti), antimonyore(Sb), manganese ore(Mn), vanadium ore(V), iodine ore(I), sulfurore(S), potassiurm ore(K), phosphate ore(P), uranium ore(U), etc.

Test samples include solid, liquid, dust, powder, solid, fragment, filtrate, film and other tangible objects.

Protection Safe Box

The device is protected by a protection safe box for waterproof, dustproof, and drop-proof. The box meets the requirement in ASTM 05276-1998 (2009) and is tested in the cargo container drop method.

Specification:

Main Configuration	1. One ore analyzer host; 2. One standard sample:3. Two original rechargeable lithium batter ies 4. Charger andpower cord; 5. One USB flash disk (32G): 6. Five reinforcedpolypropylene films, 7. One standard portable moisture-prootand shockproofbox.
Standard mode	Ore mode, optional mode: alloy analysis mode and soil analysismode.
Selfdiagnosisfunction	This product is able to automatically diagnose the hardware.software, network, and battery, and generate logs for quicktroubleshooting.
Operating system	Secure Windows CE 6.0 operating system
Test method	Basic parameter method, supporting the empirical coefficientmethod to correct the point contact or trigger control of testing.without long-time triggering in the whole test process. Or, pressand hold the trigger to test samples as requested by customers.
Filter	8 filters, for automatically switching based on test elements;
Excitation source	High-power micro straight X-ray tube, W target material, 4Whigh-power X-ray tube, tube voltage 50K V, current up to 100pA;KMX technology, higher X-ray count rate, ultra-low electronicnoise. No external standard sample is required in each test.Energy is automatically calibrated and checked during testing.

Detector	SI PIN detector for XRFM629 SDD detector for XRFM634
Test elements	Ti, V, Cr, Mn, Fe, Co, Ni, Cu, Zn, Hf, Ta, W, Pb, Bi, Zr, Nb, Mo, Cd, Sn, Sb, Re, In, Au, Ag, Pt, Pd, Ru, Rh, lr,Totaling 29 elements.--XRFM629 Mg, Al, Si, S ,P, Ti, V, Cr, Mn, Fe, Co, Ni, Cu, Zn, Hf, Ta, W, Pb, Bi, Zr, Nb, Mo, Cd, Sn, Sb, Re, In, Au, Ag, Pt, Pd, Ru, Rh, lr,Totaling 34 elements.--XRFM634

XRFM9Mate/Pro

Features:

1. Small,light and easy to carry.
2. High-speed processing chip, advanced algorithm and high-responsive software, resulting in even faster analysis.
3. High-performance X-ray Tube, Ultra-high Resolution Detector combined with Digital Multi-channel Processing Technology,
4. Industrial resistive touch screen, superior to capacitor screen in back-light and clearer against sunlight in the field. At the same time, people don't need to take off gloves when they are opreating machine in some particular environment.
5. Intelligent battery management exerts a real-time monitoring of the residual capacity of battery and backup battery through MSBUS bus.
6. Automatic switch to standby mode when not used and recovery after the machine is picked up, which saves power and extends working time; moreover, XRF has a gravity sensing system which shuts down instrument automatically when it accidentally fallsdown, another safety consideration; XRF will also give out alarm when ambient temperature or humidity exceeds the scope of application.
7. On XRF, users can customize the reports by adding their company logos, addresses, test results, spectrum and others (such as product description, origin of products and batch number).
8. XRF is built with double beam technology which can automatically sense whether there is a sample at the measurement window. This is also a safety and protection feature. The brightness of the display of XRF is automatically regulated according to environment brightness.
9. XRF can be configured and maintained in a remote way via Internet.
10. XRF's new algorithm optimizes the spectral resolution, so lower detection limits can be achieved, which are comparable with even large-scale lab instruments.
11. XRF Ultra-short optical™ path design can significantly improve light element excitation effects, without the fall/fill condition.
12. XRF has a built-in environmental sensing system covering conditions such as temperature, dust humidity and others.

Analysis of ore types:

1. Iron ore (hematite, titanium, iron, etc.)
2. Copper (chalcopyrite, cuprite, malachite etc.)
3. Chromium (chromium spinel, chromite, chrom bismite etc.)
4. Molybdenum (copper molybdenum, molybdenum, tungsten and molybdenum ore etc.)
5. Tungsten (tin tungsten scheelite, wolframite, etc)
6. Tantalum ore (tantalite columbite, pyrochlore, etc.)
7. Lead-zinc ore (galena, sphalerite, cerussite etc.) nickel laterite ore, copper nickel sulphide etc.
8. Gold in ore or alluvial gold detection

Specification:

Weight	1.6Kg（With Battery）
Dimension	254 x 79 x 280 mm （L x W x H）
Excitation source	Up to 50KV/200μA, tube pressure and tube flow can be adjusted freely, Target Ag (standard), Au(optional), W(optional), Rh(optional).
Detector	BOOST Si-PIN detector for XRFM9Mate.
	SDD detector for XRFM9Pro.
Range of detection	All elements between Mg and U.
Display system	Industrial resistive touch screen with screen size of 4.3".
	Professional operating system and software.
	Multiple languages including English and Chinese.
	And it automatically adjusts display brightness according to the environment brightness.
Data processing	32GB memory.
	USB, Bluetooth, wifi can connect the device to the Internet, repair and setup can be done remotely. Data can be exported as EXCEL or PDF. Users can customize the reports by adding their company logos, addresses, test results, spectrum and others (such as product description, origin and batch number).
Heat dissipation	Equipped with a dedicated T-shaped radiator to dissipate the heat；no need to wait for cooling of detector.
Safety	Built-in double beam technology can automatically sense whether there is a sample at the measurement window. This is also a safety and protection feature.
	Waterproof, dust-proof and shockproof suitcase.
	Safety Band.
Power supply system	Intelligent battery with MSBUS bus, real-time monitoring battery, spare battery can directly check the remaining capacity of the battery, the battery complies with air dangerous goods transport regulations. A single battery can work for about 8 hours.

Handheld soil analyzer

XRFS529/XRFS534

XRFS5 handheld X-ray fluorescence analyzer integrates optoelectronics, microelectronics, semiconductors and computer technology as a new generation of handheld XRF products with independent intellectual property rights.

The XRFS5 handheld XRF (handheld spectrometer) soil heavy metal analyzer uses a new large-screen high-resolution LCD and a new digital multi-channel data processor for handheld analysis of heavy metal elements in the soil.

XRFS5 gives in-situ testing of pollutants and soil restoration analysis, i.e. making effective testing of heavy metal elements, including mercury, cadmium, lead, arsenic, copper, zinc, nickel, cobalt, vanadium, chromium, manganese and others, or other elements as requested by customers. The analyzer is small in volume, light in weight and able to carry away for easy testing. With excellent performance comparable to PCs, it is good at testing heavy metals with low content in soil.

Features:

1. Intelligent one-touch detection and intelligent judgement of mercury, cadmium, lead, arsenic, copper, zinc, nickel, cobalt, vanadium, chromium, manganese, etc. in contaminated soil or a variety of elements required by customers.
2. Built-in GPS, can search for satellite signals in the field at any time to determine the geographical location of the sampling point, quickly investigate large-scale soil geological contamination areas, make contamination maps, real-time monitoring of the contamination of each area, but also various types of agricultural land, residential land, commercial land, industrial land, heavy metal contamination of the environment evaluation.
3. It is also capable of rapidly tracking on-site pollution anomalies, effectively identifying "polluted" areas and the boundaries of polluted areas, and conducting real-time investigations.

Protection Safe Box

The device is protected by a protection safe box for waterproof, dustproof, and drop-proof. The box meets the requirement in ASTM 05276-1998 (2009) and is tested in the cargo container drop method.

Specification:

Weight	Host: 1.50kg; With Battery: 1.65kg
Dimension	250mm x 75mm x 270mm (L*W*H)
Excitation source	High-power high-performance X-ray microtube
Target	5 available targets for ray tubes are: gold (Au), silver (Ag).tungsten (W),tantalum (Ta),palladium (Pd)
Voltage	35kV-50kV Voltage (Changeable)
Filter	A variety of selectable filters, automatically adjusted according to different tested objects
Detector	SI PIN detector for XRFS529 SDD detector for XRFS534
Detector refrigeration temperature	Peltier effect semiconductor refrigeration system
Standard film	316 external standard films/window protection cover (internal plus version standard films available)
Power supply	2 lithium battery (7.2v\6600mAh)
Processor	High-performance ARM pulse processor
Operating system	Windows CE6.0
Data transmission	USB flash disc with two-way interface (32G)
Standard mode	Alloy Plus 6.0
Data processing	32G large-capacity data storage card: ≥80,000 sets of data and spectrograms
Display screen	High-resolution TFT industrial-grade colored high-definition touch screen, it is ergonomic, sturdy, dust-proof, and waterproof, clearly visible under any light conditions.
Outline design	The integrated designed body is sturdy, waterproof, dustproof, antifreeze, shockproof, and can be used normally in harsh environments.
Safe operation	“One key" detection, auto-lock, detection auto-stop functions. The X-raywill automatically be turned off if there is no sample in front of thedetection window for 2 seconds. 3/2 of the shell of the device is covered with a 6061 aluminum alloy frame design, with better X-ray blockage.
Detection report	Customized detection report available as per the customers' demands
Element analysis	Ti, V, Cr, Mn, Fe, Co, Ni, Cu, Zn, Hf, Ta, W, Pb, Bi, Zr, Nb, Mo, Cd, Sn, Sb, Re, In, Au, Ag, Pt, Pd, Ru, Rh, Ir,Totaling 29 elements.--XRFS529 Mg, Al, Si, S ,P, Ti, V, Cr, Mn, Fe, Co, Ni, Cu, Zn, Hf, Ta, W, Pb, Bi, Zr, Nb, Mo, Cd, Sn, Sb, Re, In, Au, Ag, Pt, Pd, Ru, Rh, Ir,Totaling 34 elements.--XRFS534

XRFS7Mate/Pro

Elements To Be Analyzed And Test Modes:

Test modes of XRFS7 Mate/Pro and elements covered	
Analysis mode	Analysis elements
XRF500Gold Mate/Pro	Standard configuration mode analysis range, such as special elements, can be added can analyze K，Ca，Ti，V，Cr，Mn，Fe，Co，Ni，Cu，Zn，As，Se，Rb，Sr，Y，Zr，Nb，Mo，Ag，Cd，Sn，Sb，W，Re，Pd，Au，Hg, Pb，Bi, Ba, totaling 31 elements

Features:

1. Small,light and easy to carry.
2. High-speed processing chip, advanced algorithm and high-responsive software, resulting in even faster analysis.
3. High-performance X-ray Tube, Ultra-high Resolution Detector combined with Digital Multi-channel Processing Technology, yielding super-high detection resolution.
4. Indicator lights flash on both sides for safety purposes during measurement, i.e., the built-in double beam technology will automatically sense whether there is a sample at the measurement window.
5. Industrial resistive touch screen, superior to capacitor screen in back-light and clearer against sunlight in the field. At the same time, people don't need to take off gloves when they are opreating machine in some particular environment.
6. XRF utilizes anti-slip, abrasion resistance and streamlined design, which is light and easy to carry. It also integrates the new high speed digital multi-channel technology, the new library grade.
7. Intelligent battery management exerts a real-time monitoring of the residual capacity of battery and backup battery through MSBUS bus.
8. Automatic switch to standby mode when not used and recovery after the machine is picked up, which saves power and extends working time; moreover, XRF has a gravity sensing system which shuts down instrument automatically when it accidentally falls down, another safety consideration; XRF will also give out alarm when ambient temperature or humidity exceeds the scope of application.
9. XRF adjusts air pressure factor automatically based on altitude it has detected. This function increases excitation effect of light elements by 40% and that of rare earth elements by 30%.
10. On XRF, users can customize the reports by adding their company logos, addresses, test results, spectrum and others (such as product description, origin of products and batch number).
11. XRF is built with double beam technology which can automatically sense whether there is a sample at the measurement window. This is also a safety and protection feature. The brightness of the display of XRF is automatically regulated according to environment brightness.

12. XRF can be configured and maintained in a remote way via Internet.
13. XRF can build a three dimensional element content distribution graph allowing for a fast estimate of mineral reserves or the extent of geological disaster with the built-in GPS for latitude and longitude reading combined with a 3rd party GIS analysis software.
14. XRF's new algorithm optimizes the spectral resolution, so lower detection limits can be achieved, which are comparable with even large-scale lab instruments.
15. XRF Ultra-short optical™ path design can significantly improve light element excitation effects, without the fall/fill condition.
16. XRF has a built-in environmental sensing system covering conditions such as temperature, dust humidity and others.

Specification:

Weight	1.6Kg（With Battery）
Dimension	254 x 79 x 280 mm（L x W x H）
Excitation source	Up to 50KV/200μA, tube pressure and tube flow can be adjusted freely, Target Ag (standard), Au(optional), W(optional), Rh(optional).
Detector	BOOST Si-PIN detector for XRFS7Mate.
	SDD detector for XRFS7Pro.
Range of detection	All elements between Mg and U.
Display system	Industrial resistive touch screen with screen size of 4.3".
	Proprietary operating system software and sound waves.
	Multiple languages including English and Chinese.
	And it automatically adjusts display brightness according to the environment brightness.
Data processing	32GB memory.
	USB, Bluetooth, wifi can connect the device to the Internet, repair and setup can be done remotely. Data can be exported as EXCEL or PDF. Users can customize the reports by adding their company logos, addresses, test results, spectrum and others (such as product description, origin and batch number).
Heat dissipation	Equipped with a dedicated T-shaped radiator to dissipate the heat；no need to wait for cooling of detector.
Safety	Built-in double beam technology can automatically sense whether there is a sample at the measurement window. This is also a safety and protection feature.
	Waterproof, dust-proof and shockproof suitcase.
	Safety Band.
Power supply system	Intelligent battery with MSBUS bus, real-time monitoring battery, spare battery can directly check the remaining capacity of the battery, the battery complies with air dangerous goods transport regulations. A single battery can work for about 8 hours..