Anritsu Advancing beyond

Universal RF Unit

MD8190A

400 MHz to 6.0 GHz

Compact Mobile Battery-Powered SDR

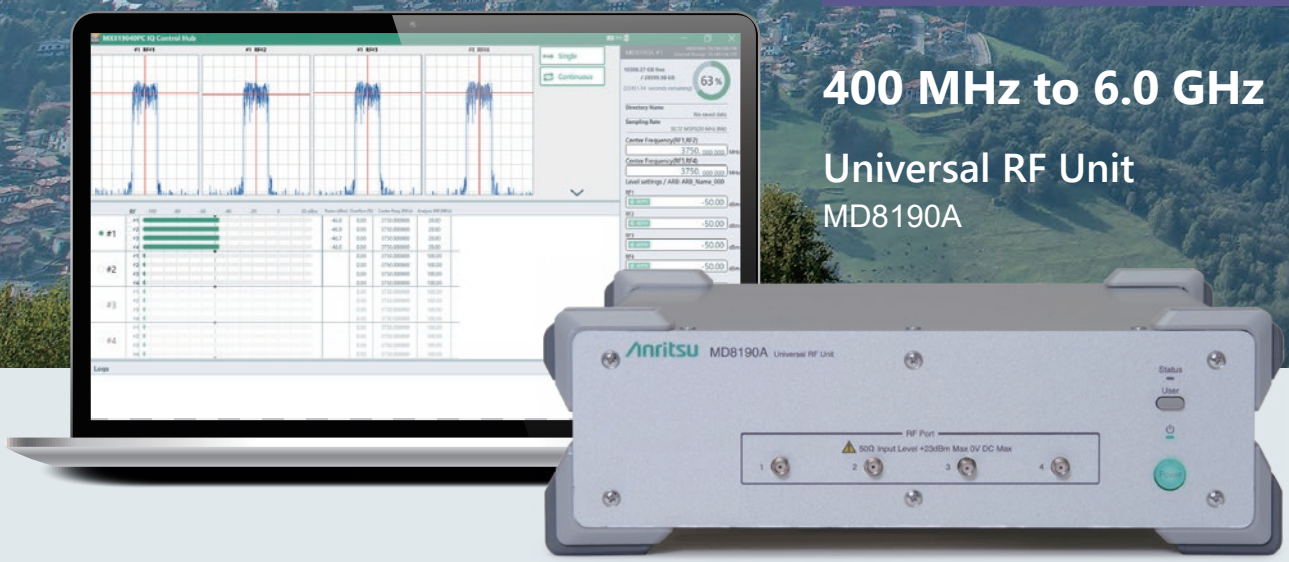
100 MHz × 4ch

Stores **16** GB of IQ data

400 MHz to 6.0 GHz

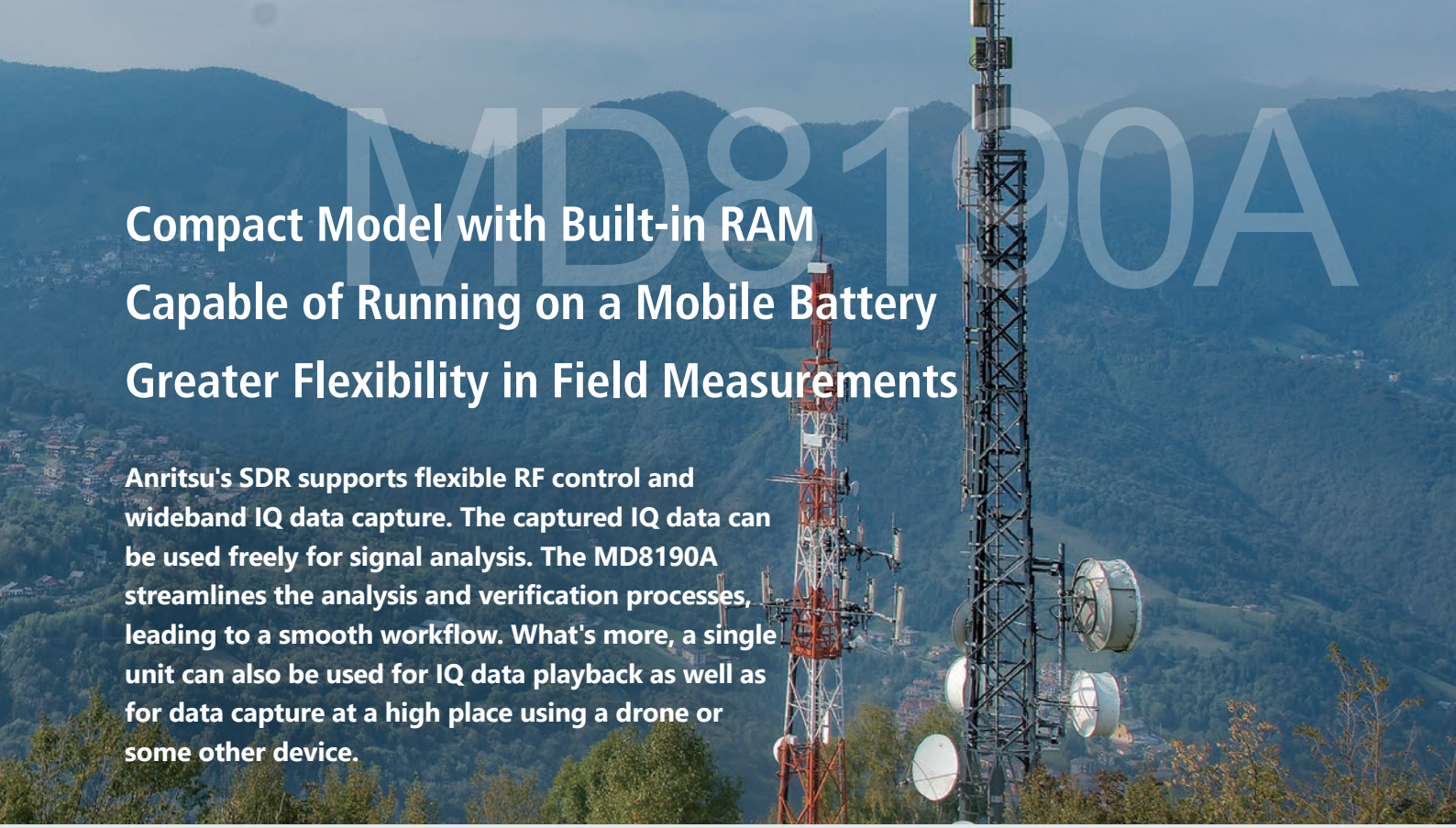
Universal RF Unit

MD8190A



Smallest and Lightest in its Class
Enables Data Capture in Hard-to-reach Locations

- Supports the reception-only mode using a commercially available 60W-class mobile battery
- Enables data capture at elevated locations and in remote areas when mounted on a drone or robot



Compact Model with Built-in RAM Capable of Running on a Mobile Battery Greater Flexibility in Field Measurements

Anritsu's SDR supports flexible RF control and wideband IQ data capture. The captured IQ data can be used freely for signal analysis. The MD8190A streamlines the analysis and verification processes, leading to a smooth workflow. What's more, a single unit can also be used for IQ data playback as well as for data capture at a high place using a drone or some other device.

A Single Unit Fully Supports both RF Transmission and Reception

Two pairs of independent RF ports allow you to set the frequency, level, and transmission/reception freely.

A modular structure enables the frequency band to be expanded flexibly.

The variable sampling frequency suppresses the amount of IQ data according to the application.

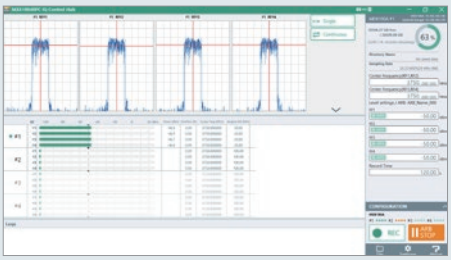
A Storage PC can Record 16 GB or More of Data

IQ data can be transmitted directly to the control PC via the built-in RAM (DDR).

A stable data capture environment allows for long-duration data recording.

Available Dedicated Measurement Software

IQ Control Hub Software



IQ signal playback function (both DL and UL)

Field Simulation Test Studio

Check of the radio propagation path conditions of the received signal

Virtual ST-R

From chipset testing to IoT device protocol verification

Applications

- Advanced L1 research for 6G
- Interference analysis and signal quality evaluation
- PoC development for external research institutes and businesses
- AI/ML algorithm verification
- Transmission and reception testing using custom waveforms

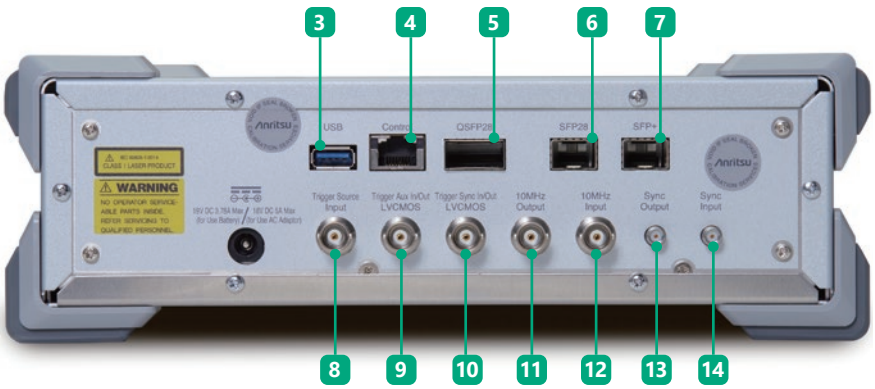
MD8190A Panels

Front Panel

1 Sub (Simplex) Input
RF Input Connectors; Sub-connectors

2 Power Button

Back Panel



3 USB
USB Port

4 Control
Ethernet connector for remote control

5 QSFP28
QSFP28 Connector

6 SFP28
SFP28 Connector

7 SFP+
SFP+ Connector

8 Trigger Source Input
External device trigger input BNC connector

9 Trigger Aux In/Out LVCMOS
Trigger input/output BNC connector

10 Trigger Sync In/Out LVCMOS
Trigger input/output BNC connector

11 10MHz Output
Equipment reference signal output BNC connector

12 10MHz Input
External reference signal input BNC connector

13 Sync Output
Sync signal output SMA connector

14 Sync Input
Sync signal input SMA connector

Specifications

Hardware Specifications

Input Properties	Frequency Range	0.4 GHz to 6 GHz
	Amplitude Measurement	Maximum input level: +23 dBm (CW), 0 VDC (nom.) Setting range: –50 to +20 dBm Accuracy*: –50 dBm ≤ set level ≤ +20 dBm ±3 dB (nom.)
	Maximum Resolution Bandwidth	100 MHz
Output Properties	Frequency	Setting range*: 0.4 GHz to 6 GHz
	Level	Setting range*: –60 to –5 dBm Accuracy*: –60 dBm ≤ set level ≤ –5 dBm ±3 dB (nom.)
Dimensions and Mass		255 (W) × 73.7 (H) × 346.9 (D) mm (excluding protrusions), ≤6 kg
Power	Connector	DC Power jack
	DC Power Supply	18 VDC, ≤5.0 A (G0385A High power AC adapter) Reference: 90 W nominal max. 19 VDC, ≤3.78 A (Omni Mobile 25600 using external battery) Reference: 72 W nominal max.
Operating Temperature		0°C to +40°C (No condensation)
Storage Temperature		–20°C to +70°C (No condensation)
EMC	Transmitted	EN 61326-1 (Class A)
	Radiated	EN 61326-1 (Class A)
	Harmonic Emissions	EN 61000-3-2 (Class A)
	Static Emissions	EN 61326-1 (Table 2)
	Electromagnetic Field Immunity	EN 61326-1 (Table 2)
	Fast Transient/Burst	EN 61326-1 (Table 2)
	Surge	EN 61326-1 (Table 2)
	Transmitted RF	EN 61326-1 (Table 2)
	Power Supply Frequency	EN 61326-1 (Table 2)
	Voltage Drop/Brown-Out	EN 61326-1 (Table 2)
Safety		EN61010-1 (Pollution Degree2) IEC 60825-1:2014 Class 1 FDA 21 CFR 1040.10 and 1040.11 Excluding deviations resulting from compliance with [LASER Notice No.56] (2019-May-8)
Functions and Features		Send and receive RF signals

*: If a single MD8190A unit is used for both RF output and input, the frequency range and level accuracy may differ.

Ordering Information

Please specify the model/order number, name and quantity when ordering.
The names listed in the chart below are Order Names. The actual name of the item may differ from the Order Name.

Model/Code	Name
MD8190A	Universal RF Unit
MD8190A-001	0.4–6GHz TRX RF Unit
MX819030A	Universal RF Platform
MX819030A-030	Universal RF Platform Basic

Note

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Specifications are subject to change without notice.

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