

Anritsu envision : ensure

Bluetooth Test Set

MT8852B



Introduction

This document provides specifications for the *Bluetooth*[®] Test Set MT8852B and lists ordering information and option and accessory codes. The MT8852B brochure is also available. The brochure provides in-depth descriptions of MT8852B applications, features, and benefits when testing a wide range of Bluetooth products.

The *Bluetooth*[®] mark and logos are owned by Bluetooth SIG, Inc. and are used by Anritsu under license

Specifications

All measurements made in compliance with Bluetooth Core Specification v1.2, 2.0, 2.1, 3.0 + HS, 4.0, 4.2 and 5.0.

Basic Rate Measurements

Basic Rate measurements made in compliance with Bluetooth RF Test Specification RF. TS. 5.0.0.

Output Power (TP/TRM/CA/BV-01-C)

Measurement Configuration

Hopping: Off or On – measure at defined, all, or any frequencies

Loopback or Tx mode

Payload: PRBS9

Packet type: DH1, DH3, DH5

Displayed Results: Average power, Peak power

Number of Measurement Frequencies: Three, default to RF Test Specification or user defined

Measurement Range: –50 to +22 dBm (average power), +23 dBm (peak power)

Resolution: 0.1 dB

Accuracy: ±1.0 dB (–35 to +20 dBm), ±1.5 dB (+20 to +22 dBm)

Power Control (TP/TRM/CA/BV-03-C)

Measurement Configuration

Hopping: Off

Loopback or Tx mode

Payload: PRBS9

Packet type: DH1, DH3, DH5

Displayed Result: Maximum power, Minimum power, Maximum step size, Minimum step size, Power at each power step

Number of Measurement Frequencies: Three, default to RF Test Specification or user defined

Measurement Range: –35 to +22 dBm (average power), +23 dBm (peak power)

Resolution: 0.1 dB

Accuracy: ±1.0 dB (–35 to +20 dBm), ±1.5 dB (+20 to +22 dBm)

Enhanced Power Control (TP/TRM/CA/BV-14-C)

Measurement Configuration

Hopping: Off

Loopback or Tx mode

Payload: PRBS9

Packet type: DH1, DH3, DH5, 2-DH1, 2-DH3, 2-DH5, 3-DH1, 3-DH3 and 3-DH5

Displayed Result

Maximum power for each packet type, Minimum power for each packet type, Maximum power step for each packet type,

Minimum power step for each packet type, Maximum power difference at any step between DHn and 2DHn or 3DHn packets

Number of Measurement Frequencies: Three, default to RF Test Specification or user defined

Measurement Range: –35 to +22 dBm (average power), +23 dBm (peak power)

Resolution: 0.1 dB

Accuracy: ±1.0 dB (–35 to +20 dBm), ±1.5 dB (+20 to +22 dBm)

Initial Carrier Frequency Tolerance (TP/TRM/CA/BV-08-C)

Measurement Configuration

Hopping: Off or On – measure at defined, all, or any frequencies

Loopback or Tx mode

Payload: PRBS9

Packet type: DH1

Displayed Results: Average initial frequency error, Maximum positive frequency error, Maximum negative frequency error

Number of Measurement Frequencies: Three, default to RF Test Specification or user defined

RF Input Measurement Range: –35 to +20 dBm

Initial Frequency Error Measurement Range: 0 to ±150 kHz

Frequency Resolution: 1 kHz

Accuracy: 500 Hz ±frequency standard

Carrier Frequency Drift (TP/TRM/CA/BV-09-C)

Measurement Configuration

Hopping: Off or On – measure at defined, all, or any frequencies

Loopback or Tx mode

Payload: 10101010

Packet type: DH1, DH3, DH5

Displayed Results: Carrier frequency drift, Drift rate

Number of Measurement Frequencies: Three, default to RF Test Specification or user defined

RF Input Measurement Range: –35 to +20 dBm

Frequency Drift Measurement Range: 0 to 200 kHz, and >2000 μ s/50 μ s

Frequency Resolution: 1 kHz

Sensitivity – single slot packets (TP/RCV/CA/BV-01-C)

Measurement Configuration

Hopping: Off or On, user selectable

Loopback only

Payload: PRBS9

Packet type: DH1

Dirty transmitter (as defined in the RF test spec): On or Off, user defined

Displayed Results: BER (percentage), Total number of bit errors and FER

Number of Measurement Frequencies: Three, default to RF Test Specification or user defined

Number of Measured Bits: 1 to 10,000 packets (216 bits to 2,160,000 bits)

Output Power Range: –90 to 0 dBm, resolution: 0.1 dB

Output Power Accuracy: ± 1 dB (–80 to 0 dBm)

BER/FER Measurement Range: 0 to 100%

BER/FER Resolution: 0.001%

Sensitivity – multi-slot packets (TP/RCV/CA/BV-02-C)

Measurement Configuration

Hopping: Off or On, user selectable

Loopback only

Payload: PRBS9

Packet type: DH3, DH5

Dirty transmitter (as defined in RF test spec): On or Off, user defined

Displayed Results: BER (percentage), Total number of bit errors and FER

Number of Measurement Frequencies: Three, default to RF Test Specification or user defined

Number of Measured Bits: 1 to 10,000 packets (for DH3, 1,464 bits to 14,640,000 bits), (for DH5, 2,712 bits to 27,120,000 bits)

Output Power Range: –90 to 0 dBm, resolution: 0.1 dB

Output Power Accuracy: ± 1 dB (–80 to 0 dBm)

BER/FER Measurement Range: 0 to 100%

BER/FER Resolution: 0.001%

Modulation Characteristics (TP/TRM/CA/BV-07-C)

Measurement Configuration

Hopping: Off

Loopback, Tx mode

Payload: 11110000 and 10101010

Packet type: DH1, DH3, DH5

Displayed Results

Frequency deviation: $\Delta f1$ max, $\Delta f2$ max, $\Delta f1$ avg, $\Delta f2$ avg, $\Delta f2$ avg/ $\Delta f1$ avg, % of $\Delta f2$ max < 115 kHz

Number of Measurement Frequencies: Three, default to RF Test Specification or user defined

RF Input Measurement Range: –35 to +20 dBm

Deviation Measurement Range: 0 to 350 kHz (peak power)

Deviation Resolution: 1 kHz

Accuracy: 1% for modulation index 0.32

Maximum Input Level (TP/RCV/CA/BV-06-C)

Measurement Configuration

Hopping: Off

Loopback only

Payload: PRBS9

Packet type: DH1

Displayed Results: BER (percentage), total number of bit errors and FER

Number of Measurement Frequencies: Three, default to RF Test Specification or user defined

Number of Measured Bits: 1 to 10,000 packets (216 bits to 2,160,000 bits)

Output Power Range: –90 to 0 dBm, resolution: 0.1 dB

Output Power Accuracy: ± 1 dB (–80 to 0 dBm)

Enhanced Data Rate (EDR) Measurements

Enhanced Data Rate measurements made in compliance with Bluetooth RF Test Specification RF. TS. 5.0.0.

EDR Relative Transmit Power (TP/TRM/CA/BV-10-C)

Measurement Configuration

Hopping: Off and On – measure at defined, all, or any frequencies
Modulations: $\pi/4$ DQPSK and 8DPSK
Packet type: 2-DH1, 2-DH3, 2-DH5, 3-DH1, 3-DH3 and 3-DH5
Loopback or Tx mode
EUT power level: Max. and Min.

Displayed Results:

Max. differential power (2-DH1, 2-DH3, 2-DH5 and 3-DH1, 3-DH3 and 3-DH5), Min. differential power (2-DH1, 2-DH3, 2-DH5 and 3-DH1, 3-DH3 and 3-DH5), average differential power (2-DH1, 2-DH3, 2-DH5 and 3-DH1, 3-DH3 and 3-DH5)

Number of Measurement Frequencies: Three, default to RF Test Specification or user defined

Measurement Range: -35 to +20 dBm (average power), +23 dBm (peak power)

Relative Power Resolution: 0.01 dB, GFSK to $\pi/4$ DQPSK and 8DPSK

Relative Power Accuracy

Relative power measurement accuracy between GFSK and $\pi/4$ DQPSK or 8DPSK, 0.2 dB typical for a power difference of <6 dB

Relative Power Measurement Range

Relative power measurement range between GFSK and $\pi/4$ DQPSK or 8DPSK, ($P_{\text{GFSK}} - 8 \text{ dB}$) < $P_{\text{DPSK}} < (P_{\text{GFSK}} + 4 \text{ dB})$

EDR Carrier Frequency Stability and Modulation Accuracy (TP/TRM/CA/BV-11-C)

Measurement Configuration

Hopping: Off and On – measure at defined, all, or any frequencies
Modulations: $\pi/4$ DQPSK and 8DPSK
Packet type: 2-DH1, 2-DH3, 2-DH5, 3-DH1, 3-DH3 and 3-DH5
Loopback or Tx mode
EUT power level: Max. and Min.

Displayed Results: Initial frequency error ω_i , Frequency error ω_o , Frequency error $\omega_i + \omega_o$, RMS DEVM (block with greatest DEVM value displayed), Peak DEVM, 99% DEVM, Average RMS DEVM (average DEVM for all blocks measured)

Number of Measurement Frequencies: Three, default to RF Test Specification or user defined

Carrier Frequency Stability Measurement Range: 0 to ± 100 kHz

Carrier Frequency Stability Accuracy: 500 Hz \pm frequency standard

Carrier Frequency Stability Resolution: 1 kHz

RMS DEVM Range: 30% $\pi/4$ DQPSK, 20% 8DPSK

RMS DEVM Resolution: 0.1% $\pi/4$ DQPSK and 8DPSK

Peak DEVM Range: 0 to 50% $\pi/4$ DQPSK, 0 to 30% 8DPSK

Peak DEVM Resolution: 0.1% $\pi/4$ DQPSK and 8DPSK

EDR Differential Phase Encoding (TP/TRM/CA/BV-12-C)

Measurement Configuration

Hopping: Off and On, user selectable
Modulations: $\pi/4$ DQPSK and 8DPSK
Packet type: 2-DH1, 2-DH3, 2-DH5, 3-DH1, 3-DH3 and 3-DH5
Number of test packets: default 100
Tx mode only

Displayed Results: Number of packets received, Number of packets with payload data errors, Percentage of errored packets

Number of Measurement Frequencies: Three, default to RF Test Specification or user defined

EDR Sensitivity (TP/RCV/CA/BV-07-C)

Measurement Configuration

Hopping: Off and On, user selectable
Modulations: $\pi/4$ DQPSK and 8DPSK
Packet type: 2-DH1, 2-DH3, 2-DH5, 3-DH1, 3-DH3 and 3-DH5
Bit threshold control: Threshold 1, 1.6 million bits, Threshold 2, 16 million bits (user editable)
Loopback only
Dirty transmitter (as defined in RF test spec): On or Off, user selectable

Displayed Results: Overall BER (displayed in exponential format), Number of bits in error, Number of packets sent by test set, Number of packets received in error by EUT

Number of Measurement Frequencies: Three, default to RF Test Specification or user defined

Output Power Range: -90 to 0 dBm, resolution: 0.1 dB

Output Power Accuracy: ± 1 dB (-80 to 0 dBm)

EDR BER Floor Performance (TP/RCV/CA/BV-08-C)

Measurement Configuration

Hopping: Off and On, user selectable
Modulations: $\pi/4$ DQPSK and 8DPSK
Packet type: 2-DH1, 2-DH3, 2-DH5, 3-DH1, 3-DH3 and 3-DH5
Bit threshold control: Threshold 1, 8 million bits, Threshold 2, 160 million bits (user editable)
Loopback only

Displayed Results: Overall BER (displayed in exponential format), Number of bits in error, Number of packets sent by test set, Number of packets received in error by EUT

Number of Measurement Frequencies: Three, default to RF Test Specification or user defined

Output Power Range: -90 to 0 dBm, resolution: 0.1 dB

Output Power Accuracy: ± 1 dB (-80 to 0 dBm)

EDR Maximum Input Level (TP/RCV/CA/BV-10-C)

Measurement Configuration

Hopping: Off and On, user selectable

Modulations: $\pi/4$ DQPSK and 8DPSK

Packet type: 2-DH1, 2-DH3, 2-DH5, 3-DH1, 3-DH3 and 3-DH5

Number of bits: default 1.6 million (user editable)

Loopback only

Displayed Results: Overall BER (displayed in exponential format), Number of bits in error, Number of packets sent by test set, Number of packets received in error by EUT

Number of Measurement Frequencies: Three, default to RF Test Specification or user defined

Output Power Range: -90 to 0 dBm, resolution: 0.1 dB

Output Power Accuracy: ± 1 dB (-80 to 0 dBm)

Bluetooth low energy Measurements

Bluetooth low energy measurements made in compliance with Bluetooth RF Test Specification RF-PHY. TS. 5.0.0.

Output power (TP/TRM-LE/CA/BV-01-C)

Measurement Configuration

EUT configured to transmit test reference packets

Packet payload: PRBS9

Displayed Results: Average power, Peak to average power

Number of Measurement Frequencies: Three, default to RF Test Specification or user defined

Measurement Range: -50 to +22 dBm (average power), +23 dBm (peak power)

Resolution: 0.1 dB

Accuracy: ± 1.0 dB (-35 to +20 dBm), ± 1.5 dB (+20 to +22 dBm)

Modulation characteristics

[TP/TRM-LE/CA/BV-05-C (BLE), TP/TRM-LE/CA/BV-10-C (2LE), TP/TRM-LE/CA/BV-13-C (BLR S = 8)]

Measurement Configuration

EUT configured to transmit test reference packets

BLE/2LE Packet payload: 11110000 and 10101010

BLE Packet payload: 11111111

Displayed Results

Frequency deviation: $\Delta f1$ max, $\Delta f2$ max, $\Delta f1$ avg, $\Delta f2$ avg, $\Delta f2$ avg/ $\Delta f1$ avg comparison, % of $\Delta f2$ max < frequency deviation limit

Number of Measurement Frequencies: Three, default to RF Test Specification or user defined

Measurement Range

RF input: -35 to +20 dBm

Deviation: 0 to 500 kHz (peak power)

Resolution

Deviation: 1 kHz

Accuracy: 1% for modulation index 0.5

Carrier frequency offset and drift

[TP/TRM-LE/CA/BV-06-C (BLE), TP/TRM-LE/CA/BV-12-C (2LE), TP/TRM-LE/CA/BV-14-C (BLR S = 8)]

Measurement Configuration

EUT configured to transmit test reference packets

BLE/2LE Packet payload: 10101010

BLR Packet payload: 11111111

Displayed Results: Carrier frequency error, Frequency drift, Drift rate

Number of Measurement Frequencies: Three, default to RF Test Specification or user defined

Measurement Range

RF input: -35 to +20 dBm

Frequency: 500 kHz

Frequency Resolution: 1 kHz

Accuracy: 500 Hz \pm frequency standard

Receiver sensitivity

[TP/RCV-LE/CA/BV-01-C (BLE), TP/RCV-LE/CA/BV-08-C (2LE), TP/RCV-LE/CA/BV-26-C (BLR S = 2),

TP/RCV-LE/CA/BV-27-C (BLR S = 8)]

Measurement Configuration

EUT configured to receive test reference packets

Packet payload: PRBS9

Full support of dirty transmitter as defined in test specification

Displayed Results: Receiver PER. Requires EUT to support HCI or 2-Wire interface for automated PER results

Number of Measurement Frequencies: Three, default to RF Test Specification or user defined

Output Power Range: -90 to 0 dBm, resolution: 0.1 dB

Output Power Accuracy: ± 1 dB (-80 to 0 dBm)

Maximum input signal level

[TP/RCV-LE/CA/BV-06-C (BLE), TP/RCV-LE/CA/BV-12-C (2LE)]

Measurement Configuration

EUT configured to receive test reference packets
Packet payload: PRBS9

Displayed Results: Receiver PER. Requires EUT to support HCI or 2-Wire interface for automated PER results

Number of Measurement Frequencies: Three, default to RF Test Specification or user defined

Output Power Range: -90 to 0 dBm, resolution: 0.1 dB

Output Power Accuracy: ± 1 dB (-80 to 0 dBm)

PER report integrity

[TP/RCV-LE/CA/BV-07-C (BLE), TP/RCV-LE/CA/BV-13-C (2LE), TP/RCV-LE/CA/BV-30-C (BLR S = 2), TP/RCV-LE/CA/BV-31 (BLR S = 8)]

Measurement Configuration

EUT configured to receive test reference packets
Packet payload: PRBS9

CRC corruption: Alternate packets

Number of test packets: Random [$100 \leq \text{RND} \leq 1500$]

Displayed Results: Receiver PER. Requires EUT to support HCI or 2-Wire interface for automated PER results

Number of Measurement Frequencies: One, default to RF Test Specification or user defined

Output Power Range: -90 to 0 dBm, resolution: 0.1 dB

Output Power Accuracy: ± 1 dB (-80 to 0 dBm)

MT8852B Signal Generator

Frequency

Frequency Range: 2.4 GHz to 2.5 GHz

Frequency Resolution: 1 kHz

Frequency Accuracy: As frequency standard ± 500 Hz

Level

Amplitude Range: -90 to 0 dBm

Amplitude Accuracy: ± 1 dB (-80 to 0 dBm)

Amplitude Resolution: ± 0.1 dB

Output Impedance: 50 Ω (nominal)

Output VSWR: 1.5:1, 1.3:1 (typical), Adjacent channels 3 or higher -40 dBc

GFSK Modulation

Modulation Index: Variable, 0.25 to 0.50 (125 kHz to 250 kHz)

Modulation Index Resolution: 0.01

Modulation Index Accuracy: 1% (nominal) for modulation index = 0.32

Baseband Filter: BT = 0.5

$\pi/4$ DQPSK Modulation

Modulation Index Accuracy: <5% RMS DEVM

Baseband Filter: BT = 0.4

8DPSK Modulation

Modulation Index Accuracy: <5% RMS DEVM

Baseband Filter: BT = 0.4

MT8852B Measuring Receiver

Frequency

Frequency Range: 2.4 GHz to 2.5 GHz

Frequency Resolution: 1 kHz

Frequency Accuracy: As frequency standard ± 500 Hz

Level

Range: -55 to +22 dBm (average power)

Power Measurement Accuracy: ± 1 dB (-35 to +20 dBm)

Input VSWR: 1.5:1

Damage Level: +25 dBm

Resolution: 0.1 dB

GFSK Modulation

Deviation Measurement Range: 0 to 350 kHz (peak power)

Accuracy: 1% for modulation index 0.32

EUT Control Interface

RS232 HCI Commands

The EUT control interface provides RS232 HCI commands to the EUT through a standard RS232 interface.

The interface meets the requirements of the Bluetooth specification for HCI UART transport layer.

An RS232 cable is supplied.

USB HCI Commands

The EUT control interface provides USB HCI commands to the EUT through a standard USB interface.

The interface meets the requirements of the Bluetooth specification section H:2.

A USB cable is supplied.

2-Wire Control: For test control of Bluetooth low energy devices the EUT control interface supports the 2-Wire specification

USB to RS232 HCI Command: For use with EUTs fitted with USB to RS232 FTDI chips

USB to 2-Wire Command: For use with EUTs fitted with USB to RS232 FTDI chips that support 2-Wire control

Audio Specifications

Number of SCO Channels Supported: 3

Codec Air Interfaces Supported: CVSD, A-Law, μ -Law

Frequency Response

(-3 dB) measured CODEC in to CODEC out: 160 Hz to 3.5 kHz.

Measured with 50 Ω source impedance and 10M Ω load impedance

Maximum Input/Output Signal Level: 3.4 V_{pk-pk} = 1.2 V RMS

Distortion/Noise

A law: -37 dB (typical) (1 kHz, 1 V RMS)

μ law: -37 dB (typical) (1 kHz, 1 V RMS)

CVSD: -30 dB (typical) (300 Hz, 1 V RMS)

Input/Output Connectors: 3.5 mm audio jack plugs (one for each SCO channel)

Input Impedance: 20 k Ω

Minimum Output Load: 600 Ω

Internal Audio Source: 1 kHz fixed frequency

Adaptive Frequency Hopping (MT8852B-015)

Supported in ACL and SCO connections

Displays: Active channel vs. time, FER vs. time

Other Features: ACL connection timer, resolution: 1 ms

Electrical Characteristics

Frequency Standard

Frequency: 10 MHz

Temperature Stability: ± 0.5 ppm (-10° to $+85^\circ\text{C}$)

Aging (1 st year): ± 1.0 ppm

Aging (over 10 years): ± 2.5 ppm (including year 1)

Rear Panel Connectors

External Frequency Standard Input: Rear panel, BNC connector, 50 Ω , 1 V

Output 1: TTL output for TX ON, TX DATA, RX DATA, and correlator

Output 2: TTL output for RX ON, TX DATA, RX DATA, and correlator

Input 1: For service use only

GPIB

IEEE 488.2: Offers full instrument control as standard

RS232

RS232: Offers full instrument control as standard

General

Power Supply

Rated Voltage: 100 Vac to 120 Vac/200 Vac to 240 Vac

Rated Frequency: 50 Hz/60 Hz

Power Consumption: 150 VA max.

Environmental

Operating Temperature: $+5^\circ$ to $+40^\circ\text{C}$

Operating Humidity: 20 to 75%

EU Standards (CE Marking)

EMC: EN 61326-1, EN 61000-3-2

LVD: EN 61010-1

RoHS: EN 50581

Dimensions and Mass

Dimensions: 216.5 (W) \times 88 (H) \times 380 (D) mm

Mass: <3.8 kg

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/Order No	Name
MT8852B MT8852B-040 MT8852B-041 MT8852B-042 MT8852B-043	Main Frame Bluetooth Test Set Bluetooth Test Set Bluetooth Test Set Bluetooth Test Set Bluetooth Test Set
J1783A J1784A J1785A	Standard Accessories MT8852B Bluetooth Test Set Operation Manual MT8852B Bluetooth Test Set Operation Manual Remote Control USB HCI control interface lead RS232 HCI Control Interface Lead RS232 Cable for Firmware Updates Power Cord BlueSuite Software Bluetooth Low Energy Measurement Software application MT8852B Bootloader 3.5 mm Jack Plugs (Qty. 3)
J1786A	Options and Accessories Adaptive Frequency Hopping option IQ data output Bluetooth low energy measurements BLE Data Length Extension Option BLE 2LE Option BLE BLR Option Platform Enhancement Option
MT8852B-015 MT8852B-017 MT8852B-027 MT8852B-034*1 MT8852B-035*1, *2 MT8852B-036*1, *2, *3 MT8852B-070	Options and Accessories Adaptive Frequency Hopping option IQ data output Bluetooth low energy measurements BLE Data Length Extension Option BLE 2LE Option BLE BLR Option Platform Enhancement Option

Model/Order No	Name
MT8852B-315*4 MT8852B-317*4 MT8852B-319*4 MT8852B-325*4 MT8852B-327 MT8852B-330 MT8852B-334*1 MT8852B-335*1, *2 MT8852B-336*1, *2, *3 MT8852B-170 MT8852B-270 MT8852B-370	Retrofit Adaptive Frequency Hopping option Retrofit IQ data output Retrofit Audio to MT8852B Retrofit EDR to MT8852B Retrofit Bluetooth low energy measurements Retrofit Basic Rate Measurement to MT8852B Retrofit BLE Data Length Extension Option Retrofit BLE 2LE Option BLE BLR Option Retrofit Platform Enhancement Option Retrofit Platform Enhancement Option Retrofit Platform Enhancement Option Retrofit
MX885201B MX885201B-301 Z1992A B0748A B0749A J0006 J0007 J0008 J0127A J0127B J0127C	BlueSuite Pro3 software application BlueSuite Pro2 to Pro3 Upgrade 2.4 GHz Antenna and Adapter Soft Carry Bag Rack Mount Kit GP-IB CABLE, 0.5M GPIB CABLE, 1.0M GPIB CABLE, 2.0M COAXIAL CORD, 1.0M COAXIAL CORD, 2.0M COAXIAL CORD, 0.5M

*1: MT8852B-034 (334) requires MT8852B-027 (327) or MT8852B-043.
*2: MT8852B-035 (335) and MT8852B-036 (336) requires MT8852B-034 (334).
*3: MT8852B-036 (336) requires MT8852B-070 (270, 370).
*4: When installing MT8852B-315/317/319/325 to MT8852B-043, MT8852B-330 is necessary.



Specifications are subject to change without notice.

• United States

Anritsu Company
450 Century Parkway, Suite 190, Allen,
TX 75013 U.S.A.
Toll Free: +1-800-267-4878
Phone: +1-972-644-1777

• Canada

Anritsu Electronics Ltd.
700 Silver Seven Road, Suite 120, Kanata,
Ontario K2V 1C3, Canada
Phone: +1-613-591-2003
Fax: +1-613-591-1006

• Brazil

Anritsu Elettronica Ltda.
Praça Amadeu Amaral, 27 - 1 Andar
01327-010 - Bela Vista - Sao Paulo - SP
Brazil
Phone: +55-11-3283-2511
Fax: +55-11-3288-6940

• Mexico

Anritsu Company, S.A. de C.V.
Blvd Miguel de Cervantes Saavedra #169 Piso 1, Col. Granada
Mexico, Ciudad de Mexico, 11520, MEXICO
Phone: +52-55-4169-7104

• United Kingdom

Anritsu EMEA Ltd.
200 Capability Green, Luton, Bedfordshire, LU1 3LU, U.K.
Phone: +44-1582-433200
Fax: +44-1582-731303

• France

Anritsu S.A.
12 avenue du Québec, Bâtiment Iris 1- Silic 612,
91140 VILLEBON SUR YVETTE, France
Phone: +33-1-60-92-15-50
Fax: +33-1-64-46-10-65

• Germany

Anritsu GmbH
Nemetschek Haus, Konrad-Zuse-Platz 1
81829 München, Germany
Phone: +49-89-442308-0
Fax: +49-89-442308-55

• Italy

Anritsu S.r.l.
Via Elio Vittorini 129, 00144 Roma, Italy
Phone: +39-6-509-9711
Fax: +39-6-502-2425

• Sweden

Anritsu AB
Isafjordsgatan 32C, 164 40 KISTA, Sweden
Phone: +46-8-534-707-00

• Finland

Anritsu AB
Teknobulevardi 3-5, FI-01530 VANTAA, Finland
Phone: +358-20-741-8100
Fax: +358-20-741-8111

• Denmark

Anritsu A/S
Torveporten 2, 2500 Valby, Denmark
Phone: +45-7211-2200
Fax: +45-7211-2210

• Russia

Anritsu EMEA Ltd.
Representation Office in Russia
Tverskaya str. 16/2, bld. 1, 7th floor.
Moscow, 125009, Russia
Phone: +7-495-363-1694
Fax: +7-495-935-8962

• Spain

Anritsu EMEA Ltd.
Representation Office in Spain
Edificio Cuzco IV, Po. de la Castellana, 141, Pta. 5
28046, Madrid, Spain
Phone: +34-915-726-761
Fax: +34-915-726-621

• United Arab Emirates

Anritsu EMEA Ltd.
Dubai Liaison Office
902, Aurora Tower,
P O Box: 500311- Dubai Internet City
Dubai, United Arab Emirates
Phone: +971-4-3758479
Fax: +971-4-4249036

• India

Anritsu India Private Limited
6th Floor, Indiqube ETA, No.38/4, Adjacent to EMC2,
Doddanekundi, Outer Ring Road, Bengaluru - 560048, India
Phone: +91-80-4058-1300
Fax: +91-80-4058-1301

• Singapore

Anritsu Pte. Ltd.
11 Chang Charn Road, #04-01, Shriro House
Singapore 159640
Phone: +65-6282-2400
Fax: +65-6282-2533

• P.R. China (Shanghai)

Anritsu (China) Co., Ltd.
Room 2701-2705, Tower A,
New Caohejing International Business Center
No. 391 Gui Ping Road Shanghai, 200233, P.R. China
Phone: +86-21-6237-0898
Fax: +86-21-6237-0899

• P.R. China (Hong Kong)

Anritsu Company Ltd.
Unit 1006-7, 10/F., Greenfield Tower, Concordia Plaza,
No. 1 Science Museum Road, Tsim Sha Tsui East,
Kowloon, Hong Kong, P.R. China
Phone: +852-2301-4980
Fax: +852-2301-3545

• Japan

Anritsu Corporation
8-5, Tamura-cho, Atsugi-shi, Kanagawa, 243-0016 Japan
Phone: +81-46-296-6509
Fax: +81-46-225-8352

• Korea

Anritsu Corporation, Ltd.
5FL, 235 Pangyoyeok-ro, Bundang-gu, Seongnam-si,
Gyeonggi-do, 13494 Korea
Phone: +82-31-696-7750
Fax: +82-31-696-7751

• Australia

Anritsu Pty. Ltd.
Unit 20, 21-35 Ricketts Road,
Mount Waverley, Victoria 3149, Australia
Phone: +61-3-9558-8177
Fax: +61-3-9558-8255

• Taiwan

Anritsu Company Inc.
7F, No. 316, Sec. 1, NeiHu Rd., Taipei 114, Taiwan
Phone: +886-2-8751-1816
Fax: +886-2-8751-1817