

NATIONAL INSTRUMENTS™

데이터 수집

NI-DAQ™ mx 8.7 Measurement & Automation Explorer

2008 1, 370470L-0129

NI-DAQmx Measurement & Automation Explorer
(DAQ) , RT DAQ , SCXI , SCC , TEDS , RTSI
OS .

National Instruments

[National Instruments](#) .



Traditional NI-DAQ (Legacy) *Measurement and Automation Explorer Help for Traditional NI-DAQ (Legacy)* .

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- *DAQ* — NI-DAQmx DAQ
- *SCXI* — SCXI
- *DAQ* — DAQ , ,
- *Measurement & Automation Explorer Help for Traditional NI-DAQ (Legacy)*— MAX Traditional NI-DAQ (Legacy)
DAQ SCXI
- *NI-DAQmx* — NI-DAQmx
NI-DAQmx
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(Windows)

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(Windows)

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,"prog*" "program", "programmatically", "progress"

. . , "?ext" "next", "text"

, " AND (OR VI) " " " VI" .



- **AND()**—
- **OR**—
- **NOT**—
- **NEAR**— 8

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- — .
- — , "program" "programs", "programming"
- — .

(Windows)

1. () .
- 2.
- 3.



4. **OK** .

PDF

PDF [PDF](#) , Adobe Acrobat Viewer

Measurement & Automation Explorer (MAX)

MAX National Instruments DAQ SCXI . MAX
. MAX DAQ SCXI



OS

OS

DAQ

»NI-DAQmx

DAQ



<F5>

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NI-DAQmx MAX

MAX :

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NI-DAQ . DAQ

MAX . MAX ,

NI-DAQmx DAQ , , . NI-DAQmx .

MAX DAQ SCXI

‣ DAQ

‣ RT DAQ

› RTSI

‣ SCXI

‣ SCXI

‣ SCC

› NI-DAQmx

‣ TEDS

MAX . ni.com/manuals :

1. .
2. >> .
3. ni.com/manuals .

DAQ

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»**NI-DAQmx**

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MAX

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DAQ :

1. DAQ DAQ .
2. MAX OS . NI-DAQmx »NI-DAQmx

RT » » »NI-DAQmx

DAQ DAQ .

Traditional NI-DAQ (Legacy) API Traditional NI-DAQ (Legacy) Measurement & Automation Explorer .

OS , Windows 2000/XP



NI USB-9xxx , MAX
MAX NI USB-9162 .

DAQ

DAQ :

1. .>>NI-DAQmx
RT , >>NI-DAQmx
2. .
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. MAX
3. . DAQ . RTSI
RTSI DAQ .
► **RTSI**
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4. .
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1. .>>NI-DAQmx
RT , >>NI-DAQmx
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. <F2> .
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4. <Enter> .
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RT , >>NI-DAQmx
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RT , **>>NI-DAQmx**

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1. **>>NI-DAQmx**

RT , **>>NI-DAQmx**

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3. DAQ .



DAQ .

RT DAQ (NI PCI-7041/6040E)

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RT DAQ

RT DAQ

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MAX

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RT DAQ

RT DAQ :

- 1.
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3. DAQ

RTSI



PXI , RTSI .
RTSI .

PXI

RTSI : :

[RTSI](#)

[RTSI](#)

[RTSI](#)

RTSI

RTSI :

1.

RT

2. **NI-DAQmx** **>>RTSI**

3. .

RTSI .

1. **>>NI-DAQmx**

2. **NI-DAQmx** **>>RTSI**

RTSI

RTSI :

1. .>>NI-DAQmx
 RT , .>>NI-DAQmx
2. RTSI .
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 RTSI . MAX .
3. RTSI NI-DAQmx .
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4. .

RTSI :

1. .>>NI-DAQmx
 RT , .>>NI-DAQmx
2. RTSI .
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 RTSI . <F2> .
3. . . .
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RTSI DAQ :

1. .>>NI-DAQmx
 RT , .>>NI-DAQmx
 2. RTSI RTSI .
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1. .>>NI-DAQmx
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1. **»NI-DAQmx**
2. RTS_I **»NI-DAQmx**
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3. RTS_I . MAX

SCXI

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[SCXI](#)

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SCXI



PXI/SCXI PXI
 >>PXI PXI

SCXI : .

1. .

RT

2. NI-DAQmx **>>NI-DAQmx SCXI**

3. .

SCXI : .

1. **>>NI-DAQmx**

RT

>>NI-DAQmx

2. **>>NI-DAQmx** **>>NI-DAQmx SCXI**

3. SCXI : .

SCXI : .

1. SCXI : .

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2. . **SCXI** : .

SCXI

SCXI :

1. **>>NI-DAQmx**
RT , **>>NI-DAQmx**
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 - ▶ **SCXI**
 - ▶ **SCXI (PXI/SCXI)**
 - ▶ **ID**
 - ▶
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5. NI-DAQ SCXI
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SCXI

SCXI

1. .>>NI-DAQmx

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RT , >>NI-DAQmx
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1. **>>NI-DAQmx**
2. SCXI .
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SCXI

SCXI :

1. SCXI , SCXI

RT

► **(1100, 1120/D, 1121, 1140)**

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SCXI

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1. **>>NI-DAQmx**

RT , **>>NI-DAQmx**

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SCXI

SCXI : .

1. **>>NI-DAQmx**
 RT , **>>NI-DAQmx**
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SCXI : .

1. **>>NI-DAQmx**
 RT , **>>NI-DAQmx**
2. SCXI .
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5. **SCXI** .

SCC

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NI-DAQmx **»NI-DAQmx SCC**

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DAQmx »NI-DAQmx SCC

3. SCC

SCC

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SCC :

1. **>>NI-DAQmx**
- RT , **>>NI-DAQmx**
2. SCC .
3. SCC :
 - ▶ **SCC (SC-2345)**
 - ▶
 - ▶ **SCC ID**
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 - ▶ **TEDS (SC-2350)**
4. .
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2. SCC .

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3. SCC .

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SCC :

1. **»NI-DAQmx**
2. SCC . **»NI-DAQmx**
3.
4. **<Enter>**

SCC

SCC :

1. **>>NI-DAQmx**
 RT , **>>NI-DAQmx**
 2. SCC . . .
 3. .
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1. **>>NI-DAQmx**
 RT , **>>NI-DAQmx**
2. SCC . . .
3. .

NI-DAQmx

NI-DAQmx 7.4 NI-DAQmx . NI-DAQmx

NI . , NI-DAQmx

MAX . NI-DAQmx

. , NI-DAQmx



NI cDAQ-9172 ,



NI-DAQmx

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NI-DAQmx

NI-DAQmx :

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2. **NI-DAQmx**
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4. . MAX NI-DAQmx .
 - PXI PXI .
 - SCXI SCXI .
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NI-DAQmx

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NI-DAQmx : .

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2. NI-DAQmx .
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MAX NI-DAQmx

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1. SCXI , SCXI

RT

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3. SCXI SCXI

TEDS

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NI-DAQmx **»NI-DAQmx TEDS**

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TEDS :

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»NI-DAQmx

RT

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DAQmx **»NI-DAQmx TEDS**

3.

TEDS

TEDS :

1. ➤NI-DAQmx
RT , ➤NI-DAQmx
2. TEDS .
3. TEDS :
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 - ▶ 2096
 - ▶ TEDS
- 4.

TEDS

TEDS :

1. **>>NI-DAQmx**
 RT , **>>NI-DAQmx**
2. TEDS .
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TEDS . MAX

DAQ MAX

1.

RT

2.

3. **NI-DAQmx** **NI-DAQmx**

4. . DAQ .

DAQ . LabVIEW ,
LabVIEW NI-DAQmx .

LabVIEW, LabWindows/CVI, Measurement Studio 7. x

LabVIEW Real-Time Module 7.1 ,

. ADE .

NI-DAQmx .

NI-DAQmx

- 1.
 2. **NI-DAQmx**
 - 3.
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-  NI-DAQmx 7.3 MAX
MAX

DAQ MAX . . . :

1. . .
2. . .
3. **NI-DAQmx** . .
4. . . DAQ . .

DAQ . .

MAX, MAX , , .
MAX _____ MAX _____ . NI-
DAQmx / : .

- [NI \(.ncc \)](#)
- [NI-DAQmxINI \(.ini\)](#)
- [NI-DAQmx \(.txt \)](#)



*Reference for LabWindows/CVI MAX Configuration Function
Reference for Measurement Studio .*

MA



MAX TEDS .



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NI

NI (.nce) , , 2 . MAX
,

.nce .

NI-DAQmxINI

NI-DAQmxINI , , .
.ini .

NI-DAQmxINI NI-DAQmx

.INI , , .
DAQmxTask, DAQmxChannel, DAQmxScale.

= / .

LabVIEW , CVI , C++/.NET *class.property*

, .
, DAQ , , NI-DAQmxINI

NI-DAQmx

NI-DAQmx , , .ncc . NI-

DAQmx .

NI-DAQmx

NI-DAQmx

DAQmxTasks, DAQmxChannels, DAQmxScales.

. LabVIEW , CVI , C++/.NET

class.property .

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, DAQ , , NI-DAQmx

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1. ➤NI-DAQmx ➤
2. , IP

MAX

MAX NI-DAQmx . . :

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MAX



LabVIEW

*MAX Configuration Function Reference for LabWindows/CVI
MAX Configuration Function Reference for Measurement Studio*

NI-DAQmx

DAQ . . , , SCXI , SCC , .
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1. **>>NI-DAQmx** **>>NI-DAQmx**
 2. , IP

OS

OS :

Windows 2000/XP

Windows 2000/XP

Windows 2000/XP _____ Windows
2000/XP OS DAQ _____ DAQ

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PCI, PCMCIA, PXI

Windows 2000/XP

Windows 2000/XP

MAX , :

1. Windows 2000/XP ➤ ➤ . ➤ .
2. National Instruments DAQ .
NI .
3. . Windows 2000/XP
4. .

DAQ
Windows 2000/XP .

Windows 2000/XP ni.com/support

Windows 2000/XP PCI, PCMCIA, PXI

PCI, PCMCIA, PXI DAQ . PCI, PCMCIA, PXI DAQ
. Windows 2000/XP

Windows 2000/XP

Windows 2000/XP >> >>

[Windows 2000/XP](#)

/ A-Z

n	nano	10^{-9}
μ	micro	10^{-6}
m	milli	10^{-3}
k	kilo	10^3
M	mega	10^6

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RVDT

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2. — VI

1. I/O

2. DAQ —
TTL .

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DAQ SCXI
SCXI

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SCXI PXI

I/O . PC
ISA PCI .

LabVIEW .

ADC /

ADC

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2. — VI .

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DAQ , ADC DAQ

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NI-DAQmx

/VI

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ADC

ADC

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MAX

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NI-DAQmx OS

VI

TEDS EEPROM

TEDS

I/O

I/O, 23

(TTL)

(, -5 V +5 V).

I/O

TTL . , ,

OS .

LabVIEW .

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I/O I/O I/O
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2. —, , , ,
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Traditional NI-DAQ (Legacy) , NI-
DAQmx . Traditional NI-DAQ (Legacy)
MAX . NI-DAQmx , MAX

3. — . (1
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NI-DAQmx VI .

M I/O (MIO) , SCXI , DAQ .

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A-Z

ADC	— (Analog-to-digital Converter)—
ADE	(Application Development Environment)— LabVIEW LabWindows/CVI.
AI	—
AO	— .
API	(Application Programming Interface)— , VI, , .
BIOS	(Basic Input/Output System)—BIOS PC . BIOS
C	, , , / . C CompactDAQ, CompactRIO, USB-9xxx .
cDAQ	NI cDAQ-9172 CompactDAQ .
CH	. .
CMRR	(Common-mode Rejection Ratio)— , (dB) .
CompactDAQ	C .
DAC	- (Digital-to-analog Converter)—
DAQ	— .
DAQ	. DAQ , PCMCIA , USB 1394(FireWire) DAQPad . SCXI DAQ .
DAQ	, , .
dB	— : dB=20log10 V1/V2
DC	
DIO	/
DMA	(Direct Memory Access)—

DSUB	D- (D-subminiature Connector)
DUT	(Device Under Test)—
E	,
FIFO	(First In First Out) .
	FIFO ADC DAC
hex	16— 16 .
Hz	— .
I/O	/— , , ,
IEEE P1451	IEEE . TEDS .
IEEE P1451.4	IEEE . TEDS , EEPROM
IRQ	
ISA	Industry Standard Architecture— PC .
LED	(Light-emitting Diode)— .
LSB	(Least Significant Bit)— A/D D/A .
LVDT	Linear-voltage Differential Transformer— . LVDT AC . . . 0
M	,
MAX	Measurement & Automation Explorer— National Instruments .
MIO	I/O(Multifunction I/O)— , I/O , , () . MIO . E MIO .
	MIO DAC

NI-DAQ	NI . NI-DAQ NI LabVIEW (ADE) VI .
NI-DAQ 7.x	NI-DAQ NI-DAQmx Traditional NI-DAQ (Legacy) API, , .
NI-DAQmx	VI, , NI-DAQ . NI-DAQ NI-DAQmx LabVIEW, LabWindows/CVI, Measurement Studio DAQ ; I/O ; API NI-DAQ VI DAQ
NI-DAQmx	MAX . NI-DAQmx .
NRSE	(Nonreferenced Single-ended Mode)— (NRSE) .
PCI	Peripheral Component Interconnect—ISA EISA . PCI PC , 132 Mbytes/s .
PCMCIA	. PCMCIA Personal Computer Memory Card International Association .
PFI	Programmable Function Interface— , . I/O .
PID	Proportional Integral Derivative— , . .
PWM	
PXI	PCI eXtensions for Instrumentation— , , CompactPCI . PXI 1997 National Instruments PXI Systems Alliance .
PXI	PXI PXI DAQ . PCI DAQ RTSI .

RSE	(Referenced Single-ended Mode)—
RTD	(Resistance Temperature Detector)—
RTSI	Real-Time System Integration — DAQ National Instruments PCI DAQ PXI
RVDT	Rotary Variable Differential Transformer—
(s)	
S	
S/s	—
SCC	Signal Conditioning Component— DAQ I/O
SCXI	Signal Conditioning eXtensions for Instrumentation— PC National Instruments . SCXI
STC	
TCR	(Temperature Coefficient of Resistance)—0 °C 100 °C (°C)
TEDS	Transducer Electronic Data Sheet— IEEE 1451.4 ., TEDS ID, , , TEDS . TEDS TEDS . IEEE 1451.4- TEDS www.ni.com/pnp .
TEDS I	TEDS TEDS (1 2) Maxim/Dallas Semiconductor 1-Wire
TEDS II	TEDS TEDS , TEDS ,

RTD, . (1
2) Maxim/Dallas Semiconductor 1-Wire

Tick

Traditional NI-DAQ . Traditional NI-DAQ (Legacy) NI-DAQ 6.9.x VI . Traditional NI-DAQ (Legacy) NI-DAQmx

TTL - (Transistor-transistor Logic)— ,

V

VI

VISA (Virtual Instrumentation Software Architecture).

WDT

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National Instruments Corporation

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Tektronix® Tek Tektronix.Inc .

National Instruments Alliance Partner Program National Istruments , , , National Instrument .

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NATIONAL INSTRUMENTS

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	49 89 7413130
	91 80 41190000
	972 0 3 6393737
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	81 3 5472 2970
	82 02 3451 3400
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	01 800 010 0793
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	0800 553 322
	47 (0) 66 90 76 60
	48 22 3390150
	351 210 311 210
	7 495 783 6851
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	41 56 2005151
	886 02 2377 2222
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